Citrix_™

uberAgent 7.4





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December 11, 2025

What is uberAgent®?

uberAgent is a User Experience Monitoring (UXM) and Endpoint Security Analytics (ESA) tool that provides in-depth visibility into user experience, system performance, and security across physical and virtual endpoints. It offers detailed insights into installed application usage - including installed web browsers, and network performance. The solution is capable of providing Endpoint Security Analytics (ESA) with its highly efficient and dynamic threat detection engine and rule engine.

Why uberAgent?

uberAgent makes performance and security diagnosis a lot easier by collecting vital KPIs like latency, jitter, and packet loss –per application - including the installed browser One agent, one solution, across all physical and virtual Windows and macOS devices.

The agent is highly efficient looking at the amount of data that it reports, as well as looking at the footprint it adds on top: less than 0.5% CPU load and a minimal amount of RAM. Customers can complement the existing EDR solutions with uberAgent.

Application adoption and licensing reporting, crash analytics on process executable level, or pinpointing performance bottlenecks? You name it, uberAgent provides the metrics and comes with 70+ dash-boards that visualize the collected data.

All of this sets us apart from other monitoring vendors in the EUC space, while we supplement existing observability platforms customers have in place today.

What can uberAgent do?

- Makes user experience measurable
- · Helps you identify trends that otherwise would have gone unnoticed
- Simplifies troubleshooting by showing you everything you need to know in one place
- · Detects threats, risky behavior, and insecure configurations
- Shows you which applications are used when –and where
- Makes Helpdesk and IT operations more effective

- Provides visibility into endpoint performance, reliability, and security
- Provides all the endpoint metrics and KPIs required by the business

Get Started

- Quickstart
- Installation

More Information

- About uberAgent
- Changelog and Release Notes
- New Release Information & Notification
- Products: UXM & ESA
- System Requirements

Quickstart

September 12, 2025

uberAgent is an innovative Windows and macOS **user experience** monitoring and **endpoint security** analytics product. You have come to the right place if you want to get it up and running in your environment.

Getting Started

- 1. Start by checking out the system requirements and take a look at the release notes.
- 2. If you have not yet done so, install Splunk or one of the alternative supported backends.
- 3. Next, you probably want to know how to install and deploy uberAgent.

Products

uberAgent comes in two flavors: uberAgent UXM (**user experience** monitoring) and uberAgent ESA (**endpoint security** analytics).

Components

uberAgent's main component is a **lightweight agent** that collects data on the endpoints and sends it to a backend of your choice. The other component is a **Splunk dashboard app** that visualizes what has been collected by the agent.

Configuration and Metrics

Metrics

Here is a list of all the metrics collected by uberAgent, neatly organized by category.

Configuration

uberAgent can be configured by way of **config files** (all platforms) or via **Group Policy** (Windows). Details in configuration options.

Here is a list of steps to take in order to reduce uberAgent's data volume.

Troubleshooting

uberAgent's log files help you quickly find out what is going on. They are easy to read and have a wealth of information.

Upgrading

When a new version of uberAgent is released you might want to upgrade your installation. Here's how to do that.

Getting Started with uberAgent® for Linux (Tech Preview)

November 5, 2025

This document provides comprehensive guidance around the latest addition to uberAgent - the platform support for Linux.

It is best for everyone who seeks to integrate uberAgent into their observability strategy. This guide outlines the agent's capabilities to date, system prerequisites, installation procedures, and configuration steps.

IMPORTANT

uberAgent for Linux is currently in tech preview state. **It is not yet a production-ready solution**. The information provided here is subject to change as the product evolves.

Noteworthy Changes in Tech Preview 2

Based on user feedback and internal testing, along overall improvements, the following changes have been made in this release:

New features

- Agent [B1072]: uberAgent now supports Red Hat Enterprise Linux version 8.10 and later.
- Agent [B1134]: automatic application identification now supports RPM-based distributions.
- **Configuration** [**B1069**]: uberAgent on Linux now honors the IgnoreLoopbackTraffic option. Previously, loopback traffic was always filtered out.

Improvements

• **Agent [11434]:** web response messages are no longer printed to stdout.

Bugfixes

• **Agent [11446]:** the management session is now properly identified during system updates.

System Requirements

Backend

uberAgent for Linux supports all backends that are already supported by uberAgent except Microsoft ADX and Microsoft Azure Monitor.

Endpoints

OS Versions

Operating system support continues to grow. The following platforms are currently supported:

- Ubuntu 22.04 or later
- Red Hat Enterprise Linux (RHEL) 8.10 or later
- eLux® 7 2507 or later

Processor Architectures

x64

Download

The tech preview of uberAgent for Linux is available as a public download on the Citrix Early Access Release page.

Installing the Linux Endpoint Agent

Ubuntu

The agent installer is available as a DEB file. It can either be installed manually or unattended through existing software deployment tools.

The uberAgent service does not start automatically upon completion of the setup process, as configuration files are not part of the installation package. This allows you to put your configuration in place before uberAgent starts up. The uberAgent service also initiates automatically following a system restart. Alternatively, you may start it manually using systemctl, provided you have root privileges:

```
systemctl start uberAgent
```

Command Line Installation

- The installer can be used from the command line to install uberAgent using the command dpkg
 i uberagent_7.5.0_amd64.deb (sudo required).
- Command line installation can be executed locally or remotely, e. g., via SSH.

Installer behavior On upgrade dpkg -i

Stop the uberAgent service if it was previously running.

On remove dpkg -r

- Remove binary
- Mask service and remove service file
- Remove copyright and third-party licenses

On purge dpkg -P

In addition to the actions performed during removal, also delete the following:

/etc/uberAgent

- /var/log/uberAgent
- /var/lib/uberAgent
- Purge and unmask service

Red Hat Enterprise Linux (RHEL)

The agent installer is available as a RPM file. It can either be installed manually or unattended through existing software deployment tools.

The uberAgent service does not start automatically upon completion of the setup process, as configuration files are not part of the installation package. This allows you to put your configuration in place before uberAgent starts up. The uberAgent service also does not initiate automatically following a system restart, to honor RHEL system standards. You may enable and start uberAgent by using systemctl, provided you have root privileges:

```
systemctl enable --now uberAgent
```

Command Line Installation

- The installer can be used from the command line to install uberAgent using the command dnf install -y uberagent-7.5.0.x86_64.rpm (sudo required).
- Command line installation can be executed locally or remotely, e.g., via SSH.

Installer behavior On upgrade dnf install -y

• Stop the uberAgent service if it was previously running.

On remove dnf remove -y

- Remove binary
- Mask service and remove service file
- Remove copyright and third-party licenses

eLux

uberAgent for Linux is also available for eLux. Please follow the instructions in the official documentation to import the uberAgent package and create an image. uberAgent starts once an image with the installed uberAgent package is booted, given that the configuration is present.

Configuration Options

Currently one can configure uberAgent for Linux using local configuration files.

Configuration File Templates

The latest configuration files templates matching your installed uberAgent version are available for download on GitHub.

Example

- Download the pre-packaged configuration file bundle
 - wget https://github.com/vastlimits/uberAgent-config/raw/refs/ heads/version/7.4/config-dist/uberAgent.uAConfig
- As this is just a compressed file, extract it to the uberAgent configuration directory.
 - sudo unzip uberAgent.uAConfig -d /etc/uberAgent/
- Modify the uberAgent.conf file to suit your environment, and add at least your receiver. Field descriptions are available as part of the configuration file.
 - sudo nano /etc/uberAgent/uberAgent.conf

```
1  [Receiver]
2  Name = My Splunk Receiver
3  Type = Splunk
4  Protocol = TCP
5  Servers = 1.2.3.4:19500
```

- Save the file and exit the editor.
- · Start the uberAgent service
 - sudo systemctl start uberAgent

Applying Configuration on eLux To apply a configuration on an eLux device, transfer the unpacked contents of the configuration archive to /setup/uberAgent/ from Scout (see how to configure file transfer).

Files And Directories on the Filesystem

All directories are created by the uberAgent installer. The agent does not require any additional directories to be created by the user.

uberAgent Executable

/usr/sbin/uberAgent

Configuration Files

/etc/uberAgent/

On eLux: /setup/uberAgent/

Persistent Output Queue

/var/lib/uberAgent/OutputQueue/

On eLux: /setup/uberAgent/OutputQueue/

Log Files

/var/log/uberAgent/

To access log files on eLux, define a diagnostic template that includes all .log files under the path above in Scout.

See Requesting diagnostic files to access the logs.

Service Configuration

/usr/lib/systemd/system/uberAgent.service

Copyright and Third-party Licenses

/usr/share/doc/uberagent/copyright

Licensing

uberAgent for Linux operates fully functional in its tech preview phase without a license file.

Feature and Metric Availability

uberAgent for Linux is currently in tech preview. Below is a summary of items that are available in the current version.

IMPORTANT

While this is a comprehensive list, it does not include every single feature and metric, but rather a selection of the most relevant ones. Also keep in mind that the availability of a sourcetype doesn'

t necessarily mean that all fields are available, e.g. due to particularities of the Linux platform.

Application Metrics

Application & Process Performance Metrics

Source types

- uberAgent:Process:ProcessDetail
- uberAgent:Process:ProcessStatistics

Application Name to ID Mapping Metrics

Automatic Application Identification

Grouping processes by application is a key feature of uberAgent.

Ubuntu: **dpkg** and **snap** packages are supported.

RHEL: **RPM** and **snap** packages are supported.

eLux: **EPM/FPM** packages are supported.

Source type

• uberAgent:Application:AppNameIdMapping

Application & Process Startup/Stop Metrics

Source types

- uberAgent:Process:ProcessStartup
- uberAgentESA:Process:ProcessStop

Machine Metrics

Machine Inventory Metrics

Source types

- uberAgent:System:MachineInventory
- uberAgent:System:DiskInventory
- uberAgent:System:NetworkConfigInformation
- uberAgent:System:VolumeInventory

Machine Performance And Utilization Metrics

Source type

• uberAgent:System:SystemPerformanceSummary2

Network Metrics

Source types

- uberAgent:Process:NetworkTargetPerformance
- uberAgent:Application:NetworkConnectFailure

Session Metrics

Source type

uberAgent:Session:SessionDetail

Coming soon to uberAgent for Linux

- Application Inventory & Usage Metrics
- Application Crashes & Hangs Metrics
- Browser/Web App Metrics
- Citrix Session Metrics
- Machine Crashes & Hangs Metrics
- Computer Startup, Shutdown & Hibernation Metrics
- Automatic Application of Configuration Changes
- Central Config File Management (CCFM)
- Custom Scripts
- User & Host Tags

About uberAgent®

September 7, 2025

uberAgent is an innovative Windows and macOS user experience monitoring (UXM) and endpoint security analytics (ESA) product.

uberAgent UXM highlights include detailed information about **boot and logon duration**, application unresponsiveness detection, **network reliability** drill-downs, process startup duration, **application usage** metering, browser performance, **web app** metrics, and **Citrix** insights. These varied system performance and reliability aspects are smartly brought together in the Experience Score dashboard.

uberAgent ESA excels with a sophisticated **Threat Detection Engine**, endpoint security & compliance rating, the uAQL query language, detection of **risky activity**, DNS query monitoring, hash calculation,

registry monitoring, and Authenticode signature verification. uberAgent ESA comes with **Sysmon and Sigma rule converters**, a graphical rule editor, and uses a simple yet powerful query language instead of XML.

Products: UXM & ESA

September 12, 2025

uberAgent is made up of two products: uberAgent UXM and uberAgent ESA.

uberAgent® UXM: Digital Employee Experience (DEX)

uberAgent UXM covers all aspects of digital employee experience (DEX) on any Windows or macOS endpoint. uberAgent works equally well in virtual machines as on physical PCs. It has been optimized to meet the requirements of the world's most demanding organizations, with **proven scalability** to hundreds of thousands of endpoints.

uberAgent UXM determines **application reliability** KPIs, finds issues with network connectivity, collects detailed inventory information, and shows which applications are used when and how often, to name but a small subset of its impressive features. In addition to the above, uberAgent UXM has some of the most **comprehensive Citrix monitoring** capabilities. uberAgent's browser monitoring functionality provides detailed insights into **web app usage** and performance.

More Info on uberAgent UXM

Explore the following for more information on uberAgent UXM:

UXM documentation

uberAgent ESA: Endpoint Security Analytics

uberAgent UXM and uberAgent ESA are deeply integrated. uberAgent UXM provides rich context and metadata, while uberAgent ESA adds deep security visibility. With the combination of ESA and UXM, you need **only one agent** for digital employee experience, performance, and security. This guarantees the smallest possible footprint on the endpoint. With its flexible and open architecture, uberAgent ESA is the **perfect complement to EDR/antivirus products**.

uberAgent ESA's powerful Threat Detection Engine helps businesses **identify risky behavior**, unusual communications, suspicious executables, and common vulnerabilities. The product ships with

an extensive predefined ruleset covering some of the most significant endpoint security use cases. Extending ESA's rules is easily possible and highly encouraged.

uberAgent ESA's Security & Compliance Inventory is a **testing and rating framework** that checks the attack surface of your operating systems and applications. The test results are used to calculate security scores that pinpoint configuration and security hardening weaknesses.

More Info on uberAgent ESA

Explore the following for more information on uberAgent ESA:

- ESA documentation
- · How uberAgent ESA complements EDR products

Components: Agents & Apps

September 12, 2025

uberAgent consists of **two main components**: the actual agent runs on the endpoints you want to be monitored, sending the data it collects to the configured backend either directly or via Splunk's Universal Forwarder. The second main component, implemented as a set of Splunk apps, provides dashboards, visualizations, searches, and reports.

The Agent

uberAgent's data collecting component is a lightweight agent that runs independently of any runtimes or frameworks. The agent's footprint is so small that it is truly unobtrusive on the monitored endpoints and does not affect user density.

Where other products rely on operating system sources such as performance counters, WMI, or similar unfiltered data, uberAgent comes with its own metrics. Instead of raw data uberAgent gives you **information that matters** (see uberAgent's list of metrics).

The agent is highly configurable: metrics can be turned on or off individually, the **data collection frequency** can be chosen freely, denylists and allowlists (supporting regular expressions) enable finegrained control. This ensures that only data you really need is sent to the backend for indexing.

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Browser Extensions

uberAgent's endpoint agent is complemented by browser extensions, which enable uberAgent to

collect performance and usage metrics from web apps, too. Extensions are available for all major

browsers.

The Splunk Apps

Multiple Splunk apps help process and visualize the data collected by the agent. The **indexer app**

lives on Splunk indexers and mainly creates uberAgent's index and data input. Dashboard apps implement the user interface, providing different views into the collected data. uberAgent comes with

two dashboard apps: one for **uberAgent UXM** and another for **uberAgent ESA**.

uberAgent's main apps are complemented by special-purpose apps that offer a different view of the

existing uberAgent data, such as the **uberAgent Helpdesk** app.

Most dashboards are searchable and have extensive filtering capabilities to give you a fast and pow-

erful way of isolating specific data. Time range pickers make it easy to go back to the exact time a

problem occurred.

uberAgent makes full use of Splunk's advanced UI components to display a beautiful user interface

that fluidly adapts to screen width and device type. As a result, it works equally well on a tablet as on

a PC or Mac.

Alternative Backends

uberAgent supports several backends in addition to Splunk: Azure Monitor, Elasticsearch, and Apache

Kafka. Please note that at this time support is limited to sending data from the endpoint agent to the

backend. Dashboards are only available for Splunk.

System Requirements

December 11, 2025

Backend

Splunk

Operating system: all that are supported by Splunk

Splunk version: Splunk Enterprise 7.0 or newer or Splunk Cloud (details).

We only support uberAgent on Splunk software that is officially supported by Splunk (details).

Endpoints

Windows

OS Versions

- Windows 11
- Windows 10 1607
- Windows Server 2025
- Windows Server 2022
- Windows Server 2019
- Windows Server 2016

Please note that we only support uberAgent on Windows versions that are officially supported by Microsoft.

Processor Architectures

- x64
- x86 (where applicable)
- Arm (Windows 11 only)

Windows Agent Service Account The main component of uberAgent's endpoint agent is a system service that needs to run as the local SYSTEM account because that is required by some APIs.

macOS

Operating system: macOS Monterey or newer

Citrix Virtual Apps and Desktops™, Microsoft RDS, VMware Horizon View

Remote desktop session hosts (e.g. Citrix XenApp/CVAD, VMware Horizon View, Microsoft RDS) are explicitly supported. The same applies to any kind of virtual desktop (e.g. Citrix XenDesktop/CVAD, VMware View).

Azure Virtual Desktop (AVD)

uberAgent supports Azure Virtual Desktop (AVD) environments.

IaaS (AWS EC2, Azure VMs)

uberAgent supports cloud infrastructure as a service offerings such as Amazon AWS EC2, Azure VMs, and similar in any region.

Browser Extensions

Chrome

Google Chrome 120 or newer

Edge

Microsoft Edge 120 or newer

Firefox

Mozilla Firefox 120 or newer

Internet Explorer

Microsoft Internet Explorer 11

Endpoint Agent Features

Citrix Virtual Apps™ and Desktops Site Monitoring

• CVAD delivery controller version 7.6 or newer

Citrix NetScaler® Monitoring

- At least PowerShell version 3.0
- At least Citrix NetScaler firmware version 13.1

Citrix Cloud™ Monitoring

• Citrix DaaS™ Remote PowerShell SDK

Alternative Backends

Apache Kafka

- Confluent REST Proxy 5.4.x or newer
- Confluent Schema Registry 5.4.x or newer
- Any Apache Kafka version supported by the Confluent components above

Elasticsearch & Kibana

- At least Elasticsearch 7.12.x
- At least Kibana 7.12.x

Microsoft Azure Log Analytics

• No specific requirements

Microsoft Azure Data Explorer Cluster

• No specific requirements

Changelog and Release Notes

September 7, 2025

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New features

- **Citrix CVAD integration (Windows):** uberAgent is now part of the Citrix Virtual Apps and Desktops installation (documentation).
- **Citrix Director integration (Windows) [B968]:** uberAgent is now connected with Citrix Director (documentation), enabling new Director functionalities.

- **Citrix Web Studio integration (Windows) [B1044]:** uberAgent can now be enabled and configured via Citrix Web Studio (documentation).
- **Logon monitoring (Windows)** [**B1040**]: added monitoring of AppX file associations and package load times.

Improvements

- Agent (macOS) [B1032]: enhanced logging and error management for unsupported receiver types.
- **Agent (Windows)** [**B996**]: added generic ETW receiver for services to read events from uberAgent® using the Windows Event Tracing for Windows (ETW) API using the ETW receiver type and the ETWProviderGuid configuration option.
- **Agent (Windows)** [B993]: added config-flag AppNameIsAppId that disables compressing the application name, resulting in the AppId being identical to the application name.
- **Agent (Windows)** [**11315**]: improved the performance of the data exchange with the driver.
- **Dashboards** [**B992**]: expanded clickable area of collapsible section headers in Experience Score Overview and Security Score dashboards for improved usability.
- **Dashboards** [**11325**]: updated the Splunk SDK for Python to version 2.1.0 in the uberAgent ESA Splunk app.
- Driver (Windows) [11309]: reduced the scope of file locks.
- **Setup (Windows)** [**B1026**]: the default installation directory is now: C:\Program Files\Citrix\uberAgent.

Bugfixes

- **Agent (macOS)** [**I1268**]: fixed a logical memory leak if a timer contains the ESA metric ProcessStop but ESA is not licensed.
- **Agent (Windows) [11311]:** fixed an issue where the internal application name cache was not populated due to misspelled registry key.
- **Agent (Windows) [11320]:** fixed an issue where the driver configuration was not applied when ESA was disabled.
- **CCFM (Windows)** [**I1310**]: fixed an issue where failed to monitor the GPO registry key for updates.

Release notes

• Code Signing (Windows) [B1050]: updated code signing certificates in all binaries to use certificates issued for Citrix Systems, Inc., except for uberAgentFilter.sys and uberAgentNetMon.sys.

- Installer (macOS): After upgrading uberAgent, ensure to run pkill -f "uberAgentBrowserHelper" with root privileges before enabling the daemon.
- **Setup [B1000]:** the configuration files are no longer part of the installation package. See Installing the macOS Endpoint Agent or Installing the Windows Endpoint Agent for details.
- Sourcetype (Windows) [B1040]: uberAgent:Logon:LogonDetail has new fields: AppXFileAssocStart,AppXFileAssocEnd,AppXLoadPackagesStart,AppXLoadPackagesEandAppXPackages.

Known issues

- Agent (Windows) [I1154]: under heavy load the following message may be logged: CheckEventRecord, Events were lost. This may affect uberAgent's per-process disk, network, or UI-responsiveness metrics.
- **Boot monitoring [11052]:** on Windows 11, no information can be retrieved if there is no active session within the data collection period.
- **Browsers [11085]:** on systems with many user sessions the URL of the foreground tab might not match the browser's window title.
- **Browsers/Firefox add-on [I626]:** if the option privacy.resistFingerprinting is set to true, browser metrics are not available due to invalid data being sent from Firefox.
- **Browsers/IE add-on (Windows):** metrics are collected incompletely for the configured start page.
- Browsers/IE add-on (Windows): metrics are not collected on page reload.
- **Browsers/IE add-on (Windows):** monitoring does not work if IE is published from Citrix Virtual Apps. It does work from Citrix Virtual Desktops, however.
- Citrix CVAD/DaaS (Windows): data collection issue if the Citrix Remote Powershell SDK (required for Citrix Cloud monitoring) is installed on a CVAD controller.
- **Citrix CVAD/DaaS (Windows):** when running the Citrix VDA on a Citrix delivery controller, some per-machine information is missing.
- Experience Score [1377]: scheduled searches generate three warnings in Splunk's _internal index every 30 minutes. The messages look like the following: DateParserVerbose Failed to parse timestamp in first MAX_TIMESTAMP_LOOKAHEAD (128) characters of event. However, there is no impact on uberAgent's functionality.
- **GPU** (**Windows**) [**133**]: values for the fields ComputeUsagePercentAllEngines, ComputeUsagePercentEngine0 and similar can be higher than 100 with Intel Iris GPUs on Windows Server 2016 1607.
- **Kafka** [1291]: in rare cases, sending data to Kafka results in a SEC_E_BUFFER_TOO_SMALL error message in the logfile. This should have no effect; the transmission is repeated and succeeds on the second try.

- **NetScaler®:** in very rare cases, the content of the Virtual Server Performance field vServerName contains spaces in wrong places.
- **Update inventory (Windows):** not all installed Windows updates may be reported due to API limitations.
- **User input delay (Windows) [1983]:** determining this metric may trigger a handle leak in uber-Agent caused by Windows. This was fixed by Microsoft in most OS versions, but still happens on Windows Server 2022 22H2.
- **Volume inventory (macOS):** the encryption status of mounted read-only APFS snapshots may not be reported due to API limitations. This includes the root directory volume in a default installation of macOS.

New Release Information & Notifications

September 7, 2025

There are many ways to get notified about new uberAgent releases.

Citrix Blog

Citrix uberAgent blog URL

Citrix Downloads

• Citrix Observability feed URL

Social Media

- Citrix Twitter
- Citrix LinkedIn
- Citrix Facebook
- Citrix Instagram

Email

You can subscribe to Citrix's newsletter on citrix.com/blogs.

Planning

September 7, 2025

The information in this section helps you plan uberAgent deployments.

Architecture Options

December 11, 2025

Backend Placement

Applies to: Splunk and alternative backends.

The backend service required by uberAgent can be installed or consumed in any setup that is supported by the backend product vendor. This includes:

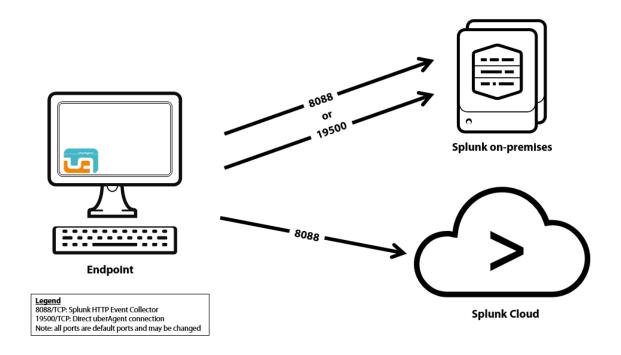
- On-premises (physical or virtual machine)
- Backend vendor cloud offering such as Splunk Cloud
- Public cloud IaaS (virtual machine in a cloud such as AWS EC2, Azure VMs)

Endpoint to Backend Communication

Recommended: Direct

Applies to: Splunk and alternative backends.

In this recommended configuration uberAgent talks directly to the backend servers. This has the advantage that the overall footprint on the monitored endpoints is smaller compared to architecture options that require Splunk Universal Forwarder.



Configuration highlights

- Communications: uberAgent® sends data directly from the endpoint to the backend servers
- **Splunk backends:** on the indexers, either a TCP port is opened or HTTP Event Collector is configured
- Alternative backends: uberAgent makes use of the backend's native REST API

Pros

- Smallest footprint
- Data can be transferred encrypted via HTTPS and authenticated with a REST token

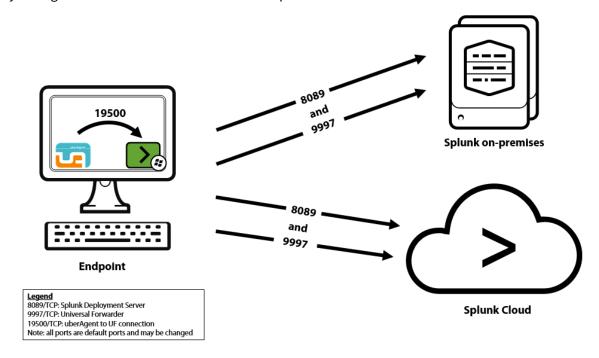
Alternative: Via Splunk Universal Forwarder

Applies to: Splunk backends only.

Note

Please note that with this configuration option, data is transmitted unencrypted over TCP from uberAgent to Splunks Universal Forwarder on the local machine. Therefore, we recommend that you use the direct connection as described before, which enables encrypted and authenticated data transmission.

Similar to Standalone mode, but uberAgent sends the data it collects to a locally installed Splunk Universal Forwarder. If you have deployed Universal Forwarder on your monitored endpoints anyway you might want the forwarder to handle all Splunk communications.



Configuration highlights

- **Communications:** uberAgent sends data to the local forwarder's TCP port which in turn sends data to the Splunk indexers
- Splunk Universal Forwarder: a TCP port is opened on each endpoint (for local access only)

Pros

- All Splunk communications are handled by Splunk components
- Additional data can be collected via Universal Forwarder (log files, Windows event logs, scripts)
- Collected data can optionally be persisted to disk before sending off to Splunk

Cons

- Larger footprint than the recommended architecture
- On the local machine, data is sent unencrypted and unauthenticated over TCP

Configuration Options

September 12, 2025

uberAgent can be configured by means of **configuration files** (all platforms) or via **Group Policy** (Windows). Both variants allow for centralized management and automatic deployment. The **recommended** way to configure uberAgent is via Central Config File Management (CCFM).

Default Configuration

Starting with uberAgent 7.4.0, the agent installer does not store the template configuration files on disk any more. You can download the latest template config files for your installed uberAgent version on GitHub. It is advisable to regularly check the GitHub repository for relevant configuration updates, specifically for uberAgent ESA's threat detections and security inventory checks.

Data Volume Optimized Configuration

A configuration optimized for data volume is available as an alternative to the default configuration.

How to Configure uberAgent®

Configuration via Central Config File Management (CCFM)

To configure uberAgent via centrally managed configuration files, please follow these steps (recommended).

Configuration via Local Config Files

To configure uberAgent via configuration files local to the endpoint, please follow these steps.

Configuration via Group Policy

To configure uberAgent via Group Policy, please follow these steps.

Configuration via Citrix Studio or Citrix Web Studio™

To configure uberAgent via Citrix Studio or Citrix Web Studio, please follow these steps. **Note:** This option is only available if uberAgent was installed during the Citrix Virtual Apps and Desktops installation.

Configuration via Config and Support Tool

The uberAgent Config and Support Tool helps you create configurations from scratch and prepare them as Central Configuration File Management configuration bundles. Please find more information here.

Precedence

Windows

- 1. CCFM or Citrix Studio or Citrix Web Studio
- 2. Group Policy
- 3. ProgramData: %ProgramData%\vast limits\uberAgent\Configuration\
 uberAgent.conf

The first configuration found is used exclusively. In other words: CCFM overrides Group Policy, which overrides %ProgramData%.

macOS

- 1. CCFM
- /Library/Application Support/uberAgent/

Antivirus Exclusions

September 7, 2025

It is recommended that specific folders are excluded from scanning by your antivirus product to ensure smooth operation of your uberAgent® deployment. Include the following items to reduce the risk of false positives.

Configuration Files & Scripts

Platform	Path	Filetype
Windows	<pre>%ProgramData%\vast limits\uberAgent\ Configuration*</pre>	.conf, .ps1
Windows	<pre>%ProgramData%\vast limits\uberAgent\ Config cache*</pre>	.conf, .ps1
Windows	<pre>%ProgramData%\vast limits\uberAgent\temp *</pre>	.ps1
macOS	<pre>/Library/Application Support/uberAgent/</pre>	.conf
macOS	<pre>/Library/Application Support/uberAgent/ Security inventory/*</pre>	.zsh
macOS	<pre>/Library/Application Support/uberAgent/ Config Cache/*</pre>	.conf, .zsh

Persistent Output Queue

Exclude the location where the POQ stores its files. The items below assume the default location. If you choose to use a different path, adjust accordingly.

Platform	Path	Filetype
Windows	<pre>%ProgramData%\vast limits\uberAgent\ Output Queue*</pre>	.db, .db-shm, .db-wal
macOS	/Library/Application Support/uberAgent/ Output Queue/*	.db, .db-shm, .db-wal

Splunk Data Volume Calculation

September 12, 2025

When uberAgent is used with Splunk as a backend, a Splunk license is required. Splunk is licensed by daily indexed data volume, i.e., you pay for the total amount of data you send to Splunk per day. How long that data is stored does not matter, only how much new data you add. uberAgent is one of the potentially many data sources that put data into Splunk, contributing to the total data volume.

Estimate or Measure

Customers have a vested interest in knowing how much data each Splunk add-on generates, so they can estimate costs before they buy. In the case of uberAgent, the data volume per host depends greatly on the environment, the types of applications used, the desktop configuration, background processes, the type of browser used and many other variables. For that reason, it is not possible to calculate the data volume with any reasonable accuracy without doing an actual proof of concept implementation (see below). However, if you just want some figures for a **very rough first calculation**, use the following values for typical clients and servers:

uberAgent® UXM data volume

- Typical data volume per single-user client and working day: 25 MB
- Typical data volume per multi-user (Citrix CVAD/RDS) server and working day: 90 MB

uberAgent ESA data volume

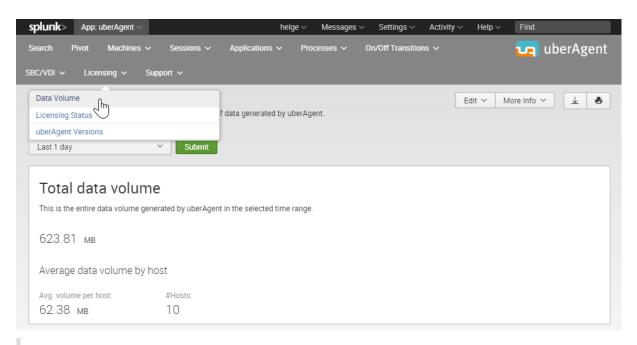
Using uberAgent ESA in addition to uberAgent UXM will approximately double the data volume per client/server and working day.

Accurate data volume numbers

To get accurate numbers install uberAgent and go to the *Data Volume* dashboard (see below). You can significantly reduce the data volume through an optimized configuration.

Data Volume Dashboard

If you already have uberAgent installed, you can simply look up the generated data volume by going to the *Data Volume* dashboard:



Note

Make sure you have configured Splunk correctly or the data volume dashboard may not be able to display values for all metrics.

The dashboard uses macros of the UXM and ESA apps. If you only have the UXM app installed, you see the error message **Error in 'Searchparser': the search specifies a macro 'uberAgentESA_score_index'that cannot be found...**. Installing the ESA app solves that issue.

Reducing the Data Volume

Once you have your first installation set up you might want to fine-tune and possibly reduce the data volume. Luckily that is easily possible. Here is how to reduce uberAgent's data volume.

Splunk Sizing Resources and Recommendations

September 12, 2025

Sizing Splunk is not always trivial, especially if it is used for other use cases in addition to uberAgent. That being said, this page lists some basic recommendations as well as resources that should help with sizing Splunk. Before we start, please keep in mind that the only generic answer any good consultant will give is: "it depends". Because it does.

That being said, this page lists some basic recommendations as well as resources that should help with sizing Splunk. Before we start, please keep in mind that the only generic answer any good consultant

will give is: "it depends". Because it does.

Splunk Sizing Considerations

Hardware Resources: CPU and Disk

Splunk needs CPU and disk resources, RAM not so much (compared to some other workloads). Make sure you have enough disk space for the planned retention time as well as a disk subsystem that delivers good IOPS numbers.

Accelerated Data Model

uberAgent's Splunk app makes use of an accelerated data model which speeds up searches by about 50-100x. The data model's high-performance analytics store (HPAS) is located on the indexers. Generating the HPAS incurs some additional indexer CPU load and requires additional disk storage.

Heavy Forwarders

Splunk Heavy Forwarders (HFs) can often be a useful third tier, logically situated between the uberAgent endpoints and the Splunk indexers. If you are deploying uberAgent to tens of thousands of endpoints, keep in mind that high numbers of simultaneous network connections may place a significant load on the HFs. Monitor heavy forwarder performance and be prepared to scale out.

Splunk Sizing Recommendations

- 1. Always **start with a PoC** and closely monitor Splunk performance during that phase.
- 2. Measure uberAgent's data volume, keeping in mind that optimization is often possible.
- 3. Due to the accelerated data model, uberAgent's Splunk load profile is somewhat similar to Splunk's Enterprise Security (ES) app. When looking at sizing guides, base your calculations on the ES use case.

Splunk Sizing Resources

- Splunk's Capacity Planning Manual and its chapter on reference hardware and its summary of performance recommendations
- The deployment planning chapter from Splunk's Enterprise Security installation and upgrade manual
- Splunk's unofficial storage sizing calculator

- Hurricane Labs' Splunking Responsibly blog series. Part 1: considerations for managing limited system resources and Part 2: sizing your storage
- Aplura's Splunk best practices

uberAgent® Feature Support on macOS

September 12, 2025

The long-term goal for uberAgent on macOS is to achieve feature-parity with its Windows counterpart. As long as this is not yet the case, this article helps you to see at a glance **which metrics are being collected and which dashboards contain macOS-specific information**.

More information about individual fields is available in the metrics documentation.

User Experience Monitoring

Sourcetypes

- uberAgent:Application:AppNameIdMapping
- uberAgent:Application:ApplicationInventory
- uberAgent:Application:BrowserWebRequests2
- uberAgent:Application:Errors
- uberAgent:Application:NetworkConnectFailure
- · uberAgent:Config:ConfigInfo
- uberAgent:License:LicenseInfo
- uberAgent:Process:NetworkTargetPerformance
- uberAgent:Process:ProcessDetail
- uberAgent:Process:ProcessStartup
- uberAgent:Process:ProcessStatistics
- · uberAgent:Session:SessionDetail
- uberAgent:System:DiskInventory
- · uberAgent:System:MachineInventory
- uberAgent:System:MonitorInventory
- uberAgent:System:NetworkConfigInformation
- uberAgent:System:SystemPerformanceSummary2
- uberAgent:System:VolumeInventory

Dashboards

Experience Score

- Experience Score Overview
- Machine Scores
- Session Scores
- Application Scores

Machines

- Machine Performance
- Machine Network Communication
- Machine Network Configuration
- Machine Network Issues
- Machine Uptime
- Machine Inventory
- · Machine Storage

Sessions

- User Session Overview
- User Sessions
- Session 0

Applications

- Application Performance
- Application Errors
- Application Network Communication
- Application Network Issues
- Browser Web App Performance
- Browser Web App Usage
- Application Inventory
- Application Usage

Processes

- Process Performance
- Process Network Communication
- Process Network Issues

Licensing

- Data Volume
- Licensing Status
- uberAgent Versions

Endpoint Security Analytics

Sourcetypes

- uberAgentESA:ActivityMonitoring:ProcessTagging
- uberAgentESA:Process:DnsQuery

Dashboards

Processes

- Threat Detection Events
- DNS Exfiltration & Tunneling
- Process Tree

Telemetry data elements

September 7, 2025

Usage

Headers

Key	Description	Example
ver	Indicates the version of the telemetry event.	1.0
id	Indicates a unique identifier of the usage event.	d4ce7919-5d80-44de-a8fa- 102923fe0ead
type	Indicates the event type used by Citrix Analytic Service to identify cloud usage events.	EndpointAgent.Configuration

Key	Description	Example
st	Indicates the timestamp when the event is generated in uberAgent.	2024-11-01T16:07:46.384Z
prod	Identifies the originating product and deployment of the usage event.	uberAgent®
prodVer	Indicates the uberAgent product version.	7.4.0.6504

Payload

Field	Description	Example
osversion	Operating system the uberAgent is installed on	10.0.26100
deviceid	Indicates a Unique identifier for the uberAgent endpoint	n7+hhF/2NRhfPG2U
ostype	Type of the operating system uberAgent is installed on	1
isvm	Is the endpoint a virtual machine or not	1
otherctxcomponents	Are there other Citrix® components installed?	1
configsource	uberAgent configuration source	1
agentworkingmode	uberAgent working mode	1
licensetype	Type of uberAgent license installed	2
licenseexpirationdate	Expiration date of the license	2025-12-31
usercount	Total unique user count	6
browserextensions	Actively used uberAgent browser extensions, e.g., Edge, Chrome, CEB	1,2,5
metricsconfig	Used backend systems, active metrics, and data collection frequency	"interval": "30s","backends": [1,2],"metrics": [1,2,5,10,51]

Screambled licensing telemetry data

Considering the sensitivity of information sent in the license telemetry, Citrix scrambles the following data.

Field	Description	Example
deviceid	Indicates a Unique identifier for the uberAgent endpoint	n7+hhF/2NRhfPG2U

Installation

September 7, 2025

Installing uberAgent is quick and easy. This section shows you how to install the two main uberAgent components: the actual agent that runs on the machines you want to monitor as well as the backend that stores and visualizes the collected data.

Backend

September 7, 2025

Supported Backends

While uberAgent has been designed to use **Splunk** as a backend from day one, it also works well with **Elasticsearch & Kibana**, **Apache Kafka**, **Microsoft Azure Monitor**, and **Microsoft ADX**. Installing instructions for all backends are available in this section.

Installing Splunk

September 12, 2025

This page explains how to install a Splunk server for uberAgent.

Prerequisites

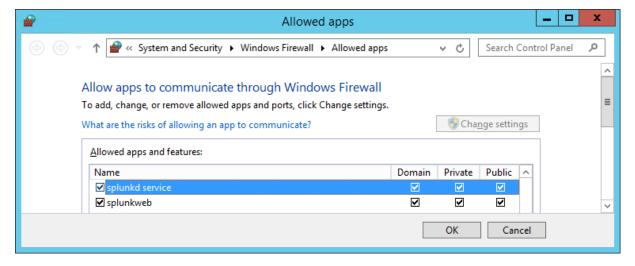
- Download Splunk
- Please see the KB article supported Splunk versions

Setup

Run through Splunk's setup on the designated Splunk server (in this simple tutorial we assume that you only have a single, Windows-based Splunk server). Choose *Local system user* when asked for a Splunk user.

Firewall

Once Splunk is installed: if you have a firewall enabled, make sure that communication is allowed for splunkd.exe and splunkweb.exe (both normally located in C:\Program Files\Splunk\bin). For Windows Firewall the recommended configuration looks like this:



Log On

Log on to the Splunk console by navigating to http://servername:8000 in your browser.

License

If you plan to use Splunk Enterprise and already have a license, install it through **Settings** > **Licensing**. If you do not have a license yet: Splunk runs in Enterprise mode with an allowed daily data volume of 500 MB for 60 days. Then it switches to the free version.

Sending to Splunk's HTTP Event Collector

If you plan to have the endpoint agent send the collected data to Splunk's HTTP Event Collector follow the steps in this article.

Install uberAgent®

Read on about how to install uberAgent.

Configuring Splunk's HTTP Event Collector

September 12, 2025

What is HTTP Event Collector

HTTP Event Collector (HEC) is a high-performance REST API data input. It accepts plain text or JSON data sent via HTTP or HTTPS.

Clients must authenticate with a token in order to be able to send data to a HEC input. Multiple tokens can be generated per HEC input if required.

When to Use HTTP Event Collector

HTTP Event Collector (HEC) is the only way to send uberAgent data to Splunk Cloud. But it is useful even with on-premises Splunk Enterprise. HEC forces clients to authenticate before being allowed to send and it can use HTTPS as data transport, which qualifies it for sending data over the internet.

uberAgent natively supports HEC. It can send the data it collects to HEC via HTTP or HTTPS.

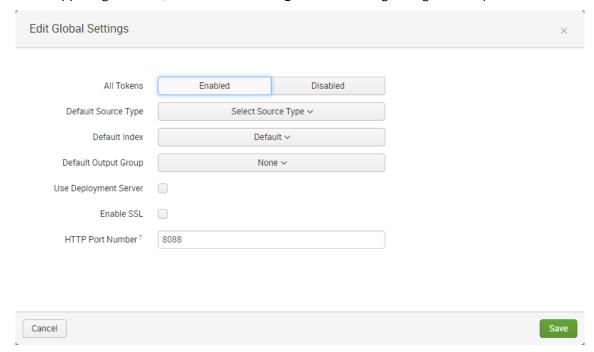
Configuring HTTP Event Collector in Splunk Enterprise

Enabling HTTP Event Collector in the UI

To enable HTTP Event Collector (HEC) for uberAgent® follow these steps:

- From the system bar, click Settings > Data Inputs
- On the left side of the page, click **HTTP Event Collector**

• In the upper right corner, click **Global Settings**. The following dialog comes up:



- In the All Tokens toggle button, select Enabled
- Optionally change the HEC port or enable SSL/TLS
 - Note that Splunk's default self-signed certificate is not trusted by uberAgent if it is not in the endpoint's operating system certificate store.
 - HTTP Event Collector shares SSL settings with the Splunk management server so check your server.conf for SSL configuration details.
- Click Save

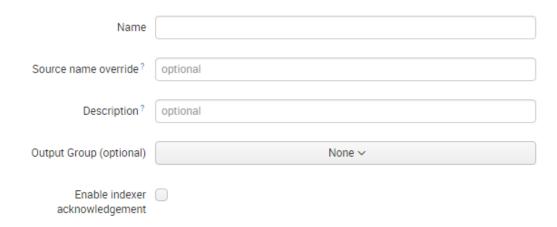
Creating an HTTP Event Collector Token in the UI

To use the HTTP Event Collector, you must configure at least one token. The token is what uberAgent uses when it connects to Event Collector to send data.

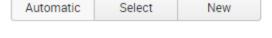
To create an HEC token for use with uberAgent follow these steps:

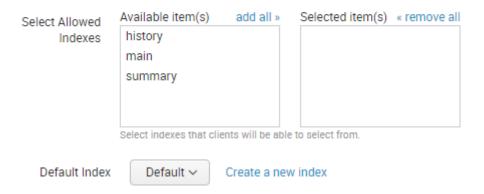
- From the system bar, click Settings > Data Inputs
- On the left side of the page, click HTTP Event Collector
- In the upper right corner, click **New Token**. The following dialog comes up:

Configure a new token for receiving data over HTTP. Learn More 12

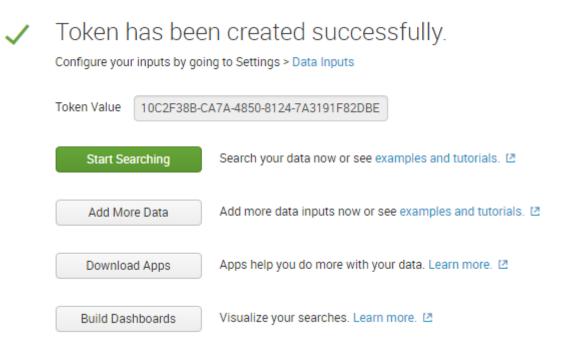


• Enter a name (e.g. uberAgent) and click **Next**. The following dialog comes up:





- Leave everything at the defaults and click Review
- On the next page click **Submit**
- Copy the token value displayed. In the following screenshot that would be: 10C2F38B-CA7A-4850-8124-7A3191F82DBE



HTTP Event Collector Configuration Files

Splunk HTTP Event Collector can be configured through configuration files instead of the UI, which is often required for automation or for configuring settings that are not exposed in the UI. See Splunk's documentation Set up and use HTTP Event Collector with configuration files for details.

Configuring uberAgent to Send to an HTTP Event Collector Input

To configure uberAgent to send its collected data to HEC the following configuration settings are required:

- **Servers:** comma-separated list of URLs starting with http or https, e.g.: http://server1 :8088, https://server2:8088
- **Protocol:** must be set to HTTP (even when sending via HTTPS)
- **RESTToken:** fill in the token created above. The token can optionally be encrypted with the uAEncrypt commandline tool.

Please make sure to review the KB document Reuse of Open HTTP Connections.

Installing and Configuring Elasticsearch & Kibana

September 12, 2025

This document explains how to install and configure Elasticsearch/Kibana for uberAgent (in this simple tutorial, we assume that you only have a single node with Elasticsearch and Kibana).

Installation

Follow Elastic's installation guide to install Elasticsearch.

Configuration for uberAgent®

Elasticsearch 6.x

Elasticsearch 6 is only supported by uberAgent version 6.2 and lower.

Run the following PowerShell command on the Elasticsearch server to create an index template for uberAgent with the required field definitions:

On Linux use:

```
curl -XPUT -H 'Content-Type: application/json'http://localhost:9200/
_template/uberagent -d@elasticsearch-uberagent.json
```

The file elasticsearch-uberagent.json is part of the uberAgent download package.

If you enabled X-Pack security, you need to pass the elastic user (configured during the setup) for the commands above. On Windows use the -Credential parameter, for Linux -u.

Elasticsearch 7.7 And Lower

Elasticsearch 7.7 and lower are only supported by uberAgent version 6.2 and lower.

Run the following PowerShell command on the Elasticsearch server to create an index template for uberAgent with the required field definitions:

```
1 Invoke-RestMethod -Uri http://localhost:9200/_template/uberagent?
    include_type_name=true -Method Put -InFile .\elasticsearch-uberagent
    .json -ContentType "Application/json"
```

On Linux use:

```
curl -XPUT -H 'Content-Type: application/json'http://localhost:9200/
   _template/uberagent?include_type_name=true -d@elasticsearch-uberagent
.json
```

The file elasticsearch-uberagent.json is part of the uberAgent download package.

If you enabled X-Pack security, you need to pass the elastic user (configured during the setup) for the commands above. On Windows use the -Credential parameter, for Linux -u.

Elasticsearch 7.8 And Higher (Including 8.x)

Elasticsearch 7.8 and higher as well as 8.x are only supported by uberAgent version 6.3 and higher. Run the following PowerShell command on the Elasticsearch server to create an index template for uberAgent with the required field definitions:

```
1 Invoke-RestMethod -Uri http://localhost:9200/_index_template/uberagent
    -Method Put -InFile .\elasticsearch-uberagent.json -ContentType "
    Application/json"
```

On Linux use:

```
curl -XPUT -H 'Content-Type: application/json'http://localhost:9200/
_index_template/uberagent -d@elasticsearch-uberagent.json
```

The file elasticsearch-uberagent.json is part of the uberAgent download package.

If you enabled X-Pack security, you need to pass the elastic user (configured during the setup) for the commands above. X-Pack security is enabled by default since Elasticsearch 8. On Windows use the -Credential parameter, for Linux -u.

If you want to use an Elasticsearch data stream instead of a classic index, add "data_stream": {
}, to the file elasticsearch-uberagent.json. Example:

```
1
   {
2
3
       "priority": 100,
4
       "index_patterns": [
          "uberagent*"
5
6
      ],
       "data_stream": {
7
8
9
      "template": {
10
11
          "mappings": {
12
13
          "dynamic": "strict",
14
             "properties":
15
16
```

```
17
18
                 "@timestamp" : {
    "type" : "date" }
19
20
21
               }
22
           }
23
24
25
        }
27
    }
```

Kibana

Follow Elastic's installation guide to install Kibana

Dashboards

uberAgent only comes with Splunk dashboards.

Install uberAgent

Read on about how to install uberAgent.

To configure uberAgent to send data to Elasticsearch, a configuration section similar to the following is required:

```
1 [Receiver]
2 Name = Default
3 Type = Elasticsearch
4 Protocol = HTTP
5 Servers = http://servername:9200
6 # The setting RESTToken is required if X-Pack security is enabled. It is enabled by default since Elasticsearch version 8.
7 RESTToken = username:password
```

Configuring Microsoft Azure Monitor

September 12, 2025

This page explains how to configure uberAgent to send the collected data to Microsoft Azure Monitor.

Support/Status

Support for Microsoft Azure Monitor Logs is **experimental** and **and available exclusively on Windows platforms**.

Creating the Log Analytics Workspace

To use uberAgent® with Microsoft Azure Monitor Logs, please follow these steps:

- Navigate to https://portal.azure.com and sign in with your Microsoft account or your Organizational account associated with your Microsoft Azure subscription.
- Navigate to the Azure service Log Analytics workspaces and create a new workspace by specifying a unique workspace name, subscription, resource group, location and pricing tier or use an existing workspace linked to your Microsoft Azure subscription.
- Open up the **Advanced settings** > **Connected sources** menu and note the WORKSPACE-ID and the PRIMARY-KEY.

Configuring uberAgent to Send to Azure Monitor Logs

To configure uberAgent to send its collected data to Azure Monitor Logs the following Receiver configuration settings are required:

```
• Type: OMSLogAnalytics
```

Protocol: HTTP

• Servers: https://WORKSPACE-ID.ods.opinsights.azure.com

• **RESTToken:** PRIMARY-KEY

Example

```
1 [Receiver]
2 Name = Default
3 Type = OMSLogAnalytics
4 Protocol = HTTP
5 Servers = https://WORKSPACE-ID.ods.opinsights.azure.com
6 RESTToken = SECRET-PRIMARY-KEY
```

Configuring Apache Kafka & Confluent REST Proxy

September 12, 2025

Introduction

What is Apache Kafka

Apache Kafka is a high-performance distributed message queueing and event stream processing platform. Producers send data to Kafka, which buffers the incoming events to disk for a configurable period of time. Kafka logically groups events into topics, which Consumers subscribe to.

What is Confluent REST Proxy

Confluent is a Kafka distribution targeted at enterprises. It adds monitoring, security, and management components to open source Kafka.

While vanilla Kafka only accepts incoming data via a proprietary binary protocol, Confluent comes with a REST proxy that is similar in nature to Splunk HEC or Elasticsearch REST API. REST Proxy is part of the free community edition of Confluent.

When to Use Kafka with uberAgent®

By routing uberAgent's data through Kafka, enterprises can make end-user computing metrics available to individual teams within the organization in a publish/subscribe kind of model. Once access has been granted for a topic, a team can start consuming that topic's metrics. While some teams might be interested in uberAgent's asset and inventory information, others might need access to application performance or browser web app usage data.

Kafka makes it possible to distribute uberAgent's metrics in a highly scalable manner, supporting hundreds of thousands of endpoints (data producers) and thousands of consumers. uberAgent natively supports Kafka via the Confluent REST proxy.

Prerequisites

In order for uberAgent to be able to send data to a Kafka backend the following is required:

- Confluent REST Proxy with Confluent Schema Registry
- · Apache Kafka

Please see the system requirements for details.

Implementation Details

Topics

Kafka Topics and uberAgent Sourcetypes uberAgent uses Splunk's concept of sourcetypes to logically group events. uberAgent sourcetypes names always start with uberAgent followed by two additional sections concatenated by colons. Example:

```
1 uberAgent:Application:Errors
```

uberAgent sourcetypes are mapped to Kafka topics in a 1:1 relationship. Since colons are not allowed in topic names, they are replaced by underscores. The sourcetype from the above example maps to the following Kafka topic:

```
1 uberAgent_Application_Errors
```

Topic Creation uberAgent does not create Kafka topics. For uberAgent to be able to send data to Kafka, either topic auto-creation must be enabled (setting auto.create.topics.enable), or the topics needed by uberAgent must be created manually.

uberAgent's sourcetypes are documented here. A listing of all sourcetypes is available in the file uA_sourcetypes_metrics.csv which is part of the uberAgent dashboard app (included in the uberAgent download).

Partitions

Kafka stores topic data in partitions that can be distributed across nodes in a Kafka cluster. One partition per consumer group is required.

Kafka producers like uberAgent can either select a specific partition for each event or have events be distributed randomly across partitions. uberAgent combines the two approaches: it specifies the hostname as key for each event. This ensures that all events from a specific host are always stored in the same partition.

Schema and Data Format

uberAgent uses Avro as data format when sending to Kafka. Avro requires a schema definition for every event. This guarantees high data quality and easier processing by downstream consumers.

In order to minimize network data volume, uberAgent sends the full schema definition only for the first event of a topic. All further events of the same topic reference the topic's schema definition by the ID returned from the schema registry in response to the first event.

Avro requires REST Proxy to be configured with a schema registry URL (configuration setting schema .registry.url).

Event Metadata Each uberAgent event has the same default metadata fields in Kafka as in Splunk:

- time
- host
- index
- source
- sourcetype

The sourcetype is used as the key for the Kafka partition selection (see above) and added to each event as a dedicated field.

REST Proxy API Details uberAgent sends data to the Confluent REST Proxy API v2 via HTTP POST to /topics/SOURCETYPE (docs). The HTTP content type is application/vnd.kafka.v2+json.

Configuration

uberAgent

To configure uberAgent to send data to Kafka via Confluent REST Proxy a configuration section similar to the following is required:

The receiver Name can be any string. The Protocol must be HTTP - it stands for a REST endpoint accessed via http or https. The Servers parameter accepts a comma-separated list of REST proxies that are contacted in a round-robin fashion for fault tolerance and load sharing. TLSClientCertificate optionally specifies a client certificate to use for authentication (see below).

Kafka

Please see the implementation details section above for information on how to configure Confluent and Kafka for receiving data from uberAgent.

Authentication

Confluent REST Proxy supports authentication via an HTTPS client certificate on the endpoint. Make sure to specify the TLSClientCertificate option in the uberAgent configuration.

It is not necessary to issue individual certificates to clients. A single certificate with CN=uberAgent (or similar) might be best.

Confluent REST Proxy propagates the client certificate to the Kafka broker in one of two ways:

- TLS
- SASL

The following sections show the configuration steps for each option.

Client Certificate Propagation via TLS In order for certificate propagation from REST Proxy to the Kafka brokers to work, the following requirements must be met:

- REST Proxy and the Kafka brokers must be configured for TLS support
- A root CA that issues all required certificates and is trusted by all components is highly recommended
- REST Proxy's client certificate store must contain the certificate (inluding private key) uberAgent authenticates with

REST Proxy Configuration This example shows a simple configuration with all components on one server. In a real-world deployment that would most likely not be the case. Adjust the URLs accordingly.

Add the following to the file /etc/kafka-rest/kafka-rest.properties:

```
11 # REST proxy to broker connection
12
14
15 bootstrap.servers=localhost:9093
16 client.security.protocol=SSL
18 # The client keystore contains the client certificate (including the
     private key) that is used by uberAgent to authenticate. REST proxy
     passes it on to the broker.
19 client.ssl.keystore.location=/opt/vastlimits/certificates/kafka.
     clientkeystore.jks
20 client.ssl.keystore.password=PASSWORD3
21 client.ssl.key.password=PASSWORD3
23 # The truststore contains the collection of CA certificates trusted by
     this application
24 client.ssl.truststore.location=/opt/vastlimits/certificates/kafka.
     truststore.jks
25 client.ssl.truststore.password=PASSWORD1
  27
29 # Miscellaneous
30 #
33 # Listeners (port 8083 cannot be used for REST Proxy because it is used
      by Confluent Connect)
34
  listeners=https://0.0.0.0:8084
37 #
38 # Security plugin
39 #
41
  # License for commercial edition (required for the security plugin)
  confluent.license=LICENSE_KEY
43
44
45 # Enable the REST proxy security plugin
46 kafka.rest.resource.extension.class=io.confluent.kafkarest.security.
     KafkaRestSecurityResourceExtension
47
  # Whether or not to require the HTTPS client to authenticate via the
48
     server's trust store (required if the security plugin is enabled)
  ssl.client.auth=true
49
53 # HTTPS from clients to REST proxy
54 #
```

Kafka Broker Configuration Add the following to the file /etc/kafka/server.properties .

```
# The truststore lists certificates that are allowed to connect.
    Specify either a single CA certificate or individual client
    certificates.

2 ssl.truststore.location=/opt/vastlimits/certificates/kafka.truststore.
    jks

3 ssl.truststore.password=PASSWORD1

4

5 # Server certificate for the broker
6 ssl.keystore.location=/opt/vastlimits/certificates/kafka.keystore.jks
7 ssl.keystore.password=PASSWORD2

8 ssl.key.password=PASSWORD2

9

10 # Both plaintext and SSL listeners on different ports. Plaintext can be
    used from the schema registry, for example.

11 listeners=PLAINTEXT://:9092,SSL://:9093

12

13 # Enforce authentication for clients connecting via SSL
14 ssl.client.auth=required
```

Client Certificate Propagation via SASL You will find more information in the official Confluent documentation.

Configuring Microsoft Azure Data Explorer (ADX) & Azure Event Hubs

December 11, 2025

Introduction

What is Azure Data Explorer (ADX)

Microsoft Azure Data Explorer (ADX) is a data analytics platform designed for querying and analyzing large volumes of data in near real time.

What is Azure Event Hubs

Microsoft Azure Event Hubs is a real-time data ingestion service based on Apache Kafka. It can process millions of events per second which subsequently can be made available to hundreds of individual consumers (applications that read and process incoming data).

Why Combine Azure Data Explorer With Azure Event Hubs for uberAgent® Data

In enterprise scenarios, uberAgent's endpoint agents may send events concurrently from hundreds of thousands of devices. This requires a backend service that is capable of ingesting millions of events per second. In the Azure cosmos, Event Hubs is exactly such a service. Once ingested, it buffers uberAgent's events until they've been routed to Azure Data Explorer (ADX), where they can be efficiently queried from various additional services via the Kusto Query Language (KQL).

Advantages of Using Azure Data Explorer & Azure Event Hubs for uberAgent Data

By routing uberAgent's data through Azure Event Hubs to Azure Data Explorer, enterprises can make DEX and endpoint security metrics available to individual teams within the organization in a publish/subscribe kind of model. Once access has been granted to an ADX database, a team can start working with the metrics it stores.

Azure Event Hubs makes it possible to distribute uberAgent's metrics in a highly scalable manner, supporting hundreds of thousands of endpoints (data producers) and thousands of consumers. uberAgent natively supports Azure Data Explorer via Azure Event Hubs.

Prerequisites

In order for uberAgent to be able to send data to an Azure Data Explorer backend, the following Azure services are required:

- Microsoft Azure Event Hubs
- Microsoft Azure Data Explorer Cluster
- · Microsoft Azure Enterprise Application

Please see the system requirements for details.

Setup

Navigate to the Azure portal and sign in with an organizational account associated with your Microsoft Azure subscription.

Creating an Azure Enterprise Application

In order to authenticate to Event Hubs, an Enterprise Application needs to be created. Follow the steps in the Microsoft documentation. Make sure to obtain a **client ID** and a **client secret**.

Creating the Azure Event Hubs Namespace & Instance

- 1. **Create a new Event Hubs namespace** Azure service by specifying a resource group, a unique namespace name, a location, and a pricing tier.
- 2. Assign the following permissions to the namespace for the enterprise application you created above:
 - · Azure Event Hubs Data Sender
 - Schema Registry Contributor (Preview)
 - Schema Registry Reader (Preview)
- 3. Open up the newly created Event Hubs namespace and **create an Event Hubs instance** by specifying a unique name, the partition count (1 is sufficient), and the retention time.

Creating the Azure Data Explorer Cluster

- 1. **Create a new Azure Data Explorer Cluster** by specifying a resource group, a unique cluster name, and the workload.
- 2. **Create a new database** in the newly created Azure Data Explorer Cluster by specifying a database name, the retention period, and the cache period.
- 3. Open the newly created database and **create a new data connection**, using the Event Hubs instance created above as the source. Specify a data connection name, and the name of the Event Hubs namespace. Make sure to allow routing the data to other databases and leave the table name empty. Set the data format to CSV.

Creating the Azure Data Explorer Tables

The uberAgent endpoint agent does not create the database tables in Azure Data Explorer. The script uberAgentSchema.AzureDataExplorer.kql to create the tables is part of the uberAgent download package.

Configuring Azure Event Hubs as Data Receiver in uberAgent

Receiver Stanza The following configuration settings are required in a Receiver stanza:

• Type: AzureEventHubs

Protocol: HTTP

• **AzureEventHubsConfigurationId:** The ID of the AzureEventHubsConfiguration stanza (see below).

AzureEventHubsConfiguration Stanza The following configuration settings are required in an AzureEventHubsConfiguration stanza:

- Id: Unique GUID this stanza is referenced by from a Receiver stanza.
- AuthenticationURL: The authentication URL (optional). The default value is: https://login.microsoftonline.com/##UA_TENANTID###/oauth2/token
- SendDataURL: The URL to send the data to (optional). The default value is: https://###
 UA_EVENTHUBSNAMESPACE###.servicebus.windows.net/###UA_HUBNAME###/
 messages
- AzureEventHubsNameSpace: The name of the Azure Event Hubs namespace. Placeholder variable: ###UA_EVENTHUBSNAMESPACE###
- AzureHubName: The name of the Azure Event Hubs instance. Placeholder variable: ###
 UA HUBNAME###
- AzureTenantID: The Entra tenant ID. Placeholder variable: ###UA_TENANTID###
- **AzureClientID:** The Entra enterprise application client ID.
- AzureClientSecret: A client secret associated with the client ID.

The fields ###UA_TENANTID###, ###UA_EVENTHUBSNAMESPACE###, and ###UA_HUBNAME ### are placeholders and are replaced by the agent with their corresponding value.

Example

```
1 [Receiver]
2 Name = Citrix Azure Event Hubs
3 Type = AzureEventHubs
4 Protocol = HTTP
```

```
5 AzureEventHubsConfigurationId = 82204bf8-fc99-4d59-8903-7206234dcbc8
6 7 [AzureEventHubsConfiguration]
8 Id = 82204bf8-fc99-4d59-8903-7206234dcbc8
9 AzureEventHubsNameSpace = 10 AzureHubName = uberagent 11 AzureTenantID = YOUR_TENANT_ID 12 AzureClientID = YOUR_ENTRA_ENTERPRISE_APPLICATION_CLIENT_ID 13 AzureClientSecret = YOUR_AZURE_CLIENT_SECRET
```

Implementation Details

Authentication Method

Authentication from the uberAgent endpoint agent to the Event Hubs instance happens by way of Azure AD JSON web tokens (JWT).

Routing Events to the Proper ADX Table

uberAgent sends many different types of events, distinguished by a so-called sourcetype. Each sourcetype has its own field definition and, therefore, needs to be stored in its own ADX table.

While uberAgent sends all types of events to a single Event Hubs ingestion service, from there the incoming events need to routed to the proper ADX tables depending on each event's sourcetype. This routing is automatically accomplished by adding an HTTP header with the name of the ADX table, e.g.:

```
1 "Table" : "Process_ProcessStartup"
```

Timer scripts

Timers are mostly used to determine metrics (e.g. SessionDetail). They can also be used to start custom scripts (see here). The output of the scripts is sent to the backend where the timer name is part of the sourcetype. In most backends the sourcetype does not need to be created in advance, or it is created by uberAgent. In Azure Data Explorer the table needs to be created manually by the customer otherwise ingestion errors occur.

The table name has the following format: Script_.

The following gives an example of the KQL script needed to run to ingest the result data of a custom script into the corresponding table in Azure Data Explorer.

```
1 [Timer]
2 Name = DetermineDepartment
```

```
3 Interval = 30000
4 Script = C:\Scripts\DetermineDepartment.cmd
5 ScriptContext = UserSessionAsUser
```

The output of the script DetermineDepartment.cmd is:

Department=Sales UserName=John

The KQL script to create the table and the ingestion mapping in Azure Data Explorer for this timer is:

```
1 .execute database script 
2 .create table Script_DetermineDepartment (Timestamp: long, Host: string
      , Department: string, UserName: string);
3 .create table Script_DetermineDepartment ingestion csv mapping '
      Script_DetermineDepartment_mapping' '[{
4
   "column":"Timestamp", "Properties":{
   "Ordinal":"0" }
5
6
    }
7
    "column":"Host", "Properties":{
8
9
    "Ordinal":"1" }
10
11
    "column":"Department", "Properties":{
    "Ordinal":"2" }
13
14
15
    "column":"UserName", "Properties":{
16
    "Ordinal":"3" }
17
18
    }
19
    ]';
```

The fields Timestamp and Host are mandatory and are automatically added by uberAgent. The field names in the output do not necessarily have to match the field names in the table.

Configuring Cribl Stream

September 12, 2025

What is Cribl Stream

Cribl Stream helps you process machine data —logs, instrumentation data, application data, metrics, etc. —in real time, and deliver them to your analysis platform of choice. It allows you to:

- Add context to your data, by enriching it with information from external data sources.
- Help secure your data, by redacting, obfuscating, or encrypting sensitive fields.
- Optimize your data, per your performance and cost requirements.

Benefits of Using uberAgent® With Cribl Stream



Cribl Stream supports a wide range of data sources and destinations, allowing you to use it as a central hub for data processing. If your analysis platform is not on the list of uberAgent-supported platforms, but is supported by Cribl, you can use Cribl Stream to forward the data to the destination.

Also, Cribl Stream allows you to transform the data before sending it to the destination. This can be useful for enriching, redacting, or optimizing uberAgent's collected data.

Cribl Stream Configuration

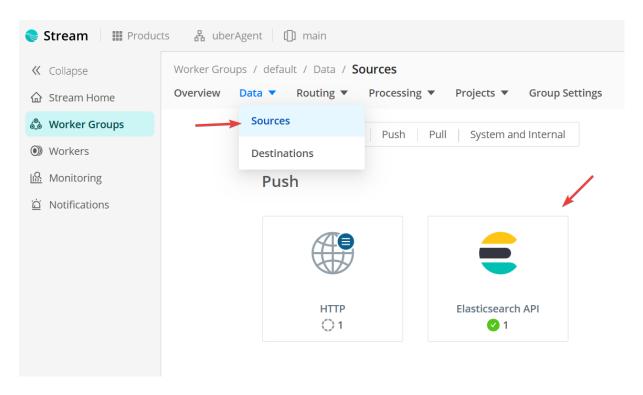
This section describes how to configure Cribl Stream's Elasticsearch data source, a transforming Cribl pipeline, and the connection between data source, pipeline, and target, to forward data to your analysis platform.

Note: This guide assumes that you have already installed Cribl Stream and added your target platform as destination. If you have not, please refer to the Cribl Stream documentation.

Elasticsearch Data Source

Cribl's Elasticsearch data source allows you to ingest data from uberAgent into Cribl Stream, as Elasticsearch is supported by uberAgent.

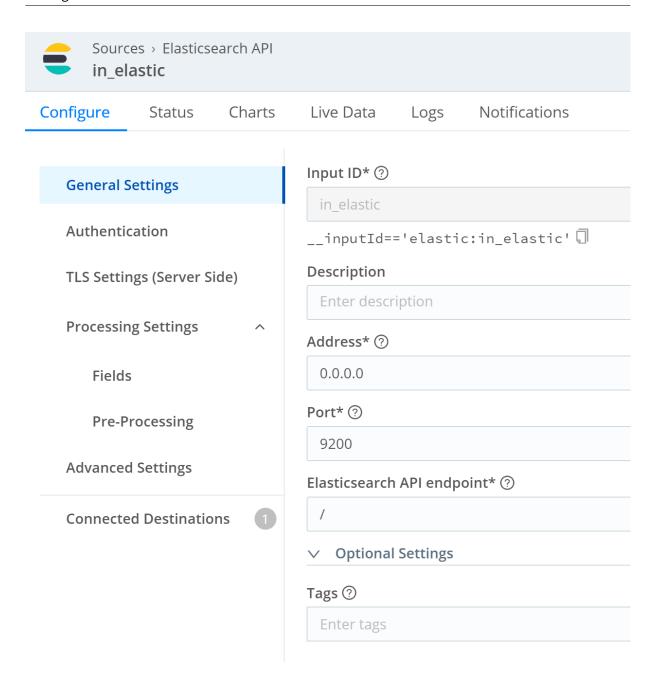
In Cribl Stream, navigate to the **Data** menu and choose **Sources**. Search for the **Elasticsearch API**.



In the next screen, click **Add source**. Configure the source as follows.

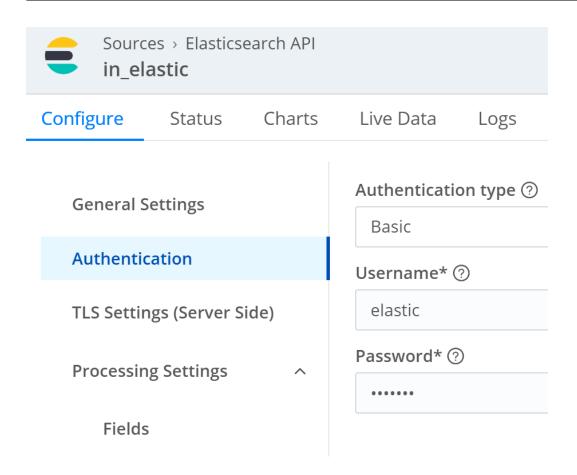
General Settings

- Input ID: Enter a unique name for the source.
- **Description**: Enter a description for the source.
- Address: Address to bind on. Defaults to 0.0.0.0 (all addresses).
- Port: Port to bind on. E.g. 9200.
- Elasticsearch API endpoint: Leave the default /.
- Tags: Optionally, add tags to the source.

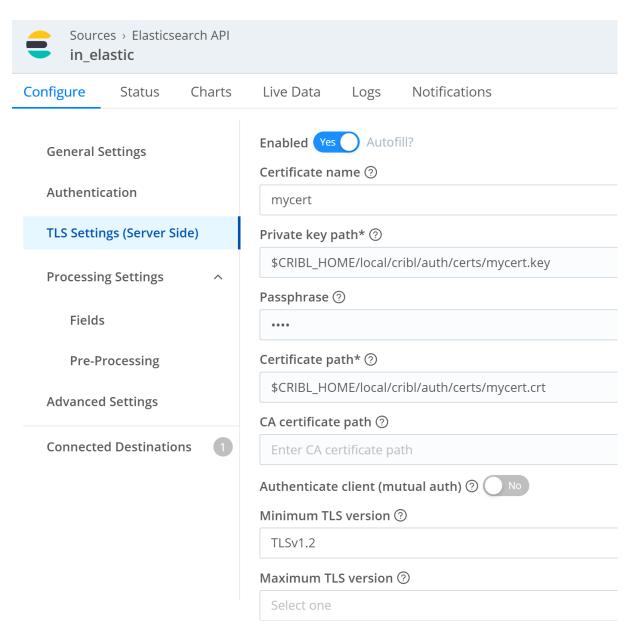


Authentication

Authentication type: Basic
Username: Enter a username.
Password: Enter a password.



TLS Settings Cribl allows using the Elasticsearch source over plain and unsecured HTTP. However, we advise using TLS for secure communication. If you have not already configured TLS, please refer to the Cribl Stream documentation.



Remember that the uberAgent endpoints have to trust the Cribl Stream certificate. If you are using a self-signed certificate, please refer to Using uberAgent With Self-Signed Certificates.

Authenticate client (mutual auth) is not supported by uberAgent.

Click Save.

Transforming Pipeline

Cribl Stream allows you to transform data using a pipeline. We documented the required steps to send uberAgent's data to your target platform. But, you can also use the pipeline to enrich, redact, or optimize the data.

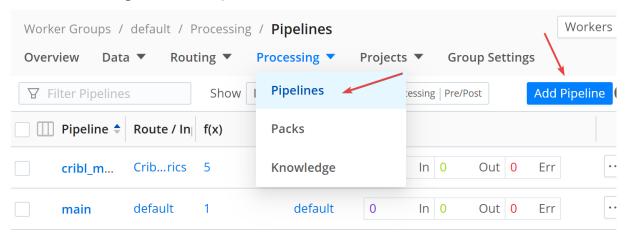
Save the following JSON as input.json.

```
1 {
2
     "id": "uberAgent",
3
4
     "conf": {
5
        "output": "default",
6
        "streamtags": [],
8
        "groups": {
9
     }
        "asyncFuncTimeout": 1000,
11
12
        "functions": [
13
          {
14
            "filter": "true",
15
16
            "conf": {
17
              "srcField": "'@timestamp'",
18
              "dstField": "_time",
              "defaultTimezone": "local",
20
              "timeExpression": "time.getTime() / 1000",
21
              "offset": 0,
22
              "maxLen": 150,
23
              "defaultTime": "now",
"latestDateAllowed": "+1week",
24
25
              "earliestDateAllowed": "-420weeks"
26
27
             }
28
            "id": "auto_timestamp",
29
            "description": "Calculates a timestamp field"
31
33
          {
34
            "filter": "true",
            "conf": {
36
37
              "remove": [
39
                 "'@timestamp'"
40
             }
41
42
            "id": "eval",
43
44
            "description": "Removes the old timestamp from the _raw event"
45
46
47
48
        "description": "Extracts the timestamp"
       }
49
50
51
    }
```

This pipeline does the following:

- 1. **auto_timestamp**: Calculates the _time field based on uberAgent's @timestamp field. Otherwise, Cribl would take the time of the data ingestion as the _time field. But, you want to use the time when the data was collected by uberAgent.
- 2. **eval**: Removes the old @timestamp field from the data.

Click on **Processing** and choose **Pipelines**.



Click **Add Pipeline** and choose **Import from File**. Select the input.json file.

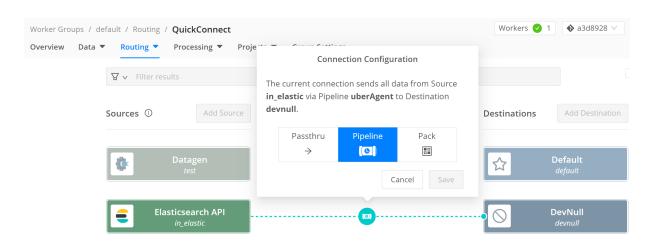
Connection

Now that you have configured the data source and pipeline, you need to connect them to forward the data to your analysis platform.

In the Routing menu, select QuickConnect.

Select the **Elasticsearch API** source and connect it via drag and drop with the **DevNull** target. This is a dummy target that discards the data. You can replace it with your target platform.

In the **Connection Configuration** dialog, select **Pipeline**. If the dialog does not open automatically, click on the connection.



Select the **uberAgent** pipeline and click **Save**.

Commit & Deploy

To save the changes, click on the **Commit & Deploy** button in the top right corner.

uberAgent Configuration

To forward data to Cribl Stream, you need to configure uberAgent to send data to the Cribl Stream Elasticsearch source.

Note: This guide assumes that you have already installed uberAgent. If you have not, please refer to the installation documentation.

Elasticsearch Receiver

Add a new receiver to the uberAgent configuration file. The receiver configuration should look like this:

```
1 [Receiver]
2 Name = Cribl
3 Type = Elasticsearch
4 Protocol = HTTP
5 Servers = https://CRIBL_INGRESS_ADDRESS:9200
6 RESTToken = username:password
```

Change the CRIBL_INGRESS_ADDRESS to the address of your Cribl Stream instance. You can find the address in the Cribl Worker Group overview, in the chart **Group Information**.

Change the RESTToken to the username and password you configured in the Cribl Stream Elastic-search data source. You can encrypt the RESTToken if desired.

Full Application Names (Optional)

Note: This requires uberAgent 7.4 or later.

By default, uberAgent sends abbreviations for application names to save bandwidth. I.e., it sends Google Chrome as GglChrm. In Splunk dashboards, these abbreviations are expanded to the full application names. This is not available in other backends.

If you want to send the full application names, add the following configuration to the uberAgent configuration file:

```
1 [Miscellaneous]
2 ConfigFlags = AppNameIsAppId
```

Restart uberAgent

After you have configured the Elasticsearch receiver and, optionally, the full application names, restart the uberAgent service.

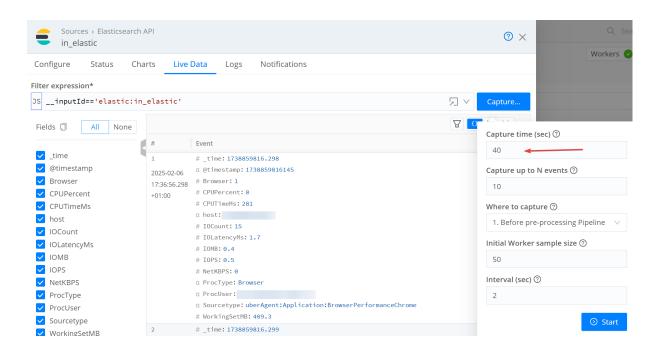
Troubleshooting

When the data is not arriving in your target platform, perform the following checks.

Ingress

First, check if the data is flowing into Cribl Stream. In the **QuickConnect** view, click on the **Elastic-search API** source and choose **Capture**. This allows you to see the data flowing into Cribl Stream. Check the **Events In** and **Events Out** counters in the **Charts** menu to monitor the event count and bandwidth.

If you don't see data immediately, try increasing the capture time to 40 seconds. The default is 10 seconds, but uberAgent collects data every 30 seconds.



Egress

Second, check if the data is flowing through the pipeline to your destination successfully. In the **QuickConnect** view, click on the **DevNull** target (or your destination) and choose **Capture**. This allows you to see the data flowing out of Cribl Stream, after it was modified by the pipeline. If you applied the pipeline correctly, you should not see the <code>@timestamp</code> field in the data (check **Ingress** above, the <code>@timestamp</code> is visible).

Check the **Events In** and **Events Out** counters in the **Charts** menu to monitor the event count and bandwidth.

Installing uberAgent®

September 12, 2025

Installing uberAgent is quick and straightforward. Due to the product's flexibility, there is often more than one way of doing things. In such a case we describe the recommended configuration and link to supported alternatives.

Prerequisites

· Read about the architecture options.

- · Review the uberAgent licensing guide
- If you do not have a running Splunk installation yet set up Splunk.
- Download uberAgent and extract the archive. You should have a directory uberAgent components with the following content:
 - A subdirectory uberAgent_endpoint
 - Packed Splunk app uberAgent_indexer.tgz
 - Packed Splunk app uberAgent_searchhead.tgz
 - Packed Splunk app uberAgent_ESA_searchhead.tgz

Installation Steps

Installing uberAgent consists of the following steps:

- 1. Installing the **Splunk** apps
- 2. Installing the **Windows** endpoint agent
- 3. Installing the macOS endpoint agent
- 4. Installing Splunk Universal Forwarder (optional)
- 5. Installing the **Chrome** browser extension (optional)
- 6. Installing the **Edge** Browser Extension (optional)
- 7. Installing the **Firefox** Browser Extension (optional)
- 8. Installing the Internet Explorer Browser Extension (optional)

Installing the Splunk Apps

September 12, 2025

Upgrade

If you are upgrading from an earlier version of the uberAgent Splunk apps please make sure to follow the upgrade instructions.

Please consult the release notes for possible changes in configuration or functionality.

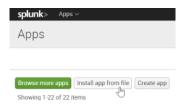
Manual Installation

• Go to the Splunk console's home page by navigating to http://servername:8000 in your browser.

• Click Manage apps:



• Click Install app from file:



- Select uberAgent_indexer.tgz and click Upload
- The uberAgent® indexer app is now installed
- Install uberAgent_searchhead.tgz in the same way
- Optionally install the uberAgent ESA search head app uberAgent_ESA_searchhead.tgz,
 too
- Click Settings > Server controls > Restart Splunk

Splunk Enterprise Security

uberAgent ESA comes with native support for Splunk Enterprise Security. Install the following apps on your Enterprise Security server to enjoy the benefits:

- uberAgent_searchhead.tgz
- uberAgent_ESA_searchhead.tgz
- uberAgent_ESA_ES_companion.tgz.

Available on Splunkbase.

Using Splunk Cloud

The installation process is different when using uberAgent in combination with Splunk Cloud. This knowledgebase article contains all the necessary details.

Distributed Splunk Deployment

If you have a distributed Splunk deployment with separate search heads and indexers please deploy the **indexer app to all indexers as well as heavy forwarders** and the **search head app to all search heads**.

Alternative Architectures

Note: This is optional and not required for the recommended architecture.

If you decided to have uberAgent send data to Splunk through a locally installed Universal Forwarder on the monitored endpoints you need to enable receiving Universal Forwarder data as described here, i.e., through Settings > Forwarding and receiving > Receive data > Add new > 9997 > Save.

Sending to Splunk HTTP Event Collector

Note: This is only required when you want uberAgent to send directly to Splunk Cloud, but it can optionally be used with Splunk Enterprise, too.

uberAgent can send the data it collects via HTTP or HTTPS to a Splunk data input called HTTP Event Collector (HEC). Please follow these steps to enable and configure HTTP Event Collector.

Installing the Windows Endpoint Agent

December 11, 2025

Introduction

The uberAgent® Windows Endpoint Agent can be installed in two primary ways:

- **Standalone Installation**: This installation is independent of Citrix Virtual Apps and Desktops[™] and offers multiple methods for deployment, including manual installation, installation through software deployment tools, and deployment through Splunk Deployment Server.
- Installation via Citrix Virtual Apps and Desktops: Since uberAgent 7.4 and Citrix Virtual
 Apps and Desktops (CVAD) 2503, uberAgent can be installed as part of the CVAD installation,
 allowing centralized management through Citrix Studio or Citrix Web Studio.

Note

Starting with **uberAgent 7.2.1**, the service does not start automatically after installation. Update your deployment procedures to include a manual service start if required.

Security Considerations

uberAgent configuration files are stored and cached in the %ProgramData% directory. Securing this directory with appropriate Access Control Lists (ACLs) is essential to prevent privilege escalation or misuse. Starting with version 7.0.2, the installer automatically applies secure permissions by default.

Recommended Permissions

• Administrators: Full Control

SYSTEM: Full Control
Users: No Access

Users must not have read access to the configuration directory as it may contain sensitive information like backend credentials.

Custom Scripts Custom scripts that need to be executed in the **user context** can be securely managed in two ways:

- 1. **Assign read permissions to individual scripts** without exposing the entire configuration directory.
- 2. **Place the scripts in a separate folder** with appropriate permissions, containing only scripts that need execution from the user context.

Automatic Security Configuration

The following MSI parameters control automatic security settings:

- PROGRAMDATA_CONFIGDIR_RESETPERMISSIONS (default: 1): Ensures secure permissions are applied.
- **PROGRAMDATA_CONFIGDIR_DELETEFILES** (default: 1): Deletes existing configuration files during installation.

For Citrix Virtual Apps[™] and Desktops installations:

- **Initial Installation:** Both parameters are set to 1 to apply secure permissions and remove existing configurations.
- **Updates:** The PROGRAMDATA_CONFIGDIR_DELETEFILES parameter is disabled (0) to preserve existing configurations.

Note

When deploying configuration files, ensure that secure ACLs are applied to the directory and remain intact throughout the process. Neglecting this step could compromise security and allow unintended access to the configuration files.

Standalone Installation

Download Installer

Download the latest uberAgent standalone release from Citrix Observability - uberAgent Product Software and unzip the content. The installer can be found in the uberAgent_endpoint\bin directory:

32-bit Systems: uberAgent-32.msi64-bit Systems: uberAgent-64.msi

MSI Parameters

INSTALLDIR

• Required: no

• Default: %ProgramFiles%\Citrix\uberAgent

• **Description:** installation directory

• Valid values: any local file system path

PROGRAMDATA_CONFIGDIR_RESETPERMISSIONS

· Required: no

• Default: 1

• **Description:** Set secure permissions on uberAgent's ProgramData directory (%ProgramData %\vast limits\uberAgent).

• Valid values:

• 0: disabled

• 1: enabled

PROGRAMDATA_CONFIGDIR_DELETEFILES

· Required: no

• Default: 1

• **Description:** Delete existing config files in uberAgent's ProgramData directory (%ProgramData %\vast limits\uberAgent). Disable this setting only if you're removing potentially malicious existing config files as part of your own deployment package logic.

Valid values:

- 0: disabled
- 1: enabled

Manual Installation

- 1. Install the appropriate MSI file from the directory uberAgent_endpoint\bin depending on the bitness of your machine: uberAgent-32.msi or uberAgent-64.msi.
- 2. If you have a license file for uberAgent, copy it to the installation directory (default: % ProgramFiles%\Citrix\uberAgent). uberAgent does not start without a license file. Please see the uberAgent licensing guide for more details.
- 3. Configure uberAgent as needed; see the Configuration Options section for details.
- 4. Start the uberAgent service.

Installation Through a Software Deployment Tool

- 1. Install the appropriate MSI file from the directory uberAgent_endpoint\bin depending on the bitness of your machine: uberAgent-32.msi or uberAgent-64.msi.
- Configure the MSI parameters as needed.
- 1. Distribute the license file and configuration templates as part of your deployment package. uberAgent does not start without a license file. Please see the uberAgent licensing guide for more details.
- 2. Optional: The uberAgent service does not start automatically after installation, so a service start step may be included.

Installation Through Splunk Deployment Server

Note:

Deployment Server can only be used with Splunk Enterprise and requires Splunk Universal Forwarder on the endpoint as a deployment client.

uberAgent Copy the directory uberAgent_endpoint from the unzipped uberAgent download package to \$SPLUNK_HOME\etc\deployment-apps on your deployment server.

Note: \$SPLUNK_HOME refers to the base directory of the Splunk installation, typically C:\Program Files\Splunk.

Configuration To deploy a customized configuration file, copy it into the directory \$SPLUNK_HOME \etc\deployment-apps\uberAgent_endpoint\bin. This overwrites the default configuration file from the installation package.

License File If you have a license file for uberAgent, copy it into the directory \$SPLUNK_HOME\ etc\deployment-apps\uberAgent_endpoint\bin.

Serverclass Create a file called serverclass.conf in \$SPLUNK_HOME\etc\system\ local on your deployment server. Serverclass.conf defines what to deploy where. For a quick start, paste the following content into serverclass.conf to deploy uberAgent to all Windows machines. You may want to fine-tune this to suit your needs.

To make Splunk read the new file serverclass.conf, run the following command:

```
1 $SPLUNK_HOME\splunk.exe reload deploy-server
```

Installation via Citrix Virtual Apps and Desktops

Since **uberAgent 7.4** and **Citrix Virtual Apps and Desktops 2503**, uberAgent can be installed and updated as part of the Citrix VDA installation.

Note

To install and update uberAgent using the Citrix Virtual Apps and Desktops (CVAD) installation, you must first uninstall all existing uberAgent installations and then reinstall them using the CVAD installation.

Installation Steps

1. Start the Citrix Virtual Apps and Desktops installation.

- 2. In the **Optional Software** step, ensure that **Citrix® uberAgent** is selected.
- 3. Configure uberAgent as needed; see the Configuration Options section for details.
- 4. Enable uberAgent Data Collection in Citrix Studio or Web Studio.
- 5. Start the uberAgent service.

Note:

By default, the uberAgent Data Collection policy is disabled. uberAgent will run in idle mode until the policy is enabled.

uberAgent Director Integration

When uberAgent is installed as part of the Citrix Virtual Apps and Desktops installation, you only need to **enable the uberAgent Data Collection** policy. Everything else works seamlessly.

For more information, please refer to the Director documentation.

Citrix Site Monitoring

uberAgent supports **Citrix Site Monitoring** in both standalone mode and Citrix Virtual Apps and Desktops installations.

If some or all of your endpoints are running the Citrix Virtual Apps and Desktops (CVAD) VDA, you should install uberAgent on the Citrix delivery controller(s), too. Please see this page for details.

Imaging & Citrix PVS

If you intend to copy the agent installation via an imaging method or Citrix PVS, we recommend you remove instance-specific information. To do that, follow these steps right before capturing the image:

- Stop the service uberAgent (but leave the start type at automatic).
- Backup your Central Config File Management ConfigFilePath if configured.
- Open an administrative command prompt.
- Run the command: reg delete "HKLM\SOFTWARE\vast limits\uberAgent"/f /reg:64.
- Restore the Central Config File Management ConfigFilePath if previously backed up.
- Optionally: delete existing log files.
- Optionally: delete existing Persistent Output Queue files/folders.
- Prepare the machine for cloning as necessary, but do not reboot.

For your convenience, we provide a PowerShell script that performs the steps listed above. Please make sure that you run it as an administrator. If you want to perform a complete cleanup without user interaction, you can use the -clearAll script parameter.

Script (uA-imaging-preparation.ps1):

```
1 [CmdletBinding()]
2 param(
     [Switch]$clearAll
3
4 )
5
6 Write-Host "-----"
7 Write-Host " uberAgent PVS & Imaging Preparation Script"
8 Write-Host "-----
9 Write-Host ""
11 # Check for administrator privileges
12 if (-not ([Security.Principal.WindowsPrincipal] [Security.Principal.
      WindowsIdentity]::GetCurrent()).IsInRole([Security.Principal.
      WindowsBuiltInRole]::Administrator)) {
13
     Write-Host "Error: This script must be run as administrator."
14
15
      exit 1
16
   }
17
18
19 Write-Host "This script will:"
20 Write-Host "1. Stop the 'uberAgentSvc' service."
21 Write-Host "2. Backup the CCFM ConfigFilePath if configured and remove
      the 'uberagent' registry key."
22 Write-Host "3. Optionally remove all 'uberagent*.log', 'uAGuardian.log
      ', and 'uAInSessionHelper.log' files from C:\Windows\Temp and the
      current user's temp directory."
23 Write-Host "4. Optionally remove all Persistent Output Queue files in %
      ProgramData%\vast limits\uberAgent\Output Queue\."
24 Write-Host "5. Restore the 'ConfigFilePath' registry value if it was
     backed up."
25 Write-Host ""
26 Write-Host "You can run this script in automatic mode by using the -
      clearAll parameter."
27 Write-Host ""
28 Write-Host "--
29 Write-Host ""
31 # Define base registry path
32 $baseKey = 'HKLM:\Software\vast limits\uberAgent'
33 $configPath = 'HKLM:\Software\vast limits\uberAgent\Config'
34 $configFileValueName = 'ConfigFilePath'
35 $configFileValue = $null
37 # Stop the uberAgentSvc service if it is running
38 $serviceName = 'uberAgentSvc'
39 if (Get-Service -Name $serviceName) {
```

```
40
41
      try {
42
         Stop-Service -Name $serviceName -Force -ErrorAction Stop
43
         Write-Host "Service '$serviceName' stopped successfully."
45
       }
46
47
      catch {
48
49
         Write-Host "Failed to stop service '$serviceName': $_"
         exit 1
       }
51
52
53
    }
54
55
   else {
56
57
      Write-Host "Service '$serviceName' not found."
58
    }
59
   # Backup ConfigFilePath value if it exists
61
62
   if (Test-Path $configPath) {
63
64
      $regValues = Get-ItemProperty -Path $configPath -ErrorAction
          SilentlyContinue
      if ($regValues -and $regValues.$configFileValueName) {
         Write-Host "Found ConfigFilePath value: $($regValues.
67
             $configFileValueName)"
         Write-Host "Backing up ConfigFilePath value..."
         $configFileValue = $regValues.$configFileValueName
       }
71
72
73
    }
74
   # Remove the entire 'uberAgent' key
   if (Test-Path $baseKey) {
77
78
79
      Write-Host "Removing registry key: $baseKey"
      Remove-Item -Path $baseKey -Recurse -Force -ErrorAction
          SilentlyContinue
81
    }
83
84
  # Optionally remove all uberAgent .log files from C:\Windows\Temp and
       the current user's temp directory
85 $cleanLogs = $clearAll
86 if (-not $clearAll) {
87
      $response = Read-Host "Do you want to remove all uberAgent log files
```

```
from C:\Windows\Temp and the current user temporary directory? (
           y/n)"
       $cleanLogs = $response -match '^[Yy]$'
89
90
     }
91
92
    else {
94
       Write-Host "Automatic mode: Removing all uberAgent log files..."
96
   if ($cleanLogs) {
98
99
       # Define log file patterns to remove
       $logPatterns = @("uberagent*.log", "uAGuardian.log", "
101
           uAInSessionHelper.log")
       # Clean Windows\Temp directory
103
104
       foreach ($pattern in $logPatterns) {
105
106
          $logFiles = Get-ChildItem -Path "C:\Windows\Temp" -Filter
              $pattern -ErrorAction SilentlyContinue
107
          if ($logFiles) {
108
             foreach ($file in $logFiles) {
109
110
111
                try {
112
113
                    Remove-Item -Path $file.FullName -Force -ErrorAction
114
                    Write-Host "Removed: $($file.FullName)"
                  }
115
116
117
                catch {
118
119
                    Write-Host "Failed to remove $($file.FullName): $_"
120
121
122
              }
123
124
           }
125
126
        }
127
128
       # Also clean current user's temp directory
130
       $userTempPath = [System.IO.Path]::GetTempPath()
       foreach ($pattern in $logPatterns) {
132
133
          $logFiles = Get-ChildItem -Path $userTempPath -Filter $pattern -
              ErrorAction SilentlyContinue
134
          if ($logFiles) {
135
```

```
136
              foreach ($file in $logFiles) {
137
138
                 try {
139
                    Remove-Item -Path $file.FullName -Force -ErrorAction
140
                        Stop
                    Write-Host "Removed: $($file.FullName)"
141
142
                  }
143
144
                 catch {
145
                    Write-Host "Failed to remove $($file.FullName): $_"
146
147
                  }
148
149
               }
150
           }
151
152
153
        }
154
155
     }
156
157
    # Optionally remove all folders (including files) in %ProgramData%\vast
158
         limits\uberAgent\Output Queue
159 $cleanQueue = $clearAll
160 if (-not $clearAll) {
162
       $response = Read-Host "Do you want to remove all Persistent Output
           Queue folders (including files) in %ProgramData%\vast limits\
           uberAgent\Output Queue? (y/n)"
       $cleanQueue = $response -match '^[Yy]$'
163
     }
164
165
166
    else {
167
168
       Write-Host "Automatic mode: Removing all Persistent Output Queue
           folders..."
     }
169
170
171
172
    if ($cleanQueue) {
173
174
       $outputQueuePath = "$env:ProgramData\vast limits\uberAgent\Output
           Queue"
       if (Test-Path $outputQueuePath) {
          Get-ChildItem -Path $outputQueuePath -Directory -ErrorAction
177
              SilentlyContinue | ForEach-Object {
178
179
              try {
180
                 Remove-Item -Path $_.FullName -Recurse -Force -ErrorAction
181
```

```
Stop
182
                Write-Host "Removed folder: $($_.FullName)"
              }
183
184
185
             catch {
186
                Write-Host "Failed to remove folder $($_.FullName): $_"
187
188
189
190
           }
191
192
        }
193
194
    }
195
196
197 # Restore ConfigFilePath value if it was backed up
198 if ($configFileValue) {
199
       New-Item -Path $configPath -Force | Out-Null
200
201
       Set-ItemProperty -Path $configPath -Name $configFileValueName -Value
           $configFileValue -ErrorAction SilentlyContinue
202
       Write-Host "ConfigFilePath value restored: $configFileValue"
203
     }
204
205 else {
206
      Write-Host "No ConfigFilePath value found to restore."
207
208
210
211 Write-Host "Finished cleaning up successfully."
212 Write-Host ""
213
214 Write-Host "-----
215 Write-Host "The machine can now be prepared for cloning as necessary."
216 Write-Host "Please do not reboot the machine."
217 Write-Host "-----
```

If you have Splunk Universal Forwarder installed, please follow the steps listed here, too.

Installing the macOS Endpoint Agent

September 12, 2025

The agent installer is available as a PKG file. It can either be installed manually or unattended through existing software deployment tools. Also, most device management solutions support the distribution of such packages natively.

Note 1:

Securing the Configuration Directory

To protect the configuration of uberAgent, starting with version 6.1.2, the installer automatically sets the permissions for the agent's directory so that only root can read or access the installation directory.

Note 2:

Running uberAgent® after installating the Endpoint Agent

The uberAgent daemon does not start automatically upon completion of the setup process. It will initiate automatically following a system restart.

Alternatively, you may start it manually using launchetl, provided you have root privileges:

launchctl bootstrap system /Library/LaunchDaemons/com.vastlimits.
uberAgent.plist

Requirements

uberAgent on macOS requires the entitlement for certain privacy privileges through Apple's Transparency, Consent and Control (TCC) Framework in order to run properly. These can either be assigned manually, as described below or distributed as part of a PPPC profile. The latter can either be created manually by following the documentation provided by Apple or make use of tools like the PPPC-Utility. An example profile is available at the bottom of this page.

Full Disk Access

uberAgent makes use of Apple's EndpointSecurity (ES) framework (available since macOS 10.15), which requires explicit user authorization. Authorization is granted manually, by adding /Library /uberAgent/uberAgent.app to System Preferences > Security & Privacy > Privacy > Full Disk Access.

Note: Without this permission uberAgent won't be able to start and will terminate itself. When this happens, you'll find an error log message indicating that the ES client could not be started due to a missing TCC approval.

Accessibility Access

uberAgent uses the Accessibility framework on macOS to determine parts of the Session Detail metrics. Authorization is granted manually, by adding /Library/uberAgent/uberAgent.app to System Preferences > Security & Privacy > Privacy > Accessibility.

Installation method

Interactive

- The installation of uberAgent can be started by opening uberAgent.pkg and following the instructions on the screen.
- Since uberAgent is installed as a system-wide daemon, the installer will ask for a password for elevated access rights to install it.

Command Line

- The Installer can also be used from the command line to install uberAgent using the command installer -pkg uberAgent.pkg -target /
- This requires root privileges. A command line installation can be executed locally or remotely, e. g., using SSH.

License File

If you have a license file for uberAgent, copy it to the following directory /Library/Application Support/uberAgent. uberAgent does not start without a license file. Please see the uberAgent licensing guide for more details.

Installation Through Splunk Deployment Server

Note: Deployment Server can only be used with Splunk Enterprise and requires Splunk Universal Forwarder on the endpoint as deployment client. Please make sure that Splunk Universal Forwarder has **sufficient privileges** to perform system-wide installations, e.g. by **enabling boot-start**.

uberAgent

Copy the directory uberAgent_endpoint from the unzipped uberAgent download package to \$SPLUNK_HOME/etc/deployment-apps on your deployment server. Please make sure to apply the executable flag to the installation script by executing chmod +x silent-install.sh. Besides that, the uberAgent_endpoint folder is ready to use for deployment on Windows as well as macOS operating systems.

Note: \$SPLUNK_HOME refers to the base directory of the Splunk installation, typically /opt/splunk on Linux.

Configuration

To deploy customized configuration files, copy them into the directory \$SPLUNK_HOME/etc/deployment-apps/uberAgent_endpoint/bin. This overwrites existing files under/Library/Application Support/uberAgent/.

License File

If you have a license file for uberAgent, copy it into the directory \$SPLUNK_HOME/etc/deployment-apps/uberAgent_endpoint/bin.

Serverclass

Create a file called serverclass.conf in \$SPLUNK_HOME/etc/system/local on your deployment server. serverclass.conf defines what to deploy where. For a quick start, paste the following content into serverclass.conf to deploy uberAgent to all macOS machines. You may want to fine-tune this to suit your needs.

To make Splunk read the new file serverclass.conf run the following command:

```
1 $SPLUNK_HOME/bin/splunk reload deploy-server
```

Configuration

uberAgent can be configured very flexibly. By editing the configuration, you can switch metrics on or off, change the data collection frequency and significantly reduce the data volume.

Example uberAgent PPPC Profile

This is an exemplary privacy preferences policy control (PPPC) profile to grant uberAgent the necessary TCC privileges.

```
1 <?xml version="1.0" encoding="UTF-8"?>
2 <!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN" "http://www.apple.</pre>
       com/DTDs/PropertyList-1.0.dtd">
3 <plist version="1.0">
4
   <dict>
       <key>PayloadContent</key>
5
       <array>
6
7
           <dict>
8
                <key>PayloadDescription</key>
9
                <string>uberAgent</string>
                <key>PayloadDisplayName</key>
                <string>uberAgent</string>
11
12
               <key>PayloadIdentifier</key>
13
                <string>5FD70527-9AC3-4667-82AF-8F8F44C95C94</string>
               <key>PayloadOrganization</key>
14
               <string>vast limits GmbH</string>
15
               <key>PayloadType</key>
               <string>com.apple.TCC.configuration-profile-policy</string>
17
18
                <key>PayloadUUID</key>
19
                <string>E86AC250-6BF9-4C91-BB0A-5890F000A48C</string>
20
               <key>PayloadVersion</key>
21
               <integer>1</integer>
22
                <key>Services</key>
23
                <dict>
24
                    <key>Accessibility</key>
25
                    <array>
26
                        <dict>
                            <key>Allowed</key>
27
28
                            <true/>
                            <key>CodeRequirement</key>
                            <string>anchor apple generic and identifier "
                                com.vastlimits.uberAgent" and (certificate
                                leaf[field.1.2.840.113635.100.6.1.9] /*
                               exists */ or certificate 1[field
                                .1.2.840.113635.100.6.2.6] /* exists */ and
                               certificate leaf[field
                                .1.2.840.113635.100.6.1.13] /* exists */ and
                                certificate leaf[subject.OU] = "64N35HHH3F"
                                )</string>
                            <key>Comment</key>
32
                            <string></string>
                            <key>Identifier</key>
                            <string>com.vastlimits.uberAgent</string>
34
                            <key>IdentifierType</key>
                            <string>bundleID</string>
                        </dict>
                    </array>
                    <key>SystemPolicyAllFiles</key>
```

```
<array>
40
41
                        <dict>
                             <key>Allowed</key>
42
                             <true/>
43
                             <key>CodeRequirement</key>
44
45
                             <string>anchor apple generic and identifier "
                                com.vastlimits.uberAgent" and (certificate
                                leaf[field.1.2.840.113635.100.6.1.9] /*
                                exists */ or certificate 1[field
                                .1.2.840.113635.100.6.2.6] /* exists */ and
                                certificate leaf[field
                                .1.2.840.113635.100.6.1.13] /* exists */ and
                                 certificate leaf[subject.OU] = "64N35HHH3F"
                                )</string>
                             <key>Comment</key>
46
47
                             <string></string>
                             <key>Identifier</key>
48
49
                             <string>com.vastlimits.uberAgent</string>
                             <key>IdentifierType</key>
51
                             <string>bundleID</string>
52
                        </dict>
53
                    </array>
54
                </dict>
            </dict>
55
56
        </array>
57
        <key>PayloadDescription</key>
58
        <string>uberAgent</string>
59
        <key>PayloadDisplayName</key>
        <string>uberAgent</string>
       <key>PayloadIdentifier</key>
61
62
       <string>5FD70527-9AC3-4667-82AF-8F8F44C95C94</string>
       <key>PayloadOrganization</key>
       <string>vast limits GmbH</string>
64
65
       <key>PayloadScope</key>
       <string>System</string>
       <key>PayloadType</key>
67
       <string>Configuration</string>
       <key>PayloadUUID</key>
       <string>F53E14C7-D9ED-4933-8A71-87FD74C9870D</string>
71
        <key>PayloadVersion</key>
72
        <integer>1</integer>
73
   </dict>
74
   </plist>
```

Installing Splunk Universal Forwarder

September 12, 2025

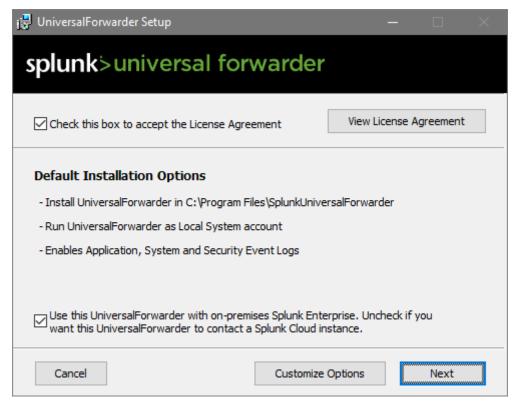
If you have chosen an architecture option where uberAgent interacts with Splunk through Splunk'

s Universal Forwarder you need to install Universal Forwarder on every machine along with uberAgent.

The following description shows you how to install and configure Universal Forwarder for uberAgent. In this example, the Splunk server's FQDN is srv1.hk.test.

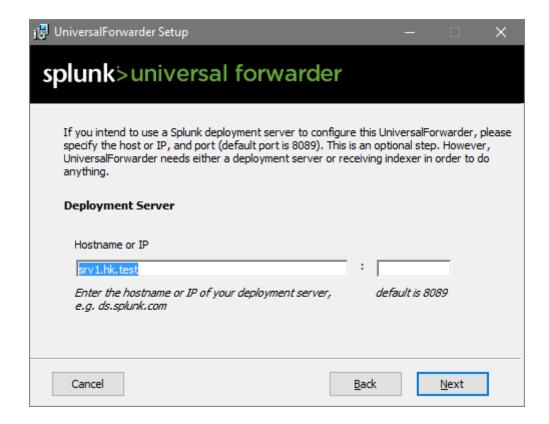
Installation

Launch the Universal Forwarder MSI file. Accept the license agreement and click **Next**.



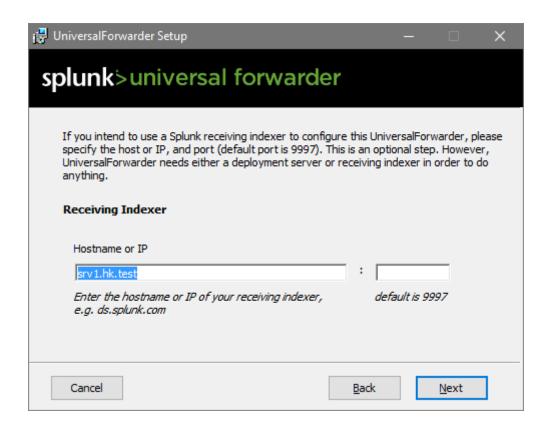
Deployment Server

If you have Splunk Enterprise, you can use Splunk's Deployment Server functionality to deploy apps. In that case, specify the Splunk server name. You can leave the port empty to use the default. If you have Splunk Free leave both fields empty.



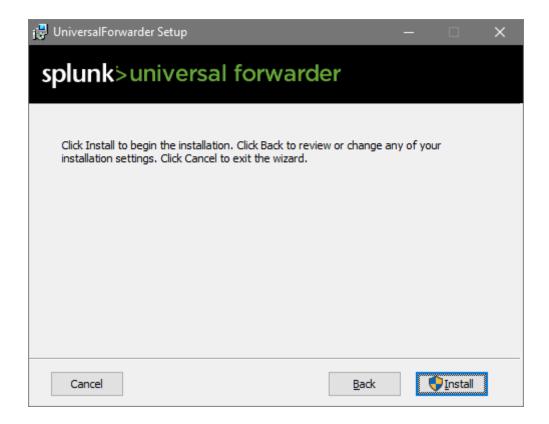
Indexer

Specify the name of your Splunk Indexer. In this simple walkthrough, our Splunk server also acts as an indexer. Again, the port is left at the default value:



Finished

That's all!



Configuration

Receive uberAgent® Data via TCP Port

If you want Universal Forwarder to handle all Splunk communications, you need to configure uber-Agent to pass its output to Universal Forwarder on the same machine. To do that, open a TCP port uber-Agent can send data to by adding the following to \$SPLUNK_HOME\etc\system\local\inputs.conf on your Universal Forwarders:

```
1 [tcp://127.0.0.1:19500]
2 connection_host = none
3 sourcetype = dummy
4 listenOnIPv6 = no
5 acceptFrom = 127.0.0.1
```

Note: \$SPLUNK_HOME refers to the base directory of the Splunk (Forwarder) installation, typically C:\Program Files\SplunkUniversalForwarder.

If you are deploying the uberAgent_endpoint app, port 19500 is opened for you automatically (details).

Disable Universal Forwarder Eventlog Data Collection

A default installation of Universal Forwarder sends all data from the Windows Application, Security, and System event logs to Splunk. If you do not need that, edit \$SPLUNK_HOME\etc\apps\Splunk_TA_windows\local\inputs.conf so that all stanzas are disabled as in the following example:

```
1 [WinEventLog://Application]
2 disabled = 1
3
4 [WinEventLog://Security]
5 disabled = 1
6
7 [WinEventLog://System]
8 disabled = 1
```

Unattended (Silent) Installation

You can find all the information required for automating the deployment of Universal Forwarder here.

Preparation for Imaging/Citrix PVS

If you intend to copy the installation via an imaging method or Citrix PVS, you need to remove instance-specific information such as server name and GUID from the Universal Forwarder installation. To do that, follow these steps right before capturing the image:

- Stop the service SplunkForwarder (but leave the start type at automatic).
- Open an administrative command prompt.
- Run the command: C:\Program Files\SplunkUniversalForwarder\bin\ splunk clone-prep-clear-config.
- Prepare the machine for cloning as necessary, but do not reboot.

Installing the Chrome Browser Extension

December 11, 2025

uberAgent's browser web app performance functionality requires a browser extension to be installed. This article lists the necessary steps.

Enabling the Agent Metric

To enable data collection from Chrome make sure uberAgent's BrowserPerformanceChrome metric is enabled in the configuration. In the default configuration, BrowserPerformanceChrome is enabled.

Installing the Chrome Extension

Note

As of uberAgent 7.2, the version 4.0 of the Google Chrome browser extension is required. This version is based on a V3 manifest file.

Manual Installation

For tests and PoCs, it may be easiest to install uberAgent's Chrome extension manually from the Chrome Web Store.

Install the extension from the Chrome Web Store.

Automated Deployment

Deployment of uberAgent's Chrome extension is easily possible with Group Policy. Follow the steps in the Chromium Documentation to configure the ExtensionInstallForcelist setting.

To configure Chrome to install the uberAgent® extension from the standard Chrome Web Store update URL add the following to the ExtensionInstallForcelist setting:

jghgedlkcoafeakcaepncnlanjkbinpb;https://clients2.google.com/service/ update2/crx

Offline Deployment

If your endpoints are not connected to the Internet and can't access Chrome's Web Store, you can also pre-install the extensions. Please contact the Citrix Support for the CRX file or download the extension using the command below. This places the CRX file on the current user's desktop:

```
wget "https://clients2.google.com/service/update2/crx?response=redirect
&prodversion=120.0.0.0&x=id%3Djghgedlkcoafeakcaepncnlanjkbinpb%26
installsource%3Dondemand%26uc" -0 "$env:USERPROFILE\Desktop\
uberAgent browser extension MV3.crx"
```

Note that using the offline deployment you need to push updated CRX files manually.

Relevant Configuration Settings

Native Messaging

uberAgent's Chrome extension uses native messaging to communicate with the agent. In a default configuration of Chrome, native messaging is not restricted.

If native messaging has been restricted, for example via the NativeMessagingBlocklist Group Policy setting, an exception needs to be defined for the uberAgent extension, for example via the NativeMessagingAllowlist Group Policy setting.

Installing the Firefox Browser Extension

December 11, 2025

uberAgent's browser web app performance functionality requires a browser extension to be installed. This article lists the necessary steps for the Firefox extension. The requirements can be found here.

Enabling the Agent Metric

To enable data collection from Firefox make sure uberAgent's BrowserPerformanceFirefox metric is enabled in the configuration. In the default configuration, BrowserPerformanceFirefox is enabled.

Installing the Firefox Extension

Note

As of uberAgent 7.2, the version 4.0.1 or newer of the Firefox browser add-on is required. This version is based on a V3 manifest file.

Manual Installation

For tests and PoCs, it may be easiest to install uberAgent's Firefox extension manually.

Install the extension from the Firefox Web Store.

User Consent The extension version 2.6 or newer initially does not collect any data. **To enable data** collection click the uberAgent icon in the upper right corner.

Automated Installation

Add-on Deployment Deployment of uberAgent's Firefox extension is easily possible with Group Policy (Firefox 60+ required). Please follow the steps in Mozilla's documentation.

Below is an example JSON code to block the user from installing any extension but force the uberAgent extension installation through Group Policy. Put it in Policies - Administrative Templates - Mozilla - Firefox - Extensions - Extension Management.

```
{
1
2
      "*": {
3
4
5
         "blocked_install_message": "If you need this browser extension,
             please contact the helpdesk.",
          "installation_mode": "blocked"
6
       }
7
8
      шĺ
9
    483699ec-db40-4a13-b984-fd7496844dc0 }
11
    ": {
12
         "installation_mode": "force_installed",
13
14
         "install_url": "https://addons.mozilla.org/firefox/downloads/
             latest/uberagent-mv3/latest.xpi"
       }
15
16
17
    }
```

User Consent As of 2019-12-02, Mozilla enforces showing a consent dialog to users if an add-on collects information about visited URLs, even if the add-on was deployed through Group Policy.

This change **forces** us to publish a new version of the add-on that initially does not collect any data. To automatically enable data collection set the new managed storage setting <code>EnableBrowserDataCollection</code> to **true**. This can be achieved in one of two ways.

Automatically declare consent and enable data collection by running a script to set EnableBrowserDataColle to **true**:

- Make sure that cookies are enabled and Firefox's setting dom.storage.enabled is set to true
- Copy the following PowerShell snippet and paste it into a new file that you name SetuberAgentFFEnableBrowserDataCollection.ps1.

```
1 #Requires -RunAsAdministrator
2 #Requires -Version 3.0
3
4 <#</pre>
```

```
5 .SYNOPSIS
       Prepare the machine for Mozilla Firefox browser data collection.
7 .DESCRIPTION
       Prepare the machine for Mozilla Firefox browser data collection.
8
9
   .EXAMPLE
       PS C:\> .\Set-uberAgentFFEnableBrowserDataCollection.ps1
       Enables the browser data collection
11
   .INPUTS
12
13
       The script does not allow any inputs
14
   .OUTPUTS
15
       The script does not produce any output
16 #>
17
   [CmdletBinding()]
18
   $uberAgentInstallationDirectory = "$(Join-Path $env:ProgramFiles '
19
       Citrix\uberAgent')"
20
   $FirefoxSettingsFile = 'uAFirefoxSettings.json'
21
22
   $RegPath = "HKLM:\SOFTWARE\Mozilla\ManagedStorage\{
    483699ec-db40-4a13-b984-fd7496844dc0 }
23
24
25
26
   $FirefoxSettingsContent = @'
27
28
      "name": "{
29
    483699ec-db40-4a13-b984-fd7496844dc0 }
31
32
      "description": "ignored",
      "type": "storage",
34
      "data": {
    "EnableBrowserDataCollection": true }
37
    }
38
39
   '@ -split '\r\n'
40
   If (!(Test-Path $uberAgentInstallationDirectory)) {
41
42
43
       Throw "The directory $uberAgentInstallationDirectory does not exist
           . Please change the path to uberAgent's installation directory
           in the script manually."
44
    }
45
46
47
   try {
48
49
       # Firefox setting file
       If (!(Test-Path $(Join-Path $uberAgentInstallationDirectory
           $FirefoxSettingsFile))) {
51
           New-Item $(Join-Path $uberAgentInstallationDirectory
52
               $FirefoxSettingsFile) -Force
```

```
}
54
       Write-Verbose "Create the Firefox setting file"
       $FirefoxSettingsContent | Set-Content $(Join-Path
           $uberAgentInstallationDirectory $FirefoxSettingsFile) -Force
57
       # Firefox registry entry
       If (!(Test-Path $RegPath)) {
61
           New-Item $RegPath -Force
62
        }
       Set-Item $RegPath -Value "$(Join-Path
64
           $uberAgentInstallationDirectory $FirefoxSettingsFile)"
    }
65
   catch {
69
       Write-Error $_ -ErrorAction Stop
    }
```

- Run the script with elevated permissions on every endpoint:
 powershell.exe -executionpolicy bypass -file Set-uberAgentFFEnableBrowserC
 .ps1
- Only upgrade to or install version 2.6+ of uberAgent's Firefox add-on once the script has been run on all endpoints

If you prefer to change things manually instead of using our script we have you covered, too:

1. Create the file uAFirefoxSettings.json in uberAgent's installation directory with the following content:

```
{ "name": "{ 483699ec-db40-4a13-b984-fd7496844dc0 } ", "description
": "ignored", "type": "storage", "data": { "EnableBrowserDataCollection
": true } }
```

- 2. Create the registry key HKEY_LOCAL_MACHINE\SOFTWARE\Mozilla\ManagedStorage $\$ { 483699ec-db40-4a13-b984-fd7496844dc0 }
- 3. Set the key's default value to the full path of the JSON file from step one, e.g. C:\Program Files\Citrix\uberAgent\uAFirefoxSettings.json

If you do not set EnableBrowserDataCollection to true before upgrading to or installing version 2.6+ of uberAgent's Firefox extension users have to opt-in at first run. If they do not opt-in, uberAgent cannot collect any website metrics.

Future versions of uberAgent (> 5.3) will set EnableBrowserDataCollection to **true** automatically unless this is specifically disabled in uberAgent's configuration.

Note that setting ShowConsentDialog to **false** has the same effect as setting EnableBrowserDataColle to **true**.

Installing the Edge Browser Extension

December 11, 2025

uberAgent's browser web app performance functionality requires a browser extension to be installed. This article lists the necessary steps.

Enabling the Agent Metric

To enable data collection from Edge make sure uberAgent's BrowserPerformanceEdge metric is enabled in the configuration. In the default configuration, BrowserPerformanceEdge is enabled.

Installing the Edge Extension

Note

As of uberAgent 7.2, the version 4.0 of the Google Chrome browser extension is required. This version is based on a V3 manifest file.

Manual Installation

For tests and PoCs, it may be easiest to install uberAgent's Edge extension manually from the Chrome Web Store. Please note that you need to allow extensions from other stores.

Install the extension from the Chrome Web Store.

Automated Deployment

Deployment of uberAgent's Edge extension is easily possible with Group Policy. Follow the steps in the Edge documentation to configure the ExtensionInstallForcelist setting. Extensions on the ExtensionInstallForcelist will also get installed if the Edge setting Allow extensions from other stores is not enabled.

To configure Edge to install the uberAgent® extension from the standard Chrome Web Store update URL add the following to the ExtensionInstallForcelist setting:

jghgedlkcoafeakcaepncnlanjkbinpb;https://clients2.google.com/service/ update2/crx

Offline Deployment

If your endpoints are not connected to the Internet and can't access Chrome's Web Store, you can also pre-install the extensions. Please contact the Citrix Support for the CRX file or download the extension using the command below. This places the CRX file on the current user's desktop:

```
wget "https://clients2.google.com/service/update2/crx?response=redirect
&prodversion=120.0.0.0&x=id%3Djghgedlkcoafeakcaepncnlanjkbinpb%26
installsource%3Dondemand%26uc" -0 "$env:USERPROFILE\Desktop\
uberAgent browser extension MV3.crx"
```

Note that using the offline deployment you need to push updated CRX files manually.

Relevant Configuration Settings

Native Messaging

uberAgent's Edge extension uses native messaging to communicate with the agent. In a default configuration of Edge, native messaging is not restricted.

If native messaging has been restricted, for example via the NativeMessagingBlocklist Group Policy setting, an exception needs to be defined for the uberAgent extension, for example via the NativeMessagingAllowlist Group Policy setting.

Installing the Citrix Enterprise Browser™ Extension

September 12, 2025

uberAgent's browser web app performance functionality requires a browser extension to be installed. This article lists the necessary steps.

Enabling the Agent Metric

To enable data collection from Citrix Enterprise Browser (CEB) make sure uberAgent's BrowserPerformanceCE metric is enabled in the configuration. In the default configuration, BrowserPerformanceCEB is enabled.

Installing the CEB Extension

Note

As of uberAgent 7.2, the version 4.0 of the Google Chrome browser extension is required. This version is based on a V3 manifest file.

Manual Installation

CEB is managed through Global App Configuration service (GACS). To let users manually install the extension or to test the extension in a proof of concept, one can add the extension to the allow list. The extension then appears as available in the extension manager.

Add the ID jghgedlkcoafeakcaepncnlanjkbinpb to the ExtensionInstallAllowlist.

Automated Deployment

Deployment of uberAgent's CEB extension is easily possible with GACS. Follow the steps in the CEB documentation to configure the ExtensionInstallForcelist setting.

Add the ID jghgedlkcoafeakcaepncnlanjkbinpb to the ExtensionInstallForcelist.

Offline Deployment

An offline deployment is not supported as CEB is managed by GACS, a cloud service hosted by Citrix.

Installing the Internet Explorer Browser Add-on

December 11, 2025

uberAgent's browser web app performance functionality requires a browser add-on (aka extension) to be installed. This article lists the necessary steps.

Enabling and Configuring the Agent Metric

To enable data collection from Internet Explorer make sure uberAgent's BrowserPerformanceIE metric is enabled in the configuration. In the default configuration, BrowserPerformanceIE is enabled.

You can optionally disable the collection of performance data from embedded frames via the registry. The following setting is valid for 32-bit and 64-bit Windows systems:

Installing the IE Add-on

The add-on's files are part of the uberAgent setup and placed in the installation directory automatically.

Note: the add-on is **not registered automatically** to prevent prompts asking the end-users for confirmation.

Registering the IE Add-on

Manual Registration

For tests and PoCs, it may be easiest to register uberAgent's Internet Explorer add-on manually. The installation directory contains the file Register-uAIEExtension.cmd. Run this file with elevated rights to register uberAgent's Internet Explorer add-on DLLs.

Alternatively, run the following commands with elevated rights:

```
1 regsvr32 /s "%ProgramFiles%\Citrix\uberAgent\uAIEExtension32.dll"
2 regsvr32 /s "%ProgramFiles%\Citrix\uberAgent\uAIEExtension64.dll"
```

Automated Registration - Software Deployment Tool

The automated registration of uberAgent's Internet Explorer add-on is easily possible with your software deployment tool of choice. Make sure to register the two DLLs using the regsvr32 commands (see above) after uberAgent is installed.

Automated Registration - uberAgent Service

uberAgent's Internet Explorer add-on can be registered automatically through uberAgent's system service. Please note that this does not happen by default to prevent end-user prompts (see below).

To configure the uberAgent service to automatically register the IE add-on set the RegisterIEAddOn configuration value to 1.

Enabling the IE Add-on

Enable Manually

Internet Explorer will ask each user to enable the add-on once the DLLs are registered when the browser is started.

Enable Automatically

To avoid end-user prompts, configure the Group Policy setting Add-on List for automatic enablement. The setting can be found at Computer Configuration > Policies > Administrative Templates > Windows Components > Internet Explorer > Security Features > Add-on Management > Add-on List.

Add an entry with the following values:

```
1 Value name: {
2 82004312-5B53-46F1-B179-4FCE28048E6F }
3 4 Value data: 1
```

Relevant Configuration Settings

Protected Mode

The uberAgent Internet Explorer add-on has been tested successfully and is supported in protected mode.

Enhanced Protected Mode

The uberAgent Internet Explorer add-on has been tested successfully and is supported in enhanced protected mode.

Enterprise Mode

Internet Explorer enterprise mode allows customers to define URLs that are rendered with older versions of the IE engine (e.g., IE9 or IE10). uberAgent's Internet Explorer add-on requires IE11 and only works for sites rendered with version 11 of the IE engine.

Upgrading uberAgent®

September 12, 2025

This document outlines the procedure for upgrading uberAgent to a newer version.

Note

Securing the Configuration Directory

Please review this document for important information on securing the agent's %ProgramData % configuration directory.

Understand What's New and Changed

Please read the changelog. Changes might affect uberAgent's configuration, for example.

Depending on the nature of the changes made for a new version, it may be necessary to update custom apps that make use of the data collected by uberAgent.

Endpoint Agents

To upgrade uberAgent's endpoint agents, run the installer for the newer version. It detects the existing installation, uninstalls it, and installs the updated version automatically. Please refer to the endpoint agent installation documentation for more details (Windows, macOS).

Note: Any custom configuration files in the installation directory are not preserved during the upgrade. As of uberAgent 7.3, configuration files must be stored outside the installation directory in %ProgramData%, as described here.

User & Host Tags

Starting with uberAgent 7.0, host and user tags are collected through dedicated timers. If you are upgrading from an earlier version, adjust your configuration to implement a timer for user and host tags as described here.

Upgrading to uberAgent 7.3.1

Upgrading to uberAgent 7.3.1 follows the standard installation instructions. However, there are important changes regarding the configuration directory for Windows. Please note the following when upgrading:

- **Configuration Directory Change**: Starting with uberAgent 7.3, configuration files can no longer be deployed in the installation folder due to security concerns.
 - Beginning with version 7.3, uberAgent only searches for configuration files in the % ProgramData%\vast limits\uberAgent\Configuration\ directory. Customers who previously stored their configurations in the installation folder need to move them to %ProgramData%\vast limits\uberAgent\Configuration\. Please refer to the endpoint agent installation documentation for more details (Windows).
- **License File**: While configuration files must be deployed to %ProgramData%, the license file should still be placed in the installation folder.
- **GPO and Central Configuration File Management**: uberAgent can continue to be configured using Group Policy Objects (GPO) or Central Configuration File Management. Ensure that these methods reflect the new %ProgramData% directory requirement.
- **Securing the Configuration Directory**: Please review this document for important information on securing the agent's %ProgramData% configuration directory.

Upgrade Steps to uberAgent 7.3.1

- 1. **Install the Update**: Run the uberAgent 7.3.1 installer. It automatically removes any previous installations and set the correct permissions for the configuration folder in %ProgramData%.
- 2. **Deploy Configuration**: After installation, move your configuration files to %ProgramData%.
- 3. **Deploy License**: Place the license file in the installation folder, as this remains the default location in uberAgent 7.3.1.

Splunk Apps

Upgrade Procedure

1. **Delete** the following Splunk app directories:

```
$$PLUNK_HOME\etc\apps\uberAgent
$$PLUNK_HOME\etc\apps\uberAgent_ESA
$$PLUNK_HOME\etc\apps\uberAgent_indexer
```

- 2. **Install** the new versions of the Splunk apps as described here.
- 3. Restart Splunk.

Upgrade from uberAgent 6.0

With uberAgent 6.1, the experience score data was moved from the KV store to a dedicated index. If you're upgrading from 6.0 to a newer version, delete the Splunk KV store lookup lookup_hostinfo2 and associated data by running the following Splunk searches:

```
| outputlookup lookup_hostinfo2
  outputlookup lookup_score_per_machine
3
  | outputlookup lookup_score_historic_per_machine
6
7
  outputlookup lookup_score_per_session
8
   | outputlookup lookup_score_historic_per_session
9
10
   outputlookup lookup_score_per_application
11
12
13
   outputlookup lookup_score_historic_per_application
```

Elasticsearch

New versions of uberAgent often include additional fields, which may require updating the Elastic-search index template. To do so, overwrite the existing index template with the new version as described here. Note that index templates are applied only to new indexes; existing indexes retain their original templates.

Configuration via Group Policy

September 12, 2025

Platforms: Windows only

Configuration via Group Policy is an alternative to configuring uberAgent via central config file management or local config files.

Overview

To configure uberAgent® via Group Policy, follow these steps:

• Copy the Group Policy AMDL/ADMX templates included in the uberAgent download package to your PolicyDefinitions directory.

- Create a new GPO that applies to the computers uberAgent is installed on.
- Import the default configuration from the directory uberAgent components\Group Policy\GPO backup of the download package, choosing either the default configuration or the version optimized for data volume.
- Adjust the imported default configuration as required.
- Local configuration files on the endpoints are ignored, and policy settings are used exclusively. If an additional configuration file is set via Group Policy, the settings of that file overwrite Group Policy settings.

Detailed Description

Preparation

In order to have the uberAgent settings show up in Group Policy Management Editor, you need to add uberAgent's Group Policy template (ADMX and ADML files) to your PolicyDefinitions directory. If you are using a Central Store for Group Policy administrative template files, then the location of the PolicyDefinitions directory is:

```
\\FQDN\SYSVOL\FQDN\policies\PolicyDefinitions
```

If you are not using a Central Store, administrative templates reside on the machines that are used to manage Group Policy in:

```
%Systemroot%\PolicyDefinitions
```

In any case, copy all files from this location in uberAgent's download package to your PolicyDefinitions directory:

```
uberAgent components\Group Policy\Administrative template (ADMX)
```

That directory should contain at least:

- uberAgent.admx
- en\uberAgent.adml

Configuration

Once the administrative template files are in the correct location, choose a Group Policy Object (GPO) you want to configure uberAgent's settings in. uberAgent's configuration settings are located in **Computer Configuration** > **Policies** > **Administrative Templates** > **uberAgent**.

Settings Import The easiest way to get a working configuration is to import the settings from the GPO backup included in the uberAgent download package.

To import the default configuration, follow these steps:

- In Group Policy Management Console (GPMC), navigate to the node **Group Policy Objects** (import is not available on a GPO link).
- Right-click the GPO you want to import the settings into.
- Select Import Settings....
- When asked for the **Backup location** from which settings will be imported select the directory uberAgent components\Group Policy\GPO backup from uberAgent's download package.
- Complete the **Import Settings** wizard.
- Open the GPO you imported the settings into in Group Policy Management Editor.
- Navigate to Computer Configuration > Policies > Administrative Templates > uberAgent>
 Receivers > Receiver 01.
- Adjust the setting **Servers (required)** according to your requirements.
- Note that **Advanced** > **Protocol** is set to **TCP** if not enabled.

Manual Configuration As an alternative to importing the default configuration (as described above), you can configure uberAgent's settings from scratch. Here are some recommendations:

- Enable on-demand metrics: **On-demand metrics** > **On-demand metrics**.
- Configure and enable a receiver: **Receivers** > **Receiver 01**.
- Configure and enable at least one timer: Timers > Timer 01.
- Do not forget to enable the setting Configuration through Group Policy.

Troubleshooting

Verify in the registry that the machines running uberAgent have received the correct Group Policy settings. uberAgent's settings are stored in HKEY_LOCAL_MACHINE\SOFTWARE\Policies\vastlimits.

Verify that uberAgent is processing the settings correctly:

- Restart the uberAgent service.
- Open the log file.
- Right after the service starts uberAgent logs in detail how it processes its configuration and what source (Group Policy, config file) is being used.

Configure uberAgent® via Citrix Policies

December 11, 2025

Starting with **uberAgent 7.4.0**, uberAgent can be configured through **Citrix Studio** or **Citrix Web Studio** when it is installed as part of the **Citrix Virtual Apps and Desktops** installation.

Information:

This configuration option is only available if uberAgent is installed using the **Citrix Virtual Apps** and **Desktops™ installer**. **Customers** who installed uberAgent using the **uberAgent standalone** installer must first uninstall uberAgent and then reinstall it using the **Citrix Virtual Apps and Desktops installer** to utilize these policies.

Enable uberAgent Data Collection

Description

The policy **Enable uberAgent Data Collection** determines whether uberAgent is generally enabled or disabled. When enabled, uberAgent can enhance Director and collect metrics for monitoring and analysis in a third-party backend. Please note that the policy Enhance Director with uberAgent Data is additionally required to activate the Director integration. To collect the following metrics, customers need to provide a configuration bundle and a license file (e.g., via the policies uberAgent Configuration Archive Path and uberAgent License Archive Path):

- User experience
- Application performance
- · System health
- Network activity
- · Security analytics

Please note that if this setting is set to disabled, uberAgent is unable to enhance Director metrics nor to collect data based on a customer-provided configuration.

Default Setting: Disabled

Enhance Director with uberAgent Data

Description

This policy enables the integration of Director with uberAgent. It allows Director to process data provided by uberAgent to enhance monitoring capabilities, including monitoring of local application usage. Please see more details here.

Default Setting: Enabled

uberAgent Configuration Archive Path

Description

This policy specifies the path to a directory containing an **uberAgent configuration archive** (uberAgent.uAConfig). This archive allows advanced customization of uberAgent.

The configuration archive can be stored:

- Locally on the endpoint
- On an SMB share, from which uberAgent automatically retrieves it

Important: Specify only the **directory path without the filename**.

Example: Use \\fileserver\configshare instead of \\fileserver\configshare\ uberAgent.uAConfig.

Default Setting: empty (not applied)

Note: This policy is **not required** if uberAgent is only used to **enhance Director**.

For a detailed explanation of how to set up and manage the configuration archive, refer to the **Central Config File Management** documentation.

uberAgent License Archive Path

Description

This policy specifies the path to a directory containing at least one **uberAgent license file** (uberAgent.lic). License files ensure that uberAgent operates in its licensed mode, unlocking the full feature set.

The license files can be stored:

- Locally on the endpoint
- On an SMB share, from which uberAgent automatically retrieves them

Important: Specify only the **directory path without the filename**.

Example: Use \\licserver\licenseshare instead of \\licserver\licenseshare\\ uberAgent.lic.

Default Setting: empty (not applied)

Note: This policy is **not required** if uberAgent is only used to **enhance Director**.

For detailed instructions on managing license files, refer to the **Central License File Management** documentation.

Central Config File Management

December 11, 2025

The ability to retrieve configuration sets from an SMB file share is called Central Config File Management (CCFM). It has the advantage of **automatic deployment** via an agent-based pull mechanism and full support for uberAgent ESA Threat Detection rules and inventory tests (which cannot be distributed by Group Policy alone). With Central Config File Management, either a single configuration can be used for all endpoints, or different types of agents can be configured to pull different configurations.

Central Config File Management is an alternative to configuring uberAgent via local configuration files or Group Policy.

Requirements

File Share Access

uberAgent must have read permissions on the file share to copy the central configuration to the local cache.

Windows The uberAgent service runs as SYSTEM. Hence, in an Active Directory domain environment, the computer account must have read permissions on the central file share.

macOS Mount the file share as SMB share.

Azure Files You can use Azure Files to store the central configuration in the same way that you can use it for the license file.

Availability Requirements

There is no need for the configured file share to be available all of the time. Endpoints always use the local configuration cache.

Enabling CCFM

If a base path is specified via one of the methods described in this section, Central Config File Management is enabled.

Windows

uberAgent checks the following registry values at startup. If one of them exists, the agent uses the specified value as the base path to the central configuration file share.

Via Group Policy Specify the base path to the configuration file share in the registry value HKLM\
Software\Policies\vast limits\uberAgent\Config\ConfigFilePath (REG_SZ).
This setting can be deployed via uberAgent's Group Policy settings.

Note: Please ensure that only the directory path is specified, excluding the filename.

Via the Registry Specify the base path to the configuration file share in the registry value HKLM\ Software\vast limits\uberAgent\Config\ConfigFilePath(REG_SZ).

Note: Please ensure that only the directory path is specified, excluding the filename.

Via Citrix Studio or Citrix Web Studio™ As of uberAgent 7.4, Central Config File Management can be configured directly through Citrix Studio or Citrix Web Studio.

To enable this, specify the base path to the configuration file share using the policy setting named uberAgent configuration archive path.

Note:

- Citrix policies are only supported if uberAgent was installed as part of the Citrix Virtual Apps and Desktops™ (CVAD) installation.
- Please ensure that only the directory path is specified, excluding the filename.

macOS

- 1. Visit the configuration GitHub repository, and select the version that matches your installed uberAgent version.
- 2. Open the directory config and download uberAgent-remote-config-macOS.conf
- 3. Add the path to the config file share in the downloaded configuration file:

Section: RemoteConfiguration **Key:** ConfigFilePath

4. Copy the updated file to /Library/Application Support/uberAgent/.

How CCFM Works

If Central Config File Management is enabled, uberAgent tries to retrieve its configuration from the file share specified in the ConfigFilePath setting. It does so by looking for the configuration matching its own version the closest.

If a central configuration is found, and its timestamp differs from the previously cached configuration on the endpoint, uberAgent downloads the central configuration. It then compares the currently applied configuration with the downloaded central configuration for meaningful changes. If any are detected, the newly downloaded central configuration is applied.

Configuration Archive (uberAgent.uAConfig)

uberAgent expects the central configuration in a single file, uberAgent.uAConfig. Technically, this file is a zipped archive of all of uberAgent's configuration files. Please note that uberAgent requires the compression algorithm Deflate.

Base Path Subdirectory Precedence

Assuming the agent's version is 7.1.0.5050 and the file share path is \\server\share, uber-Agent looks in the following directories for the configuration archive uberAgent.uAConfig and uses the first config archive it finds:

- 1. \\server\share\7.1.0.5050
- 2. $\server\share\7.1.0$
- 3. \\server\share\7.1
- 4. \\server\share\7
- 5. \\server\share

CCFM Application Matrix

The following matrix helps to understand how Central Config File Management updates the local agent configuration.

File share accessible	Central configuration found	Local cache valid	Meaningful change detected	uberAgent behavior
yes	yes	no	n/a	The configuration is downloaded and applied; the local cache folder is updated.
no	n/a	no	n/a	uberAgent pauses for 60 s, after which it retries, repeating this until uberAgent. uAConfig is found.
yes	yes	yes	yes	The configuration is downloaded and applied; the local cache folder is updated.
yes	no	yes	n/a	uberAgent uses the cached configuration.
no	n/a	yes	n/a	uberAgent uses the cached configuration.

Refresh Interval & Auto-Update

Each agent regularly checks the CCFM file share for updates and applies new configurations automatically. See this document for details.

Creating or Updating a Custom CCFM Archive (uberAgent.uAConfig)

Note: the CCFM archive of the default configuration can always be found in the config-dist sub-directory of the uberAgent Configuration GitHub repository. Creating your own CCFM archive is only necessary if **customizations** are to be applied to the default configuration.

Downloading the Latest Files from GitHub

We provide a PowerShell script to help automate the process of downloading a subset of uberAgent's configuration files from GitHub.

With the help of this script, download those files that you want to update, leaving your customized config files unchanged. Then proceed to create the CCFM archive as explained below.

Creating the CCFM Archive (uberAgent.uAConfig)

Create an archive of all uberAgent configuration files you want to be part of your central configuration and name it uberAgent.uAConfig. This can either be done in Windows Explorer, macOS Finder, or on the command line. The steps to produce a configuration archive on the terminal are as follows:

- 1. Copy all configuration files into a folder.
- 2. Change to this folder on the command line.
- 3. Execute one of the following commands, depending on the platform you are creating the archive on.

```
Windows
```

```
Compress-Archive * -DestinationPath config-temp.zip
Move-Item config-temp.zip uberAgent.uAConfig
```

```
macOS

1 zip -r uberAgent.uAConfig ./ -x "*.DS_Store"
```

Switching Between Configuration Options (CCFM ↔ Local ↔ Group Policy)

Switching from one configuration option to another at runtime is possible anytime.

From Central to Local Configuration

Windows Remove the value ConfigFilePath where you configured it (registry or Group Policy, see above).

macOS Remove the file uberAgent-remote-config-macOS.conf from the folder / Library/Application Support/uberAgent.

From Local to Central Configuration

Windows Add the value ConfigFilePath either via the registry or via Group Policy (see above).

macOS Add the path to the file share in file uberAgent-remote-config-macOS.conf (see above).

CCFM Reporting & Monitoring

uberAgent reports configuration metadata in the sourcetype uberAgent: Config:ConfigInfo (docs). The transmitted data is visualized in the **uberAgent Versions** Splunk dashboard.

Configuration via Local Config Files

September 12, 2025

Platforms: all

Configuration via local config files is an alternative to configuring uberAgent via central config file management or Group Policy.

Config File Location

Windows

Config File Templates Please download the latest config files templates for your installed uberAgent version on GitHub, and make changes as required.

As the agent searches for valid configurations only in the %PROGRAMDATA%\vast limits\uberAgent\Configuration\ directory, perform the following steps:

- 1. Download the config files from GitHub to %PROGRAMDATA%\vast limits\uberAgent\ Configuration\
- 2. Modifythe%PROGRAMDATA%\vast limits\uberAgent\Configuration\uberAgent .conf file.

Configuration Optimized for Data Volume To switch to the configuration optimized for data volume back up uberAgent.conf and rename uberAgent-data-volume-optimized.conf to uberAgent.conf.

macOS

The configuration file uberAgent.conf for the uberAgent daemon is located in /Library /Application Support/uberAgent/. During upgrades, files in this directory are not overwritten to preserve customizations. It is recommended to update the default configuration from the config file templates (see below) after an upgrade.

Config File Templates Please download the latest config files templates for your installed uberAgent version on GitHub.

Applying Configuration Changes

The agent reads the configuration upon startup of the uberAgent service/daemon. To apply configuration changes, restart the uberAgent service/daemon.

Config File Syntax

December 11, 2025

uberAgent's configuration file supports several advanced syntax features.

Windows

PATH_REGEX

PATH_REGEX stands for a **regex** in which **environment variables** can be used. It is matched against a **file system** path. The following rules apply:

- Environment variables (enclosed in percent signs, e.g., %ProgramFiles%) are expanded first, regex matching happens second.
- Paths are specified as regular expressions.
- Backslashes must be escaped by prepending a second backslash.
- Matching is case-insensitive.
- Specifying only the file name without the full path works but is not recommended.

macOS

PATH_REGEX

Due to macOS security policies, environment variables for daemons must be declared within the daemon's property list file. As future macOS releases will mandate that the plist resides within the application bundle, enforcing code signature integrity through directory hash validation, any post-installation modification to the plist, such as dynamic environment variable expansion, would disrupt the code signature, rendering the daemon inoperable. Consequently, support for environment variable expansion under macOS is not supported.

Agents on All Operating Systems

ConfigInclude

A @ConfigInclude directive includes another configuration file. The other file is identified by name (without path) and must reside in the same directory as the configuration file including it. The additional platform parameter may be used to conditionally include a file on the selected platform (Windows or macOS). Platform matching is case-insensitive.

Examples:

```
1 #Include on all platforms
2 @ConfigInclude other-file.conf
```

```
1 # Include on Windows only
2 @ConfigInclude windows-specific.conf platform=Windows
```

PROCESS_NAME_REGEX

PROCESS_NAME_REGEX stands for a **regex** that is matched against a **process name**. The following rules apply:

- Backslashes must be escaped by prepending a second backslash.
- Matching is case-insensitive.
- Only the file name is used for matching, not the full path.

URL_REGEX

URL_REGEX stands for a **regex** that is matched against a **URL**. The following rules apply:

• Backslashes must be escaped by prepending a second backslash.

• Matching is case-sensitive.

Format of the URLs matched against URL_REGEX:

- Origin and path (without query segment), e.g.: https://www.citrix.com/downloads/citrix-monitoring-observability/
- Port numbers are stripped from the URL if they match the default port number.

platform=

All configuration stanzas can optionally be limited to a specific platform using the platform= attribute.

- The platform is either Windows or macOS
- Stanzas without platform= are active on all supported platforms.

Example

```
1 [Timer platform=Windows]
2 ...
3
4 [Timer platform=macOS]
5 ...
```

Change configured setting values dynamically with uAQL

Some configuration settings are changeable using prefixed uAQL queries. This allows use cases where configuration values depend on environment variables, registry values or require string prefixes/suffixes. For now, the following configuration settings are changeable:

[Receiver]

- RESTToken
- TLSClientCertificate
- ElasticIngestPipeline
- Index
- Host
- Source
- PersistentOutputQueuePathWindows
- PersistentOutputQueuePathMacOS
- KafkaTopicName

Consider the following **example** to configure a prefix string in any *KafkaTopicName* setting.

Integrations

September 7, 2025

This section provides an overview of available integrations with and into other Citrix® products, including:

- Citrix Virtual Apps and Desktops
- Citrix Director

Citrix Virtual Apps and Desktops™ Integration

September 12, 2025

Overview

Starting with **Citrix Virtual Apps and Desktops 2503**, uberAgent is included in the CVAD installer, enabling seamless installation and updates via the CVAD installer. Additionally, uberAgent can be configured through Citrix Policies when installed using the CVAD installer. Furthermore, uberAgent integrates with Citrix Director, enhancing Director's monitoring capabilities with minimal effort.

To fully leverage uberAgent's capabilities, including advanced analytics and extended monitoring, a supported backend is required. Supported backends include **Splunk**, **Elasticsearch & Kibana**, **Apache Kafka**, **Microsoft Azure Monitor**, and **Microsoft ADX**. For more information, please refer to the Backend Documentation.

For detailed instructions on installing uberAgent using the CVAD installer, refer to Installing uberAgent.

Configuration via Citrix Policies

Starting with uberAgent 7.4, configuration can be managed directly through Citrix Studio or Citrix Web Studio when uberAgent is installed as part of the Citrix Virtual Apps and Desktops installation. This includes enabling or disabling data collection and specifying paths for the configuration archive and license. For detailed instructions, see Configuration via Citrix Policies.

Citrix Director Integration

September 12, 2025

Overview

Starting with **Citrix Virtual Apps and Desktops 2503**, uberAgent integrates with Citrix Director to enable enhanced monitoring capabilities. The core feature of this integration is Application Usage Monitoring, which can be activated with minimal effort by simply enabling the uberAgent Data Collection policy. Everything else works seamlessly and without the need for an additional backend. This functionality allows administrators to track application usage directly within Citrix Director.

To unlock the full potential of uberAgent, including advanced analytics and extended monitoring features, a supported backend is required. Supported backends include **Splunk**, **Elasticsearch & Kibana**, **Apache Kafka**, **Microsoft Azure Monitor**, and **Microsoft ADX**. For more information, refer to the Backend Documentation.

Additional Resources

For comprehensive instructions and further details, please consult the following resources:

- Application Usage Monitoring
- Citrix uberAgent Integration with Director Installation

UXM Features & Configuration

September 7, 2025

uberAgent uses sophisticated methods to collect **relevant data** from the operating system and applications. It then presents the data in an **easily understandable** and human-friendly way to give IT the information they actually need to improve **digital employee experience** and maintain **security**.

This section lists important features with their respective configuration options.

Experience Score

September 7, 2025

uberAgent's experience score is a rating system that calculates and visualizes the current and past status of all applications, devices, and user sessions monitored by uberAgent.

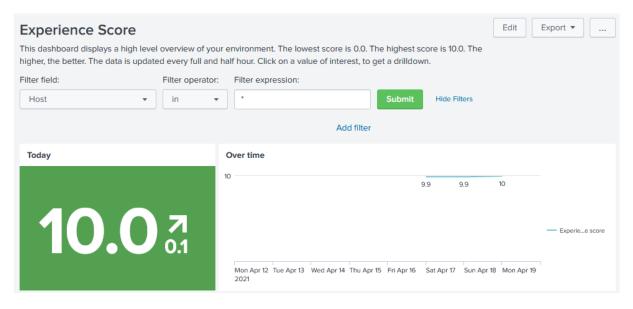
Experience scores range **from zero to ten**. Scores from zero to four are considered **bad**, scores from four to seven are considered **medium**, and scores from seven to ten are considered **good**.

Experience Score Dashboard

The experience score dashboard is the entry point of the uberAgent UXM Splunk app. It visualizes experience scores for the entire estate, breaking the data down by category and component, highlighting components where potential issues originate from.

The dashboard also provides quick access to important **KPIs** like logon duration, application responsiveness, or application errors.

Overall Score



The filter at the top allows filtering the dashboard to a subset of machines. By default, all machines are shown.

On the left in the second row, one can see the overall score and the trend compared to yesterday. On the right, the score development over time is visualized.

Machine, User Session, and Application Scores

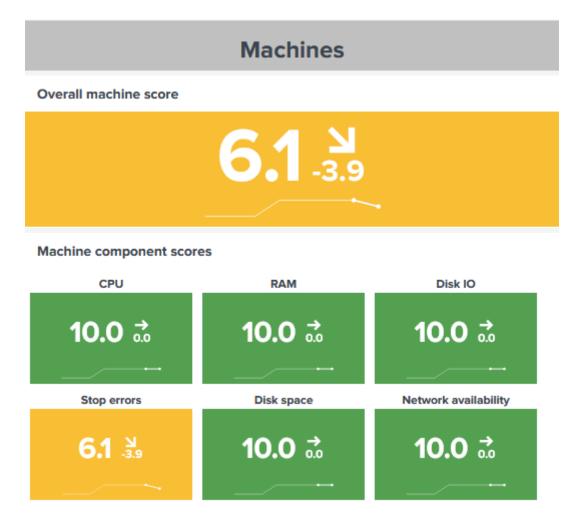


The overall score derives from three categories:

- Machine score: quality indicator for machine performance and health
- User session score: quality indicator for user session performance and health
- Application score: quality indicator for application performance and health

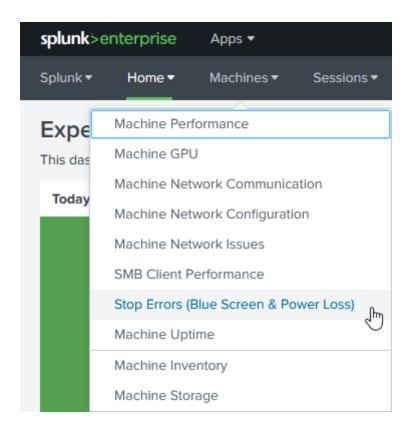
The charts show a trend indicator for the last day as well as a sparkline for the last seven days.

Score Components



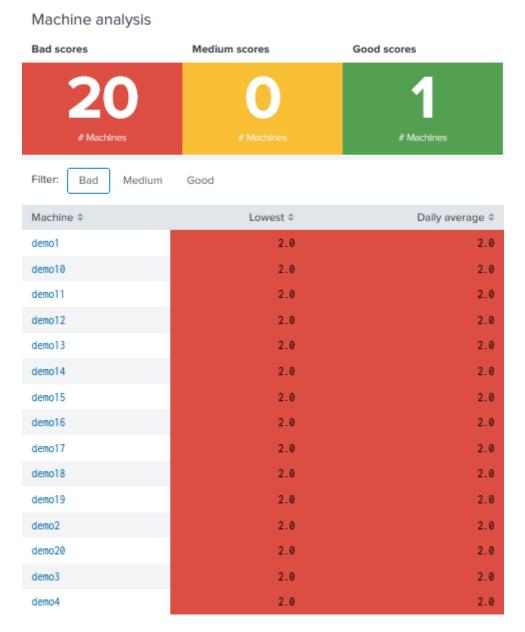
Each category is calculated by different components. Components differ per category. For example, *Stop errors* is a component solely for the machine category, while the *Protocol latency* component is only part of the user session category. There are also common components, like *CPU* or *RAM*.

The categories allow us to see issues in an environment, and the components unveil the cause (or causes). In the screenshot above, the low machine score is caused by a lot of stop errors (BSODs).



In that case, checking the *Stop Errors (Blue Screen & Power Loss)* dashboard in the *Machine* menu shows the problematic machines.

Analyzing Individual Machines, User Sessions, and Applications



The charts below show scores for individual machines, user sessions, and applications for today. Items with bad (red) or medium (yellow) scores may need attention the most. Click on an item in the table to get a drilldown.



A new chart opens showing the components over time for that item. That allows us to see when the issue or the issues started. To analyze the item in detail, click on the **analyze button**, which redirects to a new page.

More Details

More details

Scores might not be enough to get an overview. One may want to see real numbers, for example, login times, to get a better understanding of the performance.

Click on the plus sign next to the *More details* title to reveal charts with more details. Click an item of interest to get a drilldown.

Score Calculation

Component scores are evaluated at every full and half hour for the past 30 minutes. Calculations span a time interval of three minutes, resulting in 10 sections (30 minutes/3 minutes = 10). If a section is above a threshold, a threshold counter is incremented.

Each score has two thresholds. One for low severity, the other for high severity. Each threshold has a weight.

A score is calculated as follows: 10 - (Low severity threshold counter x low severity threshold weight + high severity threshold counter x high severity threshold weight)

• Example 1: Three sections above the low severity threshold as well as a weight of 0.5. The score would be: $10 - (3 \times 0.5) = 8.5$

• Example 2: Three sections above the low severity threshold (weight = 0.5) and two sections above the high severity threshold (weight = 1). The score would be: $10 - (3 \times 0.5 + 2 \times 1) = 6.5$

Note: The higher the weight, the lower the score.

Below is a list of default thresholds and weights. To modify the defaults, see Modifying the Score Calculation.

Machine

Threshold	Setting	Default value	Unit	Default weight
CPU usage. Low severity.	ThresholdMachin	neCP30PercentLowerBo	u f⁄d	0.5
CPU usage. High severity.	ThresholdMachin	neCP 90 PercentHigherBo	ouMd	1
RAM usage. Low severity.	ThresholdMachin	neRAMPercentLowerBo	ou n d	0.5
RAM usage. High severity.	ThresholdMachin	neRAMPercentHigherBo	ouMid	1
DIsk IO usage. Low severity.	ThresholdMachin	nelOStercentLowerBour	nd%	0.5
Disk IO usage. High severity.	ThresholdMachin	nelO¶ercentHigherBou	n d ∕₀	1
Stop errors. Low severity.	ThresholdStopEr	ror@ountLowerBound	Count	0.7
Stop errors. High severity.	ThresholdStopEr	ror c ountHigherBound	Count	1
Disk usage. Low severity.	ThresholdMachin	neDi 8& UsagePercentLo	w & rBound	0.2
Disk usage. High severity.	ThresholdMachin	neDi 9& UsagePercentHi _{&}	gh∕ærBound	0.5
Network availability. Low severity. (Note: higher is better)	ThresholdMachin	neN @5 workAvailabilityP	PeftcentLowerBound	0.2

Threshold	Setting	Default value	Unit	Default weight
Network availability. High severity. (Note: higher is better)	ThresholdMach	nineN &to vorkAvailabilit	yPeftentHigherBound	0.5

User session

Threshold	Setting	Default value	Unit	Default weight
CPU usage. Low severity.	ThresholdSession	CP & PercentLowerBou	un?db	0.5
CPU usage. High severity.	ThresholdSession	CP 9 /PercentHigherBo	ur %d	1
RAM usage. Low severity.	ThresholdSession	RA M PercentLowerBoo	um/da	0.5
RAM usage. High severity.	ThresholdSession	RA M PercentHigherBo	uñ⁄d	1
Disk IO latency. Low severity.	ThresholdIOLaten	cy 20 werBound	ms	0.5
Disk IO latency. High severity.	ThresholdIOLaten	cy Bl gherBound	ms	0.7
Logon duration. Low severity.	ThresholdLogonD	ura tt onLowerBound	S	0.2
Logon duration. High severity.	ThresholdLogonD	ur atto nHigherBound	S	0.4
Protocol latency. Low severity.	ThresholdSession	Rp Lat encyMsLowerBo	o urmd	0.2
Protocol latency. High severity.	ThresholdSession	Rp l@t encyMsHigherB	oumsi	0.5

Application

Threshold	Setting	Default value	Unit	Default weight
CPU usage. Low severity.	ThresholdApp(CPUPe&0entLowerBound	%	0.5
CPU usage. High severity.	ThresholdAppC	CPUP ⊛0 entHigherBound	%	1
RAM usage. Low severity.	ThresholdAppF	RAMM B024 verBound	МВ	0.1
RAM usage. High severity.	ThresholdAppF	RAMM BD4 gherBound	МВ	0.3
Disk IO. Low severity.	ThresholdAppI	OCou îtl lowerBound	Count	0.1
Disk IO. High severity.	ThresholdAppl	OCou 400 igherBound	Count	0.3
Network availability. Low severity. (Note: higher is better)	ThresholdAppN	letwo 9 KAvailabilityPercei	nt‱werBound	0.2
Network availability. High severity. (Note: higher is better)	ThresholdAppN	letwo 9k AvailabilityPerce≀	nt M igherBound	0.5
Network latency. Low severity.	ThresholdAppS	Send Latency Ms Lower Bou	ını d ıs	0.2
Network latency. High severity.	ThresholdAppS	SendL 3t €ncyMsHigherBou	umods	0.5
Application UI delay. Low severity.	ThresholdAppl	JIDela§SLowerBound	S	0.2
Application UI delay. High severity.	ThresholdAppl	JIDela i/S HigherBound	S	0.5
Application errors. Low severity.	ThresholdAppl	icatio 1 iErrorCountLowerE	3 Caunaht	0.5
Application errors. High severity.	ThresholdAppl	icatio 2 ErrorCountHigher	B ©oud t	1

Modifying the Score Calculation

The scores' default calculation settings have been chosen in a careful selection and tuning process. They should work well in most environments. Please read on if you find that the calculations should be optimized for your organization's requirements.

Before Modifying

Before making changes, note the following:

- The lowest weight possible is 0.
- The highest weight possible is 1.
- The sum of all weights doesn't need to be 1. Each component is calculated separately.
- All components together form a total machine/user session/application score. The total score is always equal to the lowest component score.

Modifying

To modify the score calculation, change the following three input lookup files in \$SPLUNK_HOME/etc/apps/uberAgent/lookups. See Score Calculation for calculations and settings.

- Machine: score_machine_configuration.csv
- User session: score_session_configuration.csv
- Application: score_application_configuration.csv

After Modifiying

- Distribute the changed input lookup files to all search heads
- It is best to delete all previous scores as they cannot be compared to the new ones. See Deleting Scores for instructions.

New versions of uberAgent may introduce new scores or changes to calculations for existing scores. Hence your score modifications will be overridden when updating uberAgent.

Score Storage

Scores are stored in the Splunk index score_uberagent_uxm. The scores for the current date get aggregated at midnight (average per day) and then stored in the index as well.

If you want to delete the scores, see Deleting Scores.

Deleting Scores

Scores are stored in the Splunk index score_uberagent_uxm and can be deleted via the CLI.

splunk clean eventdata -index score_uberagent_uxm

Troubleshooting

If the Experience Score dashboard stays empty, try the following troubleshooting steps.

- 1. Scores are stored in an additional Splunk index score_uberagent_uxm since version 6.1. Check whether the index exists.
- 2. Scores are calculated through saved searches running on Splunk search heads. In a distributed Splunk environment, configure the search heads to forward data to the indexer layer.

Per-Application Network Monitoring

December 11, 2025

This feature is supported on: Windows, macOS

What Is Per-Application Network Monitoring

uberAgent network monitoring keeps track of all incoming and outgoing network connections. uber-Agent associates every network connection with the application handling it and determines metrics like **latency**, **packet loss**, **data volume**, and more. uberAgent network monitoring also records **failed connections** that may have been blocked by firewalls, for example.

uberAgent per-application network monitoring does not inspect packets and does not break TLS or other types of encryption.

Use Cases for Per-Application Network Monitoring

By providing insights into network activity per application, uberAgent® enables the following use cases:

- · Network availability scoring
- Network quality monitoring
- Identification of network **issues** (jitter, packet loss, blocked ports)

- Mapping of network targets (who talks to whom)
- Data volume analytics (how much traffic is going where)

Which Data is Collected by Per-Application Network Monitoring

The data collected as part of uberAgent per-application network monitoring is sent to the backend via the sourcetypes listed in the network metrics documentation.

Name Resolution (IP Address to DNS Name)

Name resolution is supported on: Windows

Network packets contain IP addresses, but not DNS names. In order to be able to associate each network target IP address with the corresponding DNS name, uberAgent also monitors DNS queries. By enriching network monitoring data with DNS query data, uberAgent ensures that each network event has the target's IP address as well as its DNS name.

Please note that uberAgent does not perform reverse DNS lookups, nor does it send its own DNS queries over the wire. uberAgent only generates network traffic to send the collected data from the endpoint to the backend servers.

Protocol Notes

IPv6

IPv6 is fully supported by uberAgent per-application network monitoring.

UDP

UDP traffic is fully supported by uberAgent per-application network monitoring. However, due to the protocol's connectionless nature, latency cannot be determined.

TCP

TCP traffic is fully supported by uberAgent per-application network monitoring. Since TCP is a connection-based protocol, latency, jitter, and packet loss can be determined.

Please note that latency detection is limited to send operations because otherwise a cooperating agent at the receiving side would be required.

QUIC

QUIC traffic is treated as UDP by uberAgent per-application network monitoring.

ICMP

ICMP traffic is ignored by uberAgent per-application network monitoring.

Configuration

Enabling or Disabling Per-Application Network Monitoring

uberAgent per-application network monitoring is enabled or disabled via the NetworkTargetPerformancePr timer metric in the configuration. In the default configuration, network monitoring is enabled.

Configuration Options for Per-Application Network Monitoring

Certain aspects of per-application network monitoring can be configured via the stanza [NetworkTargetPerformanceProcess_Config].

Key (Supported on: Windows, macOS)

Internally, uberAgent records network activity by process instance. However, that level of detail is rarely required. In most cases, it is sufficient to visualize network activity per process name. This is an optimization that reduces the event count in the backend and the data volume. Optionally, the agent can be configured to record network activity by process ID for full granularity by switching to grouping per ID instead of per name.

```
1 Setting name: Key
2 Description: What to group by: process name or ID
3 Valid values: name | id
4 Default: name
5 Required: no
```

IgnoreLowActivity (Supported on: Windows, macOS)

This is another setting targeted at reducing the event count and the data volume. By default, a threshold is applied below which per-application network activity is dropped (not sent to the backend).

```
Setting name: IgnoreLowActivityDescription: Whether to ignore processes with very low activity during a collection interval
```

```
3 Valid values: true | false
4 Default: true
5 Required: no
```

IgnoreLoopbackTraffic (Supported on: Windows)

This setting aims to reduce event count and data volume. By default, uberAgent ignores loopback traffic and doesn't send its metrics to the backend.

```
1 Setting name: IgnoreLoopbackTraffic
2 Description: Whether to ignore processes with loopback traffic or not
3 Valid values: true | false
4 Default: true
5 Required: no
```

Remarks: If you set IgnoreLoopbackTraffic = false, you should also set NetworkDriverLegacyAPI

= **true** to view all metrics related to loopback traffic. By default, only network connections are collected without additional traffic details. This restriction stems from the inherent Windows API. To access all loopback traffic metrics, it's necessary to change the provider as well.

NetworkDriverEnabled (Supported on: Windows)

Starting with uberAgent 6.0 (Windows), uberAgent monitors network activity with a kernel driver. This configuration option can be used to switch back to the older network data collection source ETW. ETW network monitoring has several limitations. Most notably, latency cannot be determined accurately.

```
1 Setting name: NetworkDriverEnabled
2 Description: Enables processing all network metrics by a driver instead of ETW.
3 Valid values: true | false
4 Default: true
5 Required: no
```

NetworkDriverLegacyAPI (Supported on: Windows)

This setting is intended for internal use by Citrix. Only enable it if instructed by support.

```
1 Setting name: NetworkDriverLegacyAPI
2 Description: Use legacy WFP API to process packet streams in kernel mode.
3 Valid values: true | false
4 Default: false
5 Required: no
```

TestCompareNetworkDriverAndETW (Supported on: Windows)

This setting is intended for internal use by Citrix. Only enable it if instructed by support.

```
1 Setting name: TestCompareNetworkDriverAndETW
2 Description: Collect network metrics using Windows ETW interfaces and
      the uberAgent network driver.
3
               The ProcUser field of the metric
                   NetworkTargetPerformanceProcess is extended by a suffix
                    ETW or DRV to differentiate the type of network event.
4
               Because of that, the network events are sent two times to
                   the configured backend.
               Use this feature to test unusual behavior in test
5
                   environments. This is not intended to be used in a
                   production environment.
6 Valid values: true | false
7 Default: false
8 Required: no
```

Web App Monitoring

September 12, 2025

What Is Web App Monitoring

uberAgent web app monitoring records page loads and XmlHttpRequests. For every such event, uber-Agent collects the duration, the user, and the HTTP status code (plus some additional information). Web app monitoring works on every website and in all major browsers.

In the default configuration, uberAgent does not send full URLs to the backend. Instead, events are summarized per webserver (the host displayed in the browser's address bar). **Full URL monitoring** can optionally be enabled for specific domains or sites of interest.

Use Cases for Web App Monitoring

By providing insights into browser and website usage, uberAgent® web app monitoring enables the following use cases:

- Measuring web page load performance
- Calculating web app usage
- Collecting an inventory of web apps
- Tracking the **user journey** on a website

Which Data is Collected by Web App Monitoring

The data collected as part of uberAgent web app monitoring is sent to the backend via the sourcetypes listed in the browser metrics documentation.

Additionally, some fields in the SessionDetail sourcetype (docs) are populated through web app metrics.

Requirements & Installation

Web App monitoring requires the uberAgent browser extensions to be installed in the end user's web browser. Please see the installation instructions for details on how to install the browser extensions.

Enabling or Disabling Web App Monitoring

uberAgent web app monitoring is enabled or disabled via the BrowserPerformance* timer metrics in the configuration. In the default configuration, web app monitoring is enabled for all supported browsers.

Full URL Monitoring

What Is Full URL Monitoring

Full URL monitoring optionally includes additional URL components in the following browser web app events or fields:

- the sourcetype uberAgent: Application: BrowserWebRequests2 (docs)
- the field SessionFgBrowserActiveTabHost of the sourcetype uberAgent: Session
 :SessionDetail (docs)

By default, full URL monitoring is disabled. The path and query components are stripped from URLs sent to the backend, i.e., uberAgent only records the scheme (e.g., https), the host (e.g., www.domain.com) and the port (unless it's a standard port, e.g., 443 for https).

Example of the default behavior:

- Full URL in the browser: https://splunk1.domain.com:8000/en-US/app/uberAgent/session_user_detail?earliest=-1h&latest=now
- Shortened URL in uberAgent event: https://splunk1.domain.com:8000

Configuring Full URL Monitoring

The default level of URL component detail can be changed by adding items in the [BrowserWebAppURL_Composition] stanza of the configuration.

Please note that URL **allowlists and denylists** ([BrowserWebAppURL_Filter] stanza) have precedence over [BrowserWebAppURL_ComponentDetail]. In other words, the level of detail configuration only applies to URLs that are not filtered by a deny or allow list.

BrowserWebAppURL_ComponentDetail Format of entries in the [BrowserWebAppURL_ComponentDeta] stanza:

```
1 URL_REGEX = COMPONENT_DETAIL_SPEC
2 or:
3 URL_REGEX = COMPONENT_DETAIL_SPEC_TAB; COMPONENT_DETAIL_SPEC_REQUEST
```

Note: see the definition of URL_REGEX.

Tab URLs are matched against the regular expressions (URL_REGEX) of the items in the [BrowserWebAppURL_ComponentDetail] stanza. For matching URLs, COMPONENT_DETAIL_SPEC specifies which level of detail is recorded of the tab and request URLs.

Note:

- Tab URLs are URLs in the browser's address bar
- Request URLs are URLs the browser communicates with

Optionally, the detail level of the request URL can be set independently of the detail level of the tab URL by using the second format shown above.

Multiple URL component detail specs can be specified in a single [BrowserWebAppURL_ComponentDetail] stanza. Matching is performed in the order in which items are listed. The first matching item wins.

COMPONENT_DETAIL_SPEC Format of the URL component detail specification (COMPONENT_DETAIL_SPEC):

```
host[:path[(DEPTH)]] [:query[(PARAMS)]]
```

with:

- **DEPTH:** the number of path elements to include. Without DEPTH, the entire path is included.
- **PARAMS:** comma-separated list of regular expressions specifying query parameters to include. Without PARAMS, all query parameters are included. Details:
 - Query parameters to be included are specified as regular expressions.
 - Matching is case-sensitive.

Examples: Same Level of Detail for Tab URL and Request URL

The following examples show the effect of different configurations in a scenario where the tab URL and the request URL are identical:

- Tab URL: https://splunk1.domain.com:8000/en-US/app/uberAgent/session_user_detail?earliest=-1h&latest=now
- Request URL: https://splunk1.domain.com:8000/en-US/app/uberAgent/ session_user_detail?earliest=-1h&latest=now

Host and Path Capture URLs on splunk1.domain.com including the path, but excluding the query:

```
.*\.?splunk1\.domain\.com/.*$ = host:path
```

Result:

https://splunk1.domain.com:8000/en-US/app/uberAgent/session_user_detail

Host and 2 Path Elements Capture URLs on splunk1.domain.comincluding the path, but only the first two elements:

```
.*\.?splunk1\.domain\.com/.*$ = host:path(2)
```

Result:

https://splunk1.domain.com:8000/en-US/app

Host, Path, and Query Capture URLs on splunk1.domain.com including the path and all query parameters:

```
.*\.?splunk1\.domain\.com/.*$ = host:path:query
```

Result:

https://splunk1.domain.com:8000/en-US/app/uberAgent/session_user_detail
?earliest=-1h&latest=now

Host, 1 Path Element, and 1 Query Parameter Capture URLs on splunk1.domain.com including the first path element and the query parameter earliest:

```
.*\.?splunk1\.domain\.com/.*$ = host:path(1):query(earliest)
```

Result:

https://splunk1.domain.com:8000/en-US?earliest=-1h

Host, 1 Path Element, and 1 Query Parameter Regex Capture URLs on splunk1.domain.com including the first path element and all query parameters that match the regular expression .+est:

```
.*\.?splunk1\.domain\.com/.*$ = host:path(1):query(.+est)
```

Result:

https://splunk1.domain.com:8000/en-US?earliest=-1h&latest=now

Examples: Different Level of Detail for Tab URL and Request URL

The following examples show the effect of different configurations in a scenario where the tab URL and the request URL are different:

```
• Tab URL: https://splunk1.domain.com:8000/en-US/app/uberAgent/session_user_detail?earliest=-1h&latest=now
```

• Request URL: https://www.example.org/images/uberAgent

Tab URL: Host Only, Request URL: Host and Path Capture only the host of the tab URL, but the host and the path of the request URL:

```
.*\.?splunk1\.domain\.com/.*$ = host;host:path
```

Result:

```
1 Tab URL: https://splunk1.domain.com:8000/
2 Request URL: https://www.example.org/images/uberAgent
```

Tab URL: Host and Path, Request URL: Host Only Capture the host and the path of the tab URL, but only the host of the request URL:

```
.*\.?splunk1\.domain\.com/.*$ = host:path;host
```

Result:

```
1 Tab URL: https://splunk1.domain.com:8000/en-US/app/uberAgent/
    session_user_detail
2 Request URL: https://www.example.org
```

Automatic Application Identification

September 12, 2025

Applications

While it is pretty clear where machine and process data come from, this is not so obvious with applications. In fact, there is a tiny little bit of magic involved here - the operating system does not have a concept of applications, it only knows about processes. The fact that receiver.exe, concentr.exe and wfcrun32.exe form a logical application entity called Citrix Receiver is totally irrelevant to the OS. For that reason, other monitoring products do not bother with applications.

uberAgent is different. It automatically groups related processes to applications, because humans think in applications, not in processes - and uberAgent is designed for humans. When troubleshooting performance problems it is not enough to know that, say, SelfService.exe has a problem. You need to know that Citrix Receiver generates all those IOs. uberAgent shows you exactly that and makes it easy to analyze the impact your applications have on overall system performance.

How It Works (Windows)

Automatic application identification works for classic Win32 apps just as well as it does for Java applications, Universal Windows Platform (UWP) apps, and Windows services.

Win32

uberAgent determines the application names for all executables from properties of the MSI package the executable was installed from. Where that is not possible, uberAgent uses the information embedded in the executable.

App name \$	Process name(s) \$
Adobe Reader XI	AcroRd32.exe AdobeARM.exe reader_sl.exe

Java

uberAgent extracts the class name or filename of a Java command line. This works for Java Web Start processes, too.

Application \$	Process name(s) \$
freemind	javaw.exe

UWP

uberAgent retrieves the information from the UWP package.

App name \$	Process name(s) \$
4DF9E0F8.Netflix	WWAHost.exe
Microsoft.BingWeather	Microsoft.Msn.Weather.exe
Microsoft.People	PeopleApp.exe
Microsoft.Windows.Cortana	SearchUI.exe
Microsoft.Windows.Photos	Microsoft.Photos.exe

Windows services

Starting with Windows 10 1703 each service gets a dedicated sychost. exe instance if certain minimum RAM conditions are met. uberAgent extracts the (localized) display name for services that run in a dedicated sychost. exe instance.

App name \$	Process name(s) ✓
Network Connections	svchost.exe
Network List Service	svchost.exe
Network Location Awareness	svchost.exe
Network Store Interface Service	svchost.exe
Network Virtualization Service	svchost.exe
Phone Service	svchost.exe
Plug and Play	svchost.exe

Requirements:

- Windows 10 1703 or higher
- uberAgent 5.2 or higher

How It Works (macOS)

Bundles

uberAgent determines application names for executables that are part of a bundle folder structure by retrieving either bundle name, bundle identifier, or bundle executable name from the bundle's Info.plist file. Executables located in nested app bundles are identified as their top-level host app bundle. Executables located in nested framework bundles are identified as their nested framework bundle, except for XPC Services which are always identified as the application that initiated their launch.

App name \$	Process name(s) \$
Safari	CacheDeleteExtension ImageIOXPCService MTLCompilerService Safari com.apple.Safari.SearchHelper com.apple.WebKit.Networking com.apple.WebKit.WebContent

Executables

uberAgent extracts application names from executables that are not part of a bundle folder structure by retrieving either bundle name, bundle identifier, or bundle executable name from the embedded binary info plist. If an executable can not be identified this way but is located in a system directory it is mapped to app name macOS.

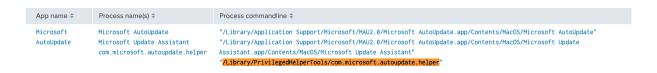
Java

In case a Java based application is not bundled, uberAgent extracts the class name or filename of a Java command line. This works for Java Web Start processes, too.

App name \$	Process name(s) \$
smart-client-showcase	java

Privileged Helper Tools

uberAgent determines application names for executables located in /Library/PrivilegedHelperTools by inspecting their respective host app bundles as described above.



Configuration

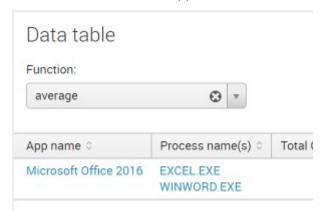
Adding Your Own Mappings

uberAgent's sophisticated method to map processes to applications works nearly every time for every application. When it does not, you can adjust it in the configuration section [ProcessToApplicationMapping]. Enter the full path to the process as a regular expression. Environment variables can also be used (enclosed in percent signs: %ProgramFiles%). Then specify the application name. Specifying only the file name without the full path works but is not recommended.

```
1 [ProcessToApplicationMapping]
2 # App name for C:\Dir\my.exe is "MyApp"
3 ^C:\\DIR\\my\.exe$ = MyApp
4
5 # App name for all executables in "C:\Program Files\Windows Defender"
    is "Windows Defender"
6 ^%ProgramFiles%\\Windows Defender\\.+\.exe$ = Windows Defender
```

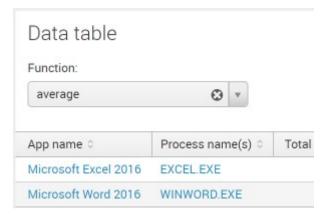
Overriding Default Mappings

This configuration option also allows you to override uberAgent's default mapping. Let us take Microsoft Office as an example. uberAgent, by default, groups all Office processes like WINWORD. EXE and EXCEL. EXE into the application Microsoft Office.



By changing uberAgent's [ProcessToApplicationMapping] configuration settings as follows, you get individual applications per process.

1 [ProcessToApplicationMapping]
2 ^%ProgramFiles(x86)%\\Microsoft Office\\root\\Office16\\EXCEL\.EXE\$ =
 Microsoft Excel 2016
3 ^%ProgramFiles(x86)%\\Microsoft Office\\root\\Office16\\WINWORD\.EXE\$ =
 Microsoft Word 2016



Ignoring Certain Processes

If you want uberAgent to ignore certain processes during application lookup, you can configure this with the option [ApplicationMappingIgnoredProcesses].

Citrix NetScaler® (ADC) Monitoring

September 12, 2025

What is Citrix NetScaler (ADC) Monitoring

With Citrix NetScaler (ADC) monitoring, uberAgent collects appliance & gateway performance, utilization, and inventory data from Citrix NetScaler Application Delivery Controllers (metrics docs).

The uberAgent endpoint agent needs to be installed on a machine from where it can reach the physical or virtual Citrix NetScaler (ADC) appliance(s). On Citrix Delivery Controllers (DDCs), the collection of NetScaler (ADC) metrics is enabled by default. Of course, NetScaler (ADC) metrics can also be retrieved from any other machine instead.

Enabling or Disabling Citrix NetScaler (ADC) Monitoring

Citrix NetScaler (ADC) monitoring is activated by default only on Citrix Delivery Controllers, as explained above. You can modify this behavior through the configuration setting [CitrixADC_Config

] in uberAgent's configuration.

To completely disable collecting Citrix ADC metrics, disable the following metrics in the configuration:

- CitrixADCPerformance
- CitrixADCvServer
- CitrixADCGateways
- CitrixADCInventory

Installation and Configuration

If you have uberAgent already installed on one or more DDCs for Citrix site monitoring, it makes sense to also collect Citrix NetScaler (ADC) metrics there. Make sure that the DDCs can communicate with the Citrix NetScaler (ADC) management interface (NSIP) either through port 80 or, if you enabled Secure Access Only for the NSIP, through port 443.

While DDCs may be the ideal place to capture Citrix NetScaler (ADC) data for most customers, that may not be the case for everybody. As explained above, you can overwrite the setting CollectADCInformation in the stanza [CitrixADC_Config] to collect Citrix NetScaler (ADC) metrics from any installed uberAgent endpoint. Make sure that this setting is only distributed to the machines that are intended for this purpose. If you distribute it to all machines where uberAgent is installed, every endpoint communicates with the Citrix NetScaler (ADC) appliance(s), which could overload the appliance(s) and generate unnecessary data.

CollectADCInformation=MachineList in combination with a set of machines configured in CollectADCInformationMachines, defines on which machines the collection of ADC metrics will be performed.

Citrix NetScaler (ADC) Configuration

Besides network access, uberAgent also needs credentials to be able to login into the Citrix ADC appliances. It only needs to read information; hence using a user with the command policy *read-only* bound is the recommended option. Users with more privileges are also supported, but not recommended from a security perspective.

Create a user with the command policy read-only bound from CLI:

```
    add system user nsread Password -externalAuth DISABLED -timeout 900 -
        maxsession 20
    bind system user nsread read-only 100
```

Verify that the user has both CLI and API set in the Allowed Management interface field:

```
1 > show system user nsread
2 User name: nsread
3
          Timeout: 900 Timeout Inherited From: User
4
          External Authentication: DISABLED
5
          Logging: DISABLED
          Maximum Client Sessions: 20
6
7
          Allowed Management interface: CLI API
           Allowed Interface Inherited From: User
8
9
           Command Policy: read-only
10
                                          Priority:100
```

uberAgent® Configuration

This section explains the configuration via uberAgent's configuration file. The configuration via GPO works accordingly.

Use the stanza [CitrixADC_Config] to specify how uberAgent should connect to your appliance(s). If multiple [CitrixADC_Config] stanzas are specified, the configured metrics are determined for each of them. Use one [CitrixADC_Config] stanza per Citrix NetScaler (ADC) pair.

Following are some examples of valid Citrix ADC configurations. More information on the parameters is available in the configuration file itself. Note that passwords can be encrypted.

Example 1: One Citrix NetScaler (ADC) appliance manageable through HTTP (port 80). Data collection happens on DDCs only

```
1 [CitrixADC_Config]
2 Server = 10.1.1.21
3 Username = nsread
4 Password = Password
5 Https = false
6 CollectADCInformation = DDCOnly
```

Example 2: A Citrix ADC high-availability pair manageable through HTTPS (port 443). Data collection happens not on a DDC.

- If HTTPS is used, the entries in the setting Server must match those in the certificate bound to the NSIP
- uberAgent collects performance information for the primary appliance only. So for best collection performance, list the primary appliance first.

```
1 [CitrixADC_Config]
2 Server = CitrixADC1.domain.local,CitrixADC2.domain.local
3 Username = nsread
4 Password = Password
5 Https = True
```

```
6 CollectADCInformation = True
```

Example 3: A Citrix ADC high-availability pair manageable through HTTPS (port 443). Data collection happens on a set of machines.

```
1 [CitrixADC_Config]
2 Server = CitrixADC1.domain.local,CitrixADC2.domain.local
3 Username = nsread
4 Password = Password
5 Https = True
6 CollectADCInformation = MachineList
7 CollectADCInformationMachines = DDC01, DDC02
```

Deployment Considerations

uberAgent's NetScaler integration sequentially queries the configured NetScalers with PowerShell through the NITRO API. This implementation method has pros and cons.

This section describes if the uberAgent implementation is for you, or if you should go with NetScaler's builtin Observability integrations.

When to Use uberAgent's Netscaler Integration

uberAgent's NetScaler integration is easy to use, comes with beautiful Splunk dashboards out-of-the-box, and is tailored to the Citrix CVAD/DaaS administrator who focuses on the quality of user sessions.

The NITRO API offers plenty of information about NetScaler, but comes with limitations. For example, it does not offer insights into failed AAA logins. In addition, not all existing NITRO API fields are queried by uberAgent, but only the ones that you see in the Splunk dashboards. Additional fields can be requested via feature requests.

uberAgent queries NetScaler sequentially. Querying lots of NetScaler boxes from one uberAgent endpoint can lead to performance issues and requires distributing the load to multiple endpoints.

Use uberAgent's NetScaler integration, when you have only a few NetScaler to monitor and want to benefit from pre-built Splunk dashboards and easy configuration.

When to Use NetScaler's Built-in Observability Integrations

NetScaler can send metrics and logs to various backends natively. This includes Splunk with example dashboards.

NetScaler Console, the monitoring and configuration tool for NetScaler from Citrix, can send data to Observability platforms like Splunk, too.

Sending data off the NetScaler instead of querying it externally through an API is more efficient. Also, NetScaler can send, more or less, data for every NetScaler setting that you see in the UI or via the Shell. It can also send log files which include information on failed AAA logins.

While NetScaler can send a lot to Observability platforms, you have to define which settings you would like to see. Also, you have to create your own visualizations or change the example dashboards.

Use NetScaler's and NetScaler Console's built-in Observability integrations when you require monitoring more than a handful NetScaler, when you need management logs or more data that is not available through uberAgent and the NITRO API.

System Requirements

Please see the system requirements page for details.

Citrix Cloud™ Monitoring

September 12, 2025

What Is Citrix Cloud Monitoring

Citrix Cloud monitoring refers to uberAgent's capability to monitor the Citrix Virtual Apps and Desktops (CVAD) control plane in Citrix Cloud. This is an exciting feature for customers who do not host delivery controllers on-premises but leverage Citrix Cloud instead.

Which Metrics Are Collected By Citrix Cloud Monitoring

Citrix Cloud monitoring collects a rich set of metrics about many aspects of a Citrix Cloud deployment (see the metrics documentation for details):

- Published applications
- Desktops
- · Desktop groups
- Machines
- Machine Catalogs

Enabling or Disabling Citrix Cloud Monitoring

Citrix Cloud monitoring is **disabled by default**. You can enable the data collection through the configuration setting [CitrixCloud_Config] in uberAgent's configuration.

To completely disable Citrix Cloud monitoring, disable the following metrics in the configuration:

- CitrixDCDesktopGroup
- CitrixDCCatalog
- CitrixDCMachine
- CitrixDCGeneralInformation
- CitrixDCApplication
- CitrixDCPublishedDesktops

Installation and Configuration

To enable the Citrix Cloud data collection, please configure the stanza [CitrixCloud_Config] in uberAgent's configuration. Make sure that this setting is only distributed to the machines that are intended for this purpose. If you distribute it with CollectCitrixCloudInformation=True to all machines where uberAgent is installed, every endpoint communicates with the Citrix Cloud APIs, which could overload the APIs and generate unnecessary data.

CollectCitrixCloudInformation=MachineList in combination with a set of machines configured in CollectCitrixCloudInformationMachines, defines on which machines the collection of Citrix Cloud metrics will be performed.

uberAgent® Configuration

This section explains the configuration via uberAgent's configuration file. The configuration via GPO works accordingly.

Use the stanza [CitrixCloud_Config] to specify how uberAgent should connect to the Citrix Cloud infrastructure. If multiple [CitrixCloud_Config] stanzas are specified, the configured metrics are determined for each of them. Use one [CitrixCloud_Config] stanza per Citrix Cloud tenant. The API endpoint option must contain to full URL to the Citrix Cloud server (e.g., https://api-eu.cloud.com). The appendix /monitordata is optional.

Following are some examples of valid Citrix Cloud monitoring configurations. More information on the parameters is available in the configuration file itself.

Example 1: one Citrix Cloud tenant. Data collection happens on all uberAgent endpoints.

```
1 [CitrixCloud_Config]
2 API endpoint = https://api-eu.cloud.com
```

```
3 CustomerId = <CustomerId>
4 ClientId = <ClientId>
5 ClientSecret = <ClientSecret>
6 CollectCitrixCloudInformation=True
```

Example 2: one Citrix Cloud tenant. Data collection happens on specific endpoints only.

```
1 [CitrixCloud_Config]
2 API endpoint = https://api-eu.cloud.com
3 CustomerId = <CustomerId>
4 ClientId = <ClientId>
5 ClientSecret = <ClientSecret>
6 CollectCitrixCloudInformation=MachineList
7 CollectCitrixCloudInformationMachines = MachineA, MachineB
```

Requirements

- Create a Citrix Cloud API client as described here.
- The Citrix Virtual Apps and Desktops Remote PowerShell SDK must be installed on the endpoint.
- PowerShell script execution is required by the Remote PowerShell SDK. Set the execution policy (machine scope) accordingly, for example, RemoteSigned.

Note: the Remote PowerShell SDK must not be installed on:

- Citrix Virtual Apps and Desktops[™] delivery controllers
- Citrix® Cloud Connector machines

Please see the system requirements page for details.

Citrix Session Monitoring

September 12, 2025

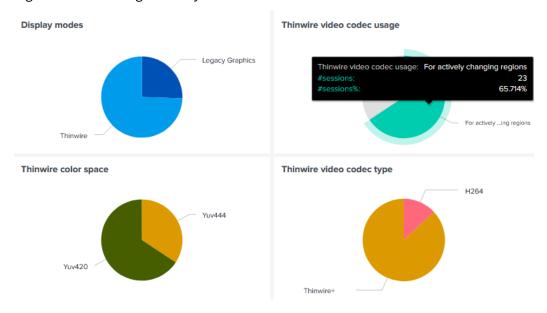
uberAgent provides unprecedented visibility into what's happening on the session level: bandwidth usage, protocol latency, Citrix policies, video encoding settings, and much more.

Citrix Session Configuration Details

The session configuration dashboard lets you analyze almost any aspect of how users connect and what policies are being applied to their sessions. The dashboard pulls its data from live sessions, so it always reflects the current state. Historical values are available, too, of course.

Video Codec, Display Mode, Color Space

Many things need to be configured just right to achieve optimal visual quality in a remoting session. These include the video codec and color space, to pick just one set of essential session parameters. As you can see in the screenshot below, uberAgent shows you exactly which codecs and rendering algorithms are configured for your sessions:



Frame Rate (FPS)

Another important metric that greatly influences rendering fidelity as experienced by end users is the frame rate, measured in frames per second. uberAgent continuously collects the frame rate for the entire duration of any session. This allows IT staff to proactively optimize the user experience without a single end-user having to call the help desk.



Citrix Policies and Settings

The Citrix session configuration dashboard offers drilldown capabilities that allow you to inspect the policies and settings of every session individually. The following screenshot shows a small excerpt of what's available:

Citrix settings (last seen values)		Citrix policies (last seen values)	
Setting \$	Value \$	Policy \$	Value
Audio channel actual priority	RealTime	Audio channel priority	RealTime
CDM channel actual priority	Medium	Audio redirection	Allowed
Connected via	10.1.1.104	Auto-create client printers	Auto-create all client printers
Display mode	Thinwire	CDM channel priority	Medium
EDT MTU	1400	Client drive mapping	Allowed
Mapped printers	Microsoft Print to PDF (from LOV OneNote for Windows 10 (from LOV Microsoft Print to PDF (from LOV OneNote for Windows 10 (from LOV Microsoft XPS Document Writer	ICA listener port	1494
		Microphone redirection	Allowed
		Printer channel priority	Low
Microsoft Print to PDF	Printer redirection	Allowed	
Mapped volumes	Local Disk (C: on LOGINLAUNCHER:	Read-only client drive access	Prohibited
Printer channel actual priority	Low	Session reliability connections	Allowed

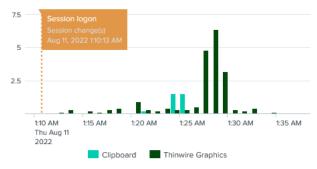
Citrix Session Protocol Insights

The session protocol insights dashboard is focused on ICA/HDX remoting protocol analytics.

Virtual Channel Bandwidth Usage

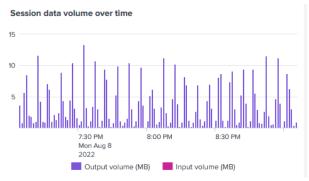
One of the dashboard's highlights: it visualizes session bandwidth usage per virtual channel. This is crucial information for any Citrix admin, as it explains which kind of data is transferred in the encrypted Citrix HDX protocol. In the screenshot below, for example, the user seems to have copied a lot of data to or from the clipboard (virtual channel: Clipboard), followed by what may have been scrolling in a long document (virtual channel: Thinwire Graphics).

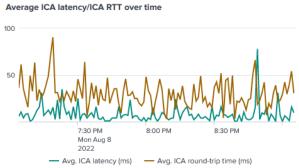




ICA® RTT

Another cool metric helps to get to the bottom of many networking issues: ICA round-trip time (RTT). A high round-trip time may be experienced by end users as screen lag. The session protocol insights dashboard visualizes ICA RTT along with ICA latency, which offers a lower-level view of network connectivity (think: an ICA/HDX version of ping). uberAgent also determines the total incoming and outgoing HDX data volume, of course:





Configuration

Citrix session configuration details as well as policies and settings are configured through two metrics. The metrics are collected by default if uberAgent is running on a Citrix Virtual Apps and Desktops session host, but this behavior is customizable.

- CitrixSessionVirtualChannelDetail
- CitrixSessionConfig

Requirements

- Citrix Virtual Apps and Desktops 7.6 LTSR and higher
- Citrix Cloud™

Note

Verify That Registry Is Configured Correctly for Citrix Virtual Channel Metrics

Starting with uberAgent 7.3, the agent uses the following registry values to automatically determine the installation location of the Citrix HDX binaries that are part of a Citrix deployment. Make sure that at least one of these values points to the correct Citrix HDX binaries folder.

1.

• **Hive**: HKLM\Software\Citrix\Install\HDX

• Value name: BinFolder

• Type: REG_SZ

• Data: Path to HDX binary folder (e.g., C:\Program Files\Citrix\HDX\bin\)

2.

• **Hive**: HKLM\Software\Citrix\Install

• Value name: Location

• Type: REG_SZ

Data: Path to HDX binary folder (e.g., C:\Program Files\Citrix\HDX\bin\)

3.

If neither of the values listed above is present in your deployment, please create the following registry value and set it to the installation location of the Citrix HDX™ binaries. This value takes precedence over those mentioned previously.

• **Hive**: HKLM\Software\vast limits\uberAgent

• Value name: CitrixHDXBinFolder

• Type: REG_SZ

• Data: Path to HDX binary folder (e.g., C:\Program Files\Citrix\HDX\bin\)

Please see the system requirements page for supported product versions.

Citrix Site Monitoring

September 12, 2025

What is Citrix Virtual Apps and Desktops™ Site Monitoring

uberAgent detects if it is running on a Citrix Delivery Controller (DDC) or a Citrix Virtual Desktop Agent (VDA). On DDCs, **uberAgent automatically activates additional metrics** like machine registration status, license usage, and published application inventory.

Which Metrics Are Collected By Citrix Site Monitoring

Citrix site monitoring collects a rich set of metrics about many aspects of Citrix CVAD sites (see the metrics documentation for details):

- Published applications
- Databases

- Desktops
- · Desktop groups
- Hypervisors
- Licenses
- Machines
- Machine Catalogs

Enabling or Disabling Site Monitoring

Citrix site monitoring is **enabled by default** but is only **activated on Citrix delivery controllers** as explained above. To disable Citrix site monitoring disable the following metrics in the configuration:

- CitrixDCDesktopGroup
- CitrixDCCatalog
- CitrixDCMachine
- CitrixDCHypervisor
- CitrixDCGeneralInformation
- CitrixDCLicenseInformation
- CitrixDCApplication
- CitrixDCPublishedDesktops

Installing & Configuring Citrix Site Monitoring

Install the uberAgent endpoint agent on at least one delivery controller per site. Installation on more than one controller is optional - it helps ensure uninterrupted data collection even when individual DDCs are unavailable.

Required Permissions

uberAgent requires read-only administrator permissions for:

- each delivery controller's computer account
- the local SYSTEM account

Permissions Script Template

The following script template can be used to grant the required permissions. Fill in the names of your domain and of your Citrix DDCs before running it in an elevated PowerShell console.

Permissions Script Example

The following example script demonstrates how to grant the required permissions in an environment with two DDCs named CTX-DDC1 and CTX-DDC2 that are members of the CONTOSO domain. Note that you need to append a dollar sign (\$) to the computername.

```
1 Add-PSSnapin Citrix.DelegatedAdmin.Admin.V1
2 New-AdminAdministrator -Sid S-1-5-18 -Enabled $true
3 Add-AdminRight -Role 0a05f0c6-0153-4852-a55a-989d6a95c0eb -
    Administrator S-1-5-18 -All
4 New-AdminAdministrator -Name CONTOSO\CTX-DDC1$ -Enabled $true
5 Add-AdminRight -Role 0a05f0c6-0153-4852-a55a-989d6a95c0eb -
    Administrator CONTOSO\CTX-DDC1$ -All
6 New-AdminAdministrator -Name CONTOSO\CTX-DDC2$ -Enabled $true
7 Add-AdminRight -Role 0a05f0c6-0153-4852-a55a-989d6a95c0eb -
    Administrator CONTOSO\CTX-DDC2$ -All
```

Sizing Guidelines

Sizing recommendations for delivery controllers with uberAgent®:

1,000 machines: minimal CPU usage, 30 MB RAM
25,000 machines: 0.5 CPU cores, 500 MB RAM

System Requirements

The following services need to be started on delivery controllers with uberAgent:

- Citrix Delegated Administration Service
- Citrix Monitor Service

Please see the system requirements page for supported product versions.

Central License File Management

September 12, 2025

Central License File Share

License file management is easy with uberAgent. Simply set up a file share with read permissions for computer accounts, place your uberAgent license file(s) in the file share, and configure the share path in uberAgent's configuration option LicenseFilePath. Note that **only the folder path without the file name should be specified**. Endpoints periodically check the configured LicenseFilePath for new licenses. If any license files are found that are not yet cached locally, the new files are copied to the local license cache directory located at %ProgramData%\vast limits\uberAgent\License cache (Windows) or /Library/Application Support/ uberAgent/License Cache (macOS), respectively.

Availability Requirements

There is **no requirement** for the configured license file path to be available at all times. Endpoints always use the local license cache for license validation, ensuring functionality even during temporary unavailability of the central file share.

Local license storage

Setting up a central file share is not required. License files can also be stored in a local folder on each endpoint. The LicenseFilePath setting accepts either a file share or a local folder as input. If LicenseFilePath is not specified, uberAgent defaults to the installation directory on Windows or /Library/Application Support/uberAgent on macOS.

Storing uberAgent's License in Azure Files

uberAgent also supports validating license files stored in an Azure Files share. Our knowledge base article describes the necessary steps to configure this.

Configuring Licensing Through Citrix Studio

Starting with uberAgent 7.4, licensing can also be configured through Citrix Studio and Citrix Web Studio. This method works **technically in the same way** as described in the previous section, with the exception that the LicenseFilePath is specified through a policy setting. The policy setting to configure the path is named uberAgent license path.

Note: Citrix policies are only supported if uberAgent was installed as part of the Citrix Virtual Apps and Desktops[™] (CVAD) installation.

Event Data Filtering

September 12, 2025

What is Event Data Filtering

Event data filtering allows defining rules with conditions that are evaluated for every event before it is sent to the backend. This feature applies to all built-in metrics. With each matching rule, a pre-defined action is executed that controls whether the event is sent to the backend or not. Additionally, it allows clearing the contents of certain fields before the event is sent to the backend.

Use Cases for Event Data Filtering

Data Volume Reduction

Depending on the requirements, one might only need a subset of the events generated by uberAgent for certain sourcetypes. Filtering out unnecessary data at the endpoint may reduce the data volume significantly (see the documentation for other ways to reduce the data volume).

Example: every time a cmd.exe process is started on Windows, an accompanying console host process is started too. These conhost.exe processes are rarely of interest and can be safely excluded.

```
1 [EventDataFilter]
2 # Exclude "conhost.exe" (typically started from the path: \??\C:\
        WINDOWS\system32\conhost.exe)
3 Action = deny
4 Sourcetype = Process:ProcessStartup
5 Query = regex_match_path(ProcPath, r"^(\\\?\\))?%SystemRoot%\\System32\\conhost\.exe$")
```

Example: compared to Windows, macOS runs significantly more concurrent processes. which can also lead to an increased data volume. One way to adjust this is to exclude the processes that belong to the operating system.

```
1 [EventDataFilter]
2 # Exclude processes belonging to the operating system
3 Action = deny
4 Sourcetype = Process:ProcessDetail
5 Sourcetype = Process:ProcessStartup
6 Sourcetype = Process:ProcessStop
7 Sourcetype = Process:ProcessStatistics
8 Sourcetype = Process:NetworkTargetPerformance
9 Query = AppId == "mcOS"
```

Sensitive Data Removal

Some sourcetypes have fields with data that may be considered sensitive in nature, such as window titles. Event data filtering allows clearing such fields, on the endpoint, before the data is sent to the backend for indexing and searching.

Example: clear the contents of session detail window title metric.

```
1 [EventDataFilter]
2 # Clear the contents of window titles.
3 Action = clear
4 Sourcetype = Session:SessionDetail
5 Field = SessionFgWindowTitle
6 Query = true
```

The query above always evaluates to **true** and therefore the action clear is executed for this particular event and the field SessionFgWindowTitle is cleared to an empty value.

Actions: allow, clear, defer and deny

allow

When an event matches a rule with the allow action, it is immediately sent to the backend. No further filtering rules are applied to the event.

deny

When an event matches a rule with the deny action, it is immediately discarded and not sent to the backend. Like allow, no further rules are applied.

clear

The clear action is used to overwrite the value of a specified field with an empty value. Filtering continues with subsequent rules after clear.

defer

The defer action allows for intermediate modifications, such as using a set operation to adjust fields, while still continuing to evaluate subsequent rules for the event. Unlike allow and deny, defer does not terminate the filtering process.

Example: Modify a field but continue processing other rules

```
1 [EventDataFilter]
2 Action = defer
3 Sourcetype = Process:ProcessDetail
4 Query = Receiver.BackendType == 'Splunk' AND set(ProcCmdline, 'test')
```

Configuring Event Data Filtering

An event data filter is configured using the configuration file. The stanza [EventDataFilter] starts a new filter configuration, followed by multiple settings.

It's essential to note that filter rules are processed sequentially. Once a rule matches, the filtering process for that particular event stops. Therefore, the order of filters can be crucial for the desired outcome.

Setting	Description	Valid Values
Action	Specifies the action to be taken if a query rule is matched.	allow, deny, defer or clear
Sourcetype	The category and name of the sourcetype.	Please refer to the metrics documentation for a list of available sourcetypes.
Query	The query rule to filter using uAQL.	Please refer to the uAQL documentation.
Field	Optional setting to specify the field to be cleared if the current Action is clear. This setting can be configured multiple	This can be any field of the given metric.
	times.	

Example: Exclude DNS Monitoring Events Caused by Browsers

A browser can generate a significant number of DNS monitoring events that are rarely of interest. Such events can be easily ignored using the following event data filter.

```
1 [EventDataFilter]
2 # Deny any DNS event caused by browsers.
3 Action = deny
4 Sourcetype = Process:DnsEvent
5 Query = ProcName in ["chrome.exe", "iexplore.exe", "firefox.exe", "msedge.exe", "opera.exe"]
```

Example: Exclude Process Detail Metrics For Certain Processes

```
1 [EventDataFilter]
2 # Exclude processes whose name is exactly one of the given names.
3 Action = deny
4 Sourcetype = Process:ProcessDetail
5 Query = ProcName in ["cmd.exe", "conhost.exe", "csrss.exe", "lsm.exe", "smss.exe", "wininit.exe", "winlogon.exe"]
```

Example: Exclude Everything Except..\

Consider a use case where one wants to exclude an entire metric, except for specific data in events. This is achievable by explicitly allowing certain processes but denying all others. The stanza ordering is important because filter processing stops after the first match.

```
1 [EventDataFilter]
2 # Allow network events caused by John Doe and Jane Doe.
3 Action = allow
4 Sourcetype = Process:NetworkTargetPerformance
5 Query = ProcUser in ["John Doe", "Jane Doe"]
6
7 [EventDataFilter]
8 # Deny any network event that was not allowed in a previous filter.
9 Action = deny
10 Sourcetype = Process:NetworkTargetPerformance
11 Query = true
```

Per-Receiver Configuration

In addition to the fields of a sourcetype, certain built-in receiver fields may also be used. This allows creating event data filters that are active for certain receivers, only. Check the documentation on routing to different backends to learn more on the use case.

The available fields are Receiver. Name and Receiver. Index.

Example: Clear Fields Per Receiver

For this example, we take a look at the Session Detail metric. Consider there are two receivers configured, one for most metrics and an extra receiver for sensitive content with restricted access.

```
1 [EventDataFilter]
2 # Clear the contents of window titles for any receiver except "
    uberagent_sensitive"
3 Action = clear
4 Sourcetype = Session:SessionDetail
```

```
5 Field = SessionFgWindowTitle
6 Query = Receiver.Name != "uberagent_sensitive"
```

This configuration will clear the contents of SessionFgWindowTitle in all receivers, except the receiver uberagent_sensitive.

Example: Filter Events Per Receiver

We can also use almost the same rule to achieve a different use case: exclude events from all receivers, except uberagent_sensitive.

```
1 [EventDataFilter]
2 # Exclude this event from all receivers except "uberagent_sensitive"
3 Action = deny
4 Sourcetype = Session:SessionDetail
5 Query = Receiver.Name != "uberagent_sensitive"
```

Instead of clearing the field content for the non-matching receiver, we simply deny sending the event to all receivers, except uberagent_sensitive.

More Examples

More examples including rules created by our support for our customers can be found in the knowledge base article here.

Username and Configuration Setting Encryption

September 7, 2025

uberAgent optionally encrypts user and domain names in the agent and has support to encrypt sensitive settings in its configuration.

User and Domain Names

Encryption

User and domain names can be encrypted in the agent before being sent off to the backend. This can be useful for compliance with privacy regulations.

User and domain name encryption is disabled by default. If required, enable it via the configuration setting EncryptUserNames.

With encryption enabled, user and domain names show up in the backend and in dashboards like this:



Decryption

uberAgent's download package comes with the command line-tool uAEncrypt.exe, which can be used to decrypt usernames as shown in the following example:

```
uAEncrypt.exe -decrypt -keyId 101 -data
```

Configuration Settings

Configuration settings can optionally be obfuscated or retrieved from the OS-specific credential store. Obfuscation is the older option, but less secure. The OS credential store has been added in uberAgent 7.2 and is the recommended way to store passwords and other sensitive information that is required by uberAgent.

Encryption

Some configuration setting may optionally be retrieved from the OS-specific credential store. To indicate to uberAgent that a setting should be read from the OS credential store, specify its value in the following format: ###UA_CREDENTIAL_SOMENAME###. When uberAgent encounters the above format in its configuration, it reads the actual value from the setting SOMENAME in the OS credential store.

Example:

To secure a backend receiver's REST token, specify it in uberAgent's configuration as follows:

```
RESTToken = ###UA_CREDENTIAL_SplunkRESTToken###
```

Distribute the actual REST token value to the OS credential store (see below) of all endpoints where uberAgent's configuration references it.

Supported Settings Encryption is supported for the following configuration settings:

```
1 [AzureEventHubsConfiguration]
2 AzureClientSecret
3
```

```
4 [CitrixADC_Config]
5 Password
6
7 [CitrixCloud_Config]
8 ClientSecret
9
10 [Receiver]
11 RESTToken
12 TLSClientCertificate
```

Deployment to the OS Credential Store uberAgent doesn't handle the deployment of secrets to the endpoint's OS credential store.

Windows Implementation uberAgent retrieves credentials from the SYSTEM user's credential store.

It is essential that the credential is encoded in **UTF-8**, as uberAgent currently supports only **UTF-8** encoded secrets.

Below is a brief example of how to insert a credential into the credential store using PowerShell. It is important that the script is run as NT AUTHORITY\SYSTEM to ensure the secret is added to the SYSTEM user's credential store.

Script (StoreCredential.ps1):

```
1 <#
   .SYNOPSIS
3
       Saves credentials to the Windows Credential Manager for uberAgent.
4
5 .DESCRIPTION
       This script saves credentials (such as a Splunk REST token or other
           secrets)
7
       to the Windows Credential Manager. The credentials can be retrieved
           by
       uberAgent and used in its configuration.
       It must be run as NT AUTHORITY\SYSTEM to store credentials at
          machine level.
10
11 .PARAMETER CredentialName
       The name/target under which to save the credential in the Windows
12
          Credential Manager.
13
   .PARAMETER SecretValue
15
       The secret value (token, password, etc.) to be stored.
16
  .NOTES
17
       Requirements:
18
       - Run as NT AUTHORITY\SYSTEM to store at machine level
19
20
       - Add the appropriate configuration attribute to your uberAgent
          configuration
```

```
referencing the credential name with ###
             UA_CREDENTIAL_CredentialName### syntax
22
23
   .EXAMPLE
24
       # Run with PsExec to execute as SYSTEM:
25
       # PsExec.exe -s powershell.exe -ExecutionPolicy Bypass -Command "&
    "C:\Path\to\Script\StoreCredential.ps1" -CredentialName '
        uASplunkRESTToken' -SecretValue (ConvertTo-SecureString '
       MySecretToken' -AsPlainText -Force) }
27
28
29
       # Run interactively (will prompt for the secret value):
       # PsExec.exe -s -i powershell.exe -ExecutionPolicy Bypass -Command
30
          "& {
31
    "C:\Path\to\Script\StoreCredential.ps1" -CredentialName '
       uASplunkRESTToken' }
33
   #>
34
   [CmdletBinding()]
   param(
37
       [Parameter(Mandatory = $true, HelpMessage = "Name for storing the
           credential")]
       [string]$CredentialName,
40
       [Parameter(Mandatory = $false, HelpMessage = "Secret value to store
           ")]
       [SecureString]$SecretValue
41
42
   )
43
44 # Verify the script is running with SYSTEM privileges
   $currentProcessSID = [System.Security.Principal.WindowsIdentity]::
      GetCurrent().User.Value
   if ($currentProcessSID -ne "S-1-5-18") {
47
48
       Write-Error "This script must be run as NT AUTHORITY\SYSTEM.
           Current process SID: $currentProcessSID"
       exit 1
49
    }
51
52
53 # Add required Windows API types for credential management
   Add-Type -TypeDefinition @"
54
55
   using System;
   using System.Runtime.InteropServices;
57
58
   public class CredentialManager {
59
       [StructLayout(LayoutKind.Sequential, CharSet = CharSet.Unicode)]
       public struct CREDENTIAL {
62
           public uint Flags;
```

```
64
            public uint Type;
            public string TargetName;
            public string Comment;
            public System.Runtime.InteropServices.ComTypes.FILETIME
67
                LastWritten:
            public uint CredentialBlobSize;
            public IntPtr CredentialBlob;
            public uint Persist;
            public uint AttributeCount;
71
72
            public IntPtr Attributes;
            public string TargetAlias;
74
            public string UserName;
75
         }
76
78
        [DllImport("Advapi32.dll", SetLastError = true, EntryPoint = "
           CredWriteW", CharSet = CharSet.Unicode)]
        public static extern bool CredWrite([In] ref CREDENTIAL credential,
79
             [In] uint flags);
81
        [DllImport("Advapi32.dll", SetLastError = true, EntryPoint = "
           CredDeleteW", CharSet = CharSet.Unicode)]
        public static extern bool CredDelete([In] string targetName, [In]
           uint type, [In] uint flags);
     }
84
85
    "a
87
   function Set-SecureCredential {
        [CmdletBinding()]
90
        param(
            [Parameter(Mandatory = $true)]
91
92
            [string]$Target,
94
            [Parameter(Mandatory = $true)]
            [System.Security.SecureString]$SecurePassword
        )
96
        # Create a new CREDENTIAL structure
        $credential = New-Object CredentialManager+CREDENTIAL
100
        # Configure credential properties
101
        $credential.Flags = 0
103
        $credential.Type = 1 # CRED_TYPE_GENERIC
104
        $credential.TargetName = $Target
        $credential.UserName = "" # Empty username
105
        $credential.Persist = 2 # CRED_PERSIST_LOCAL_MACHINE
106
        $credential.Comment = "Created for uberAgent on $(Get-Date -Format
107
            'yyyy-MM-dd HH:mm:ss')"
108
109
        $BSTR = [IntPtr]::Zero
110
        try {
```

```
111
112
             # First try to delete any existing credential with the same
             # We ignore the result as it doesn't matter if it existed or
113
                not
114
             [void][CredentialManager]::CredDelete($Target, 1, 0)
115
             # Convert SecureString to plain text
116
            $BSTR = [System.Runtime.InteropServices.Marshal]::
117
                SecureStringToBSTR($SecurePassword)
118
             $decodedPassword = [System.Runtime.InteropServices.Marshal]::
                PtrToStringBSTR($BSTR)
119
             # Convert to UTF8 bytes
             $utf8Bytes = [System.Text.Encoding]::UTF8.GetBytes(
121
                $decodedPassword)
122
             # Allocate memory and copy the password bytes
124
             $credential.CredentialBlobSize = $utf8Bytes.Length
125
             $credential.CredentialBlob = [System.Runtime.InteropServices.
                Marshal]::AllocHGlobal($utf8Bytes.Length)
             [System.Runtime.InteropServices.Marshal]::Copy($utf8Bytes, 0,
126
                $credential.CredentialBlob, $utf8Bytes.Length)
127
             # Write the credential to the Windows Credential Manager
128
129
            $result = [CredentialManager]::CredWrite([ref]$credential, 0)
130
131
            if ($result) {
132
                 Write-Host "Credential successfully saved for: $Target" -
133
                    ForegroundColor Green
134
                 return $true
              }
136
            else {
137
138
139
                 $errorCode = [System.Runtime.InteropServices.Marshal]::
                    GetLastWin32Error()
                 Write-Error "Error saving credential. Error code:
140
                    $errorCode"
                 return $false
141
142
              }
143
144
         }
145
146
        catch {
147
            Write-Error "Exception occurred while saving credential: $_"
             return $false
149
         }
151
        finally {
152
153
```

```
154
            # Securely clear the memory
155
            if ($BSTR -ne [IntPtr]::Zero) {
156
                [System.Runtime.InteropServices.Marshal]::ZeroFreeBSTR(
157
                    $BSTR)
158
             }
159
            if ($credential.CredentialBlob -ne [IntPtr]::Zero) {
162
                # Securely zero out the memory before freeing it
163
                [System.Runtime.InteropServices.Marshal]::Copy(
                     (New-Object byte[] $credential.CredentialBlobSize),
164
165
                     ο,
                     $credential.CredentialBlob,
                     $credential.CredentialBlobSize
167
168
                [System.Runtime.InteropServices.Marshal]::FreeHGlobal(
                    $credential.CredentialBlob)
170
             }
171
172
         }
173
174
     }
175
177
    # Get the secret value from parameter or prompt securely if not
       provided
178
    if ($null -eq $SecretValue) {
179
180
        $SecretValue = Read-Host -Prompt "Enter the secret value to store"
            -AsSecureString
     }
181
183
184 # Save credentials to Windows Credential Manager
185 $result = Set-SecureCredential -Target $CredentialName -SecurePassword
        $SecretValue
186
    # Print configuration instructions if successful
187
    if ($result) {
190
        Write-Host ""
        Write-Host "uberAgent Configuration Instructions:" -ForegroundColor
191
             Cyan
192
        Write-Host "-----
        Write-Host "Add the following to your uberAgent configuration file
            : "
        Write-Host ""
194
        Write-Host " AttributeName = ###UA_CREDENTIAL_$CredentialName###"
195
            -ForegroundColor Yellow
196
        Write-Host ""
        Write-Host "Where 'AttributeName' could be any configuration
197
            attribute that requires a credential,"
```

```
Write-Host "such as 'RESTToken' in the [Receiver] stanza for Splunk
    authentication."

Write-Host ""

Write-Host "For more information, see the uberAgent documentation
    on credential storage:"

Write-Host ""

Write-Host "https://docs.citrix.com/en-us/uberagent/7-4-0/uxm-
    features-configuration/username-and-configuration-setting-
    encryption-2.html" -ForegroundColor Cyan

Write-Host ""
```

Examples:

Secret provided via CLI.

```
# Run with PsExec to execute as SYSTEM:
# Replace "C:\Path\to\Script\" with the actual script path
# Replace 'MySecretToken' with your secret

PsExec.exe -s powershell.exe -ExecutionPolicy Bypass -Command "& {
    "C:\Path\to\Script\StoreCredential.ps1" -CredentialName '
        uASplunkRESTToken' -SecretValue (ConvertTo-SecureString '
        MySecretToken' -AsPlainText -Force) }

""
```

Secret will be prompted interactively.

```
# Run interactively (will prompt for the secret value):
# Replace "C:\Path\to\Script\" with the actual script path

PSExec.exe -s -i powershell.exe -ExecutionPolicy Bypass -Command "& {
    "C:\Path\to\Script\StoreCredential.ps1" -CredentialName '
    uASplunkRESTToken' }

""
```

Verification:

To verify that the secret was added, run the following command:

```
PsExec.exe -s -i rundll32.exe keymgr.dll, KRShowKeyMgr
```

The dialog should display the name of the secret that was just added.

macOS Implementation Under macOS the credentials are read from the keychain (more information). The keychain items

must be stored in the system keychain, and uberAgent must be exempt from the option Confirm before allowing access under the tab Access Control.

Example:

To create a keychain item securing the REST token for Splunk, you can run the following command line:

```
sudo security add-generic-password -a "Splunk"-s "uberAgent"-w "
TOKEN_TO_BE_USED"-T "/Library/uberAgent/uberAgent.app"-U /Library/
Keychains/System.keychain
```

where Splunk is the keychain item's account name, uberAgent is the service name and TOKEN_TO_BE_USED the REST token. The account name can be chosen freely. If you want to change the default service name uberAgent, you can do so by adding the configuration option CredentialStoreServiceName in stanza Miscellaneous, and passing the name with option -s as seen in the example above.

Example:

```
1 [Miscellaneous]
2 ConfigFlags = CredentialStoreServiceName:MY_CUSTOM_SERVICE_NAME
```

Obfuscation

Sensitive settings like passwords can be obfuscated with the command-line tool uAEncrypt. exe, which is available in the uberAgent download package. The syntax is viewable by running uAEncrypt.exe -?.

To encrypt MySecretPassword:

```
uAEncrypt.exe -encrypt -keyId 1 -data PlaintextData
```

De-Obfuscation De-obfuscation is possible with:

```
uAEncrypt.exe -decrypt -keyId 1 -data ObfuscatedData
```

Supported Settings Obfuscation is supported for all configuration settings.

ESA Features & Configuration

September 12, 2025

This section describes features that are part of the uberAgent ESA endpoint security analytics product. Please take a look at the UXM and ESA products page for an explanation what the two products are about and how they work together.

Enabling ESA

April 28, 2025

uberAgent ESA is enabled or disabled through the configuration setting EnableESA. In the default configuration, EnableESA is set to **true**. However, the endpoint agent enables ESA only if one of the following is also true:

- Valid UXM and ESA licenses are available (i.e., the product is properly licensed)
- Neither UXM nor ESA licenses are available (demo mode)

ESA Enables EnableExtendedInfo

When ESA is enabled, EnableExtendedInfo is automatically enabled, too, irrespective of the configuration setting of the same name. EnableExtendedInfo ensures that GUIDs are added to process events so that individual process instances can be identified and tracked over time.

Threat Detection Engine

December 11, 2025

uberAgent ESA Threat Detection makes system activity traceable and searchable.

When a Threat Detection rule matches a risky process, an unusual network connection, or similar activity, uberAgent ESA creates an event in your SIEM (e.g., Splunk). Threat Detection's comprehensive, extensible ruleset is powered by uAQL, a feature-rich query language that is both easy to read by humans and fast to process by computers.

uberAgent ESA comes with hundreds of predefined rules for many common attack vectors and converters for Sysmon rules and Sigma signatures. Customizing and extending ESA's ruleset is explicitly encouraged.

Rule Sources

uberAgent ESA ships with rules from two different sources: Citrix rules and third-party rules. The former are curated by Citrix, while the latter are converted from sources such as the Sigma project.

Rule Storage

uberAgent ESA Threat Detection rules are part of uberAgent's configuration, which is maintained in the uberAgent Configuration GitHub repository.

Metadata

Annotation (MITRE ATT&CK Technique ID)

Annotations add supplementary data to Threat Detection rules, notably MITRE ATT&CK technique IDs.

Tag & Risk Score

Every ESA Threat Detection rule comes with a tag and a risk score that are assigned to matching events.

Sourcetype

ESA Threat Detection events are assigned the sourcetype uber Agent ESA: Activity Monitoring: Process Tagging (see the metrics documentation for a description of the fields).

Visualization

ESA Threat Detection events are visualized in the *Threat Detection Events* dashboard, which is part of the uberAgent_ESA Splunk searchhead app.

File System Activity Monitoring

September 12, 2025

File system activity monitoring is uberAgent ESA's capability to detect changes to objects in the file system. The monitored object types include files, of course, but also named pipes. uberAgent ESA can identify and react many different types of file system events, e.g., read, write, delete. Please see the event types documentation for details.

Configuration

File system activity monitoring can be configured via the stanza [FilesystemMonitoring]. By default, file system activity monitoring is enabled. To disable file system activity monitoring set Enabled = false.

Monitored Volumes

New Volumes Added to the System In the default configuration, uberAgent only monitors volumes that were present when the agent was started; newly added volumes are ignored. This can be changed by setting Hotplug = true.

Disabling Monitoring by Volume Type To monitor only certain volume types, use the setting Monitor. The following table shows available values.

Volume type	Description	Platform
Disks	Monitors all hard drives. This includes removable media	all
	such as USB thumb drives.	ne i
Mailslots	Monitors all mailslots, a	Windows
	mechanism for one-way interprocess communication	
	(IPC) using pseudofiles that	
	reside in memory.	
NamedPipes	Monitors all named pipes, a	Windows
'	mechanism for interprocess	
	communication (IPC) that is	
	accessed much like a file.	
NetworkShares	Monitors all remote file systems	all
	(access to network shares).	
	Supported protocols depend	
	on the OS: Windows: all	
	protocols handled by the	
	multiple UNC provider (MUP),	
	typically: SMB, RDP-NP (remote	
	desktop services client drives),	
	WebDAV macOS: SMB, AFP, NFS	

Example Configurations

With the following example configuration, uberAgent monitors disks only, i.e., hard drives and removable media. As Hotplug is set to **true**, uberAgent monitors volumes that were present when the agent was started as well as volumes mounted at runtime. Monitoring of network shares, mailslots, and named pipes is disabled.

```
1 [ProductComponents]
2 EnableESA = true
3
4 [FilesystemMonitoring]
5 Enabled = true
6 Hotplug = true
7 Monitor = Disks
```

With the following example configuration, uberAgent monitors disks and network shares. As Hotplug is not enabled, uberAgent only monitors volumes that were present when the agent was started. Monitoring of mailslots and named pipes is disabled.

```
1 [ProductComponents]
2 EnableESA = true
3
4 [FilesystemMonitoring]
5 Enabled = true
6 Monitor = Disks
7 Monitor = NetworkShares
```

File System Events in Threat Detection Engine (TDE)

File system events are available in TDE rules, whose queries are powered by uAQL. uAQL queries for file system events can make use of common event properties as well as file system event properties.

Example Rule for Windows

The following example detects writes to files in the directory C:\Windows (Windows):

```
1 [ActivityMonitoringRule]
2 # Detect writes to files in the directory C:\Windows.
3 RuleId = 2b635c8b-3c2b-4c51-b073-40a796d4ab9e-write
4 RuleName = Any file write
5 EventType = File.Write
6 Tag = file-write
7 RiskScore = 100
8 Query = File.Path like "%C:\\Windows\\%"
9 GenericProperty1 = File.Name
10 GenericProperty2 = File.CreationDate
11 GenericProperty3 = File.IsExecutable
```

```
12 GenericProperty4 = File.Path
```

Example Rule for macOS

The following example detects writes to files in the directory /Library/LaunchAgents (macOS):

```
1 [ActivityMonitoringRule]
2 # Detect writes to files in the directory /Library/LaunchAgents.
3 RuleId = 2b635c8b-3c2b-4c51-b073-40a796d4ab9e-write
4 RuleName = Any file write
5 EventType = File.Write
6 Tag = file-write
7 RiskScore = 100
8 Query = File.Path like "%/Library/LaunchAgents/%"
9 GenericProperty1 = File.Name
10 GenericProperty2 = File.CreationDate
11 GenericProperty3 = File.IsExecutable
12 GenericProperty4 = File.Path
```

Platform-Specific Notes

Windows

On Windows, uberAgent uses a minifilter driver to monitor the file system. Only successful file system activity is reported. Attempts that are not permitted due to missing permissions and attempts that are blocked by security products are not reported.

macOS

On macOS, uberAgent leverages the Endpoint Security Framework to monitor the file system. The Endpoint Security Framework provides the necessary APIs to capture a comprehensive range of events, including both successful and unsuccessful events. Different from the Windows implementation, on macOS uberAgent may capture unsuccessful events, too. Such events might result from permissions issues, for example. Specific results depend on the altitude at which the framework hooks the list of syscalls needed for file system activity.

Network Monitoring

December 11, 2025

The ESA Threat Detection rules for monitoring network activity are Citrix vendor rules.

Network Rules

The rules in this section detect suspicious behavior related to network operations.

- Suspicious network target names
- · PowerShell outbound network connections
- Suspicious outbound Kerberos connections
- · PowerShell remoting
- Detect network connects from suspicious sources
- Detect network connects from Windows processes
- Detect network connects from third-party tools
- RDP connects from non-RDP software, indicating lateral movement
- Detect network connects to suspicious ports
- Detect network connects to 80 and 443 from non-browser applications

MS Office & Acrobat Reader Monitoring

December 11, 2025

The ESA Threat Detection rules for monitoring Microsoft Office and Adobe Acrobat Reader are Citrix vendor rules.

Microsoft Office Rules

The rules in this section detect suspicious behavior with MS Office applications.

- Detect macro execution with the default Office security configuration applied ("disable all macros with notification")
- Detect child processes of Microsoft Office applications (dedicated rules for scripts and other types of child processes)
- Detect Microsoft Office download operations
- Detect Microsoft Office applications executing macros that access WMI to create child processes
- · Suspicious DLL load by Office
- Detect loading of MAPI DLLs from processes other than Outlook

Adobe Acrobat Reader Rules

The rules in this section detect suspicious behavior with Adobe Acrobat Reader.

· Detect child processes of Adobe Reader

LOLBAS Monitoring

December 11, 2025

LOLBAS stands for Living Off the Land Binaries And Scripts, a type of activity that misuses tools and executables that are already there because they are part of the operating system. To cite the LOLBAS' project's criteria, a LOLBin/lib/script must:

- Be a Microsoft-signed file, either native to the OS or downloaded from Microsoft.
- Have extra "unexpected" functionality. It is not interesting to document intended use cases.
- Have functionality that would be useful to an APT or red team.

The ESA Threat Detection rules for monitoring LOLBAS activity are Citrix vendor rules.

LOLBAS Rules

The rules in this section detect suspicious behavior related to operating system binaries.

- Unusual child processes and DLL loads
- Detect starts from non-default locations
- · Detect proxy execution
- Detect UAC bypass
- Detect csc/jsc compile
- Detect execute from alternate data streams
- Detect AWL bypass
- Detect encode and decode operations
- Detect copy operations
- Detect download operations

Process Tampering Monitoring

September 12, 2025

uberAgent ESA detects several malicious attack techniques such as Process Herpaderping and Process Hollowing. We name these attack techniques Process Tampering events.

Configuration

uberAgent ESA Process Tampering Monitoring is enabled or disabled through a configuration option. The related configuration Stanza is [ProcessStartupSettings].

Configure the setting EnableProcessTampering = **false** to disable process tampering monitoring.

By default, this option is enabled (requires ESA enabled, too).

Detecting Process Tampering Events

Any process tampering action is queryable with uAQL and its Threat Detection Engine rules.

Example Rule

The following example detects any Process Tampering event and forwards it to your backend, once triggered.

```
1 [ActivityMonitoringRule]
2 # Detects any Process Tampering action
3 RuleName = Detects any Process Tampering action
4 EventType = Process.TamperingEvent
5 Tag = process-tampering
6 RiskScore = 75
7 Query = true
```

This example rule forwards any tampering event. You may filter this with more advanced conditions using Common Event Properties.

Introduction to Process Tampering

While there are a couple of different techniques the outcome is most likely the same. A malicious process is running in the context of a non-malicious process and tries to hide malicious actions in the context of this good process. There are many good resources available that explain these techniques in detail. To get you a short summary please refer to the notes below.

What is Process Hollowing

A process is launched in a suspended state and executable code is unmapped and replaced with malicious code and resumed.

What is Process Herpaderping

This technique requires replacing an executable binary with a malicious file and launching it. Then, the original file is restored and the malicious executable pretends to be the original one.

Remote Thread Monitoring

September 12, 2025

uberAgent ESA detects remote thread creation that may be used in malicious attack techniques or suspicious activities such as DLL injections or malicious code execution in remote processes.

Configuration

uberAgent ESA Remote Thread Monitoring is enabled or disabled through a configuration option. The related configuration Stanza is [Miscellaneous].

Configure the setting RemoteThreadMonitoring = **false** to disable remote thread monitoring.

By default, this option is enabled (requires ESA enabled and Process Startup metrics enabled, too).

Detecting Remote Thread Events

Any remote thread action is queryable with uAQL and its Threat Detection Engine rules.

Example Rule

The following example detects any Remote Thread event and forwards it to your backend, once triggered.

```
1 [ActivityMonitoringRule]
2 # Detect any remote thread creation
3 RuleName = Detect remote thread creations
4 EventType = Process.CreateRemoteThread
```

```
5 Query = true
6 Tag = process-create-remote-thread
7 RiskScore = 75
8 GenericProperty1 = Thread.Id
9 GenericProperty2 = Thread.Timestamp
10 GenericProperty3 = Thread.StartAddress
11 GenericProperty4 = Thread.StartModule
12 GenericProperty5 = Thread.StartFunctionName
```

However, this general rule may include false positives. There are many cases where remote threads are used that are absolutely not malicious or suspicious. (e.g. debugging applications or OS remote threads)

Therefore it is recommended to filter this with more advanced conditions using Common Event Properties and Remote Event Properties.

uberAgent ESA is shipped with many automatically converted rules from Sigma. This ruleset already includes several useful Remote Thread detection rules.

Root CA certificate monitoring

December 11, 2025

The ESA Threat Detection rules for monitoring changes to root CA certificates are Citrix vendor rules.

The rules detect certificate chain cloning and cloned root trust attacks by monitoring writes to user and machine registry keys. For details, check the following rules:

```
• Detect AuthRoot, CA and Root certificate changes per machine
```

```
• Detect AuthRoot, CA and Root certificate changes per user
```

Security Descriptor & ACL Monitoring

December 11, 2025

The ESA Threat Detection rules for permissions (security descriptors and ACLs) are Citrix vendor rules.

File System ACL Rules

The rules in this section detect suspicious behavior related to file system permissions (ACLs).

- Detect processes started from directories that are user-writeable
- Detect process starts from directories with a low mandatory integrity label

Security Descriptor Monitoring Capabilities

uberAgent® ESA has sophisticated features that make security descriptors, which can be a bit obscure and difficult to work with, much more accessible:

- SID to name lookup
- · Conversion of hex access masks to permission strings

Please see this document for details.

Sigma Rules & Converter

December 11, 2025

uberAgent ESA ships with Threat Detection rules derived from Sigma signatures. These rules are grouped by severity: critical, high, medium, and low.

Sigma Rules

Following is an excerpt of some Sigma rules that ship with uberAgent® ESA:

- Detect Ryuk ransomware command lines
- · Detect DNS tunnel activity for Muddywater actor
- Detect a suspicious PowerShell command-line combination as used by APT29 in a campaign against US think tanks
- Detect Russian group activity as described in Global Threat Report 2019 by Crowdstrike
- Detect a suspicious DLL loading from AppData\Local as described in BlueMashroom report
- Detect Chafer activity attributed to OilRig as reported in Nyotron report in March 2018
- Detect CrackMapExecWin activity as described by NCSC
- Detect Elise backdoor activity as used by APT32
- Detect the execution of DLL side-loading malware used by threat group Emissary Panda aka APT27
- Detect a specific tool and export used by EquationGroup
- Detects Golden Chickens deployment method as used by Evilnum in a report published in July 2020
- Detect tools and process executions as observed in a Greenbug campaign in May 2020

- Detect Judgement Panda activity as described in Global Threat Report 2019 by Crowdstrike
- Detect registry modifications performed by Ke3chang malware in campaigns running in 2019 and 2020
- Detects Trojan loader activity as used by APT28
- · ...and hundreds more

Not all Sigma rules are enabled by default.

Sigma Converter

Citrix maintains a Sigma to uberAgent rule converter as part of the Sigma project. The converter is implemented as a Sigma backend. Please see the header of uberAgent's Sigma rule files for instructions on how to invoke the conversion.

Sysmon Rule Converter

December 11, 2025

The Sysmon to uberAgent rule converter **translates Sysmon rules into the format used by uberAgent ESA**.

Sysmon is one of the most popular endpoint detection tools. Numerous quality rulesets are maintained by the security community. The Sysmon converter makes those rulesets available for use with uberAgent ESA.

uberAgent® ESA as Sysmon Alternative

In addition to the Sysmon converter, Citrix also provides a converter for Sigma rules. This makes uber-Agent one of the most versatile detection tools on the market.

Getting Started

Download

To download the Sysmon converter, head over to the releases section of its GitHub repository.

Usage

Please see the Sysmon converter's readme for usage information.

Sysmon Converter Details

Development Info

The Sysmon converter is developed as an open-source project on GitHub. Contributions are always welcome!

The Sysmon converter is written in C# .NET. Release builds are available for Windows.

Threat Detection Engine

December 11, 2025

uberAgent ESA Threat Detection makes system activity traceable and searchable.

When a Threat Detection rule matches a risky process, an unusual network connection, or similar activity, uberAgent ESA creates an event in your SIEM (e.g., Splunk). Threat Detection's comprehensive, extensible ruleset is powered by uAQL, a feature-rich query language that is both easy to read by humans and fast to process by computers.

uberAgent ESA comes with hundreds of predefined rules for many common attack vectors and converters for Sysmon rules and Sigma signatures. Customizing and extending ESA's ruleset is explicitly encouraged.

Rule Sources

uberAgent ESA ships with rules from two different sources: Citrix rules and third-party rules. The former are curated by Citrix, while the latter are converted from sources such as the Sigma project.

Rule Storage

uberAgent ESA Threat Detection rules are part of uberAgent's configuration, which is maintained in the uberAgent Configuration GitHub repository.

Metadata

Annotation (MITRE ATT&CK Technique ID)

Annotations add supplementary data to Threat Detection rules, notably MITRE ATT&CK technique IDs.

Tag & Risk Score

Every ESA Threat Detection rule comes with a tag and a risk score that are assigned to matching events.

Sourcetype

ESA Threat Detection events are assigned the sourcetype uber Agent ESA: Activity Monitoring: Process Tagging (see the metrics documentation for a description of the fields).

Visualization

ESA Threat Detection events are visualized in the *Threat Detection Events* dashboard, which is part of the uberAgent_ESA Splunk searchhead app.

Rule Syntax

September 12, 2025

uberAgent ESA's Threat Detection rules are part of the configuration. This page documents the rule syntax.

Example

The following example shows a simple rule that is triggered whenever a process is started (EventType = Process.Start). The rule's query checks if the started process'name is wmiprvse.exe. If that is the case, the rule matches, and an event with the tag proc-start-wmiservice-child is sent to the backend.

```
1 [ThreatDetectionRule]
2 RuleId = 0a1bbfbc-e0d9-4c49-953e-e31c3aa3fc91
3 RuleName = Detect child processes of the WMI service
4 EventType = Process.Start
5 Annotation = {
6  "mitre_attack": ["T1071", "T1071.004"] }
7
8 Tag = proc-start-wmiservice-child
9 Query = Parent.Name == "wmiprvse.exe"
```

Rule Stanzas

There can be any number of [ThreatDetectionRule] stanzas, each defining one rule. Rules are processed in the order in which they are defined in the configuration. uberAgent ESA always processes all rules for every activity. This means that multiple events may be generated per activity.

Rule Components

An [ThreatDetectionRule] stanza may contain the following components.

RuleName

• Setting name: RuleName

• Description: any name to more easily identify a rule. Not used by uberAgent.

• Valid values: any string

Default: emptyRequired: yes

EventType

Setting name: EventType

• **Description:** the type of event this rule applies to.

• Valid values: see the event types page

Default: emptyRequired: yes

Annotation

• Setting name: Annotation

• Description: one or more annotations for the event in JSON format

· Valid values:

 Supported in Splunk Enterprise Security: nist, kill_chain_phases, cis20, mitre_attack, or any custom cyber security framework

Supported in uberAgent® ESA: mitre_attack

• **Default:** empty

· Required: no

Hive

This setting is only valid for registry events.

- Setting name: Hive
- **Description:** a comma-separated list of registry hives that are matched against before evaluating the query. For best performance, only the necessary hives should be specified.
- Valid values:
 - HKLM, matches HKEY_LOCAL_MACHINE
 - HKU, matches HKEY_USERS
 - A, matches application hives
 - WC, matches App-V packages and UWP apps
 - *, matches events in any hive. Note that * has a high performance impact and should be avoided if possible.
- **Default:** empty
- **Required:** only if EventType is a registry event type.

Query

- Setting name: Query
- **Description:** a uAQL query string that is matched against the properties of the event. A rule is considered matching if the query returns **true**.
- Valid values: any uAQL query string
- Default: emptyRequired: yes

Tag

- Setting name: Tag
- **Description:** a tag assigned to events matching this rule.
- Valid values: any string
- Default: emptyRequired: yes

RuleId

• Setting name: RuleId

• **Description:** a unique id assigned to this rule.

• Valid values: any string, e.g.: 7098a059-4191-4a9e-973c-8976d61cddc0

Default: emptyRequired: yes

RiskScore

Setting name: RiskScore

• **Description:** a risk score assigned to events matching this rule.

• Valid values: any number from 0 to 100. If an invalid value is set, the rule is ignored.

Default: 50Required: no

VerboseLogging

• Setting name: VerboseLogging

• **Description:** if enabled, more detail is added to the log file, e.g., the fully evaluated security descriptor if an SDDL rule is configured.

• Valid values: true or false

Default: falseRequired: no

Rule Evaluation

Rules are evaluated by running the rule's query with the event properties as input.

Reusable uAQL Queries

Commonly used queries can be defined as expressions, a functionality that is similar to macros or functions in other languages. This gives you the flexibility to write query code only once and use it multiple times.

Example

The following declares the Threat Detection expression **ParentIsMsOffice** to identify Microsoft Office as a parent application.

The expression **ParentIsMsOffice** is used in the following Threat Detection rule to identify child processes of Microsoft Office.

```
1 [ThreatDetectionRule]
2 Query = ParentIsMsOffice and (Process.Name in ["cmd.exe", "cscript.exe", "wscript.exe", "ftp.exe"] or ProcessIsPowerShell)
```

Please note that expressions must be defined *before* usage. Ideally, expressions are defined at the top of the configuration file. Also, please make sure not to use reserved keywords as expression names.

Disabling Default Rules

To disable any of the default rules, create a post-processing rule as follows:

```
1 [ThreatDetectionRuleExtension RuleId=RULE_ID]
2 Name = Disable the rule with ID RULE_ID
3 Query = false
```

Example

To disable the rule with the ID 7098a059-4191-4a9e-973c-8976d61cddc0, add the following stanza to any uberAgent configuration file:

Rule Extension Components

Rule extensions can include the following components:

Altitude

• Setting name: Altitude

• **Description:** determines the order in which rule extensions are applied.

• Valid values: float values between 0.0 and 100.0

• **Default:** 50.0

- · Required: no
- · Behavior:
 - Lower altitude values are applied first (higher priority)
 - Higher altitude values are applied later (lower priority)

Example The following example shows how rule extensions with different altitude values are applied to the same rule:

In this example, the extension with altitude 10.0 is applied first, followed by the extension with altitude 90.0. This allows for more precise control over the order of rule modifications.

Handle False Positives with Post-Processing

Consider the following default rule, which, unfortunately, also matches certain Splunk processes:

```
1 [ThreatDetectionRule]
2 RuleId = bdc64095-d59a-42a2-8588-71fd9c9d9abc
3 RuleName = Suspicious Unsigned Dbghelp/Dbgcore DLL Loaded
4 EventType = Image.Load
5 Tag = suspicious-unsigned-dbghelp/dbgcore-dll-loaded
6 RiskScore = 75
7 Annotation = {
8  " mitre_attack" : [" T1003.001" ] }
9
10 Query = ((Image.Path like r" %\\dbghelp.dll" or Image.Path like r" %\\dbgcore.dll") and Image.IsSigned == false)
```

To prevent the above rule from matching your Splunk processes, add the following post-processing stanza to any uberAgent configuration file:

```
1 [ThreatDetectionRuleExtension RuleId=bdc64095-d59a-42a2-8588-71
    fd9c9d9abc]
2 Query = Rule.Result and Parent.Name != "Splunkd.exe"
```

The above rule extension does what its name implies: it extends the original rule's uAQL query with additional statements, which is ideal for adding exclusions.

An important feature of how we've set up rule post-processing is its flexibility. Extension sections can be used not just for one rule at a time, but they can also be applied to groups of rules together. For example, a certain extension section could be set up to affect all rules that deal with network events:

```
1 [ThreatDetectionRuleExtension EventType=Net.Any]
2 Query = Rule.Result and Parent.Name != "Splunkd.exe"
```

Event Types

September 12, 2025

uberAgent ESA's Threat Detection rules can be triggered by many different types of events.

Event types are specified in the EventType component of [ActivityMonitoringRule] stanzas (rule syntax).

Process & Image Events

Event Types

The following process event types are available:

- Process . Start: a new process is created/started.
- Process. Stop: a process is terminated/stopped.
- Process. CreateRemoteThread: a process is starting a thread in another process.
- Process. Tampering Event: a process tampering event is detected.
- Image. Load: an executable image (e.g., a DLL) is loaded.
- Driver. Load: a kernel image (e.g., a driver) is loaded.

Event Properties

Common event properties are available with all types of events. Remote thread creation events and image load events have additional properties.

Network Events

Event Types

The following network event types are available:

- Net. Send: a network packet is sent.
- Net. Receive: a network packet is received.
- Net. Connect: a network connection is established.
- Net. Reconnect: a network connection is re-established.
- Net.Retransmit: a network packet is retransmitted (sent again).

Event Properties

Please see the documentation for the properties of network events.

Registry Events

Event Types

The following registry event types are available:

- Reg. Key. Create: a registry key is created.
- Reg. Value. Write: a registry value is written. This includes registry value creation as well as changes to the value's name and data.
- Reg. Delete: a registry key or value is deleted.
- Reg. Key. Delete: a registry key is deleted.
- Reg. Value. Delete: a registry value is deleted.
- Reg. Key. Security Change: a registry key's security descriptor is changed.
- Reg. Key. Rename: a registry key is renamed.
- Reg. Key. SetInformation: a registry key metadata is changed (e.g. last-write time, tags, virtualization, etc.).
- Reg. Key. Load: a registry hive is loaded.
- Reg. Key. Unload: a registry hive is unloaded.
- Reg. Key. Save: a registry key is saved.
- Reg. Key. Restore: a registry key is restored.
- Reg. Key. Replace: a registry key is replaced.
- Reg. Any: any of the above.

Event Properties

Please see the documentation for the properties of registry events.

DNS Query Events

Event Types

The following DNS query event types are available:

 DNS.Query: an outgoing DNS query request has completed, and a response has been received.

Event Properties

Please see the documentation for the properties of DNS query events.

File System Events

Event Types

The following file system activity event types are available:

- File.ChangeCreationTime: a file's original creation timestamp is changed (available on Windows only).
- File.Create: a file is created.
- File.CreateStream: an alternate data stream (ADS) is created (available on Windows only).
- File.Delete: a file is deleted (all platforms)
- File.PipeCreate: a named pipe is created.
- File.PipeConnected: a client connects to a named pipe.
- File.RawAccessRead: raw read access to a target device, bypassing ACLs (available on Windows only).
- File.Rename: a file is renamed.
- File.Write: a file is being written to.
- File.Read: a file is being read from.

Event Properties

Please see the documentation for the properties of file system activity events.

Common Event Properties

September 12, 2025

The following event properties can be used with all types of events in uAQL queries.

Property name	uAQL Data Type	Description	Platform
Process.Id	String	The process'id (e.g., 148)	all
Parent.Id	String	The process'parent's id (e.g., 4)	all
Process.Name	String	The process'image file name (e.g., Winword.exe)	all
Parent.Name	String	The process' parent's image file name (e.g., Winword.exe)	all
Process.User. Sid	String	The process'user SID	Win
Process.User	String	The process'user name in the format domain\account	all
Parent.User.Sid	String	The process' parent's user SID	Win
Parent.User	String	The process'parent's user name. Format on Windows:	all
Process.Path	String	The process' full path including the image file name	all
Parent.Path	String	The process'parent's full path including the image file name	all
Process. CommandLine	String	The process'command line	all

Property name	uAQL Data Type	Description	Platform
Parent. CommandLine	String	The process'parent's command line	all
Process.AppName	String	The process' application name (e.g., Microsoft Office)	all
Parent.AppName	String	The process' parent's application name (e.g., Microsoft Office)	all
Process. AppVersion	String	The process' application version	all
Parent. AppVersion	String	The process' parent's application version	all
Process.Company	String	The process'company (as stored in the PE image resources)	Win
Parent.Company	String	The process' parent's company (as stored in the PE image resources)	Win
Process. IsElevated	Boolean	Is the process elevated?	all
Parent. IsElevated	Boolean	Is the parent process elevated?	all
Process. IsProtected	Boolean	Is the process protected?	Win
Parent. IsProtected	Boolean	Is the parent process protected?	Win
Process. SessionId	Integer	The process'session ID	all
Parent. SessionId	Integer	The process' parent's session ID	all

Property name	uAQL Data Type	Description	Platform
Process.	String	The security descriptor	Win
DirectorySdSddl		(SD) of the process'	
		directory. The SD is	
		converted to the	
		security descriptor	
		string format (SDDL)	
		for the match. NULL	
		SDs, which grant full	
		access to everyone,	
		are represented as	
		[UA_NULL_SD]. SIDs	
		in the SD are looked up	
		and replaced with	
		names. Hex access	
		masks are replaced	
		with their string	
		representations in	
		SetACL's format	
		(details).	
Process.	Boolean	Is the process'	Win
DirectoryUserWri	teable	directory writeable by	
		the user that is logged	
		on the session the	
		process is started in?	
		Ignores processes in	
		session 0.	
Process.Hash.	String	MD5 hash of the	Win
MD5		process executable	
Process.Hash.	String	SHA1 hash of the	Win
SHA1	5	process executable	
	Ctring	·	Win
Process.Hash.	String	SHA256 hash of the	Win
SHA256		process executable	
Process.Hash.	String	Import-table hash of	Win
IMP		the process executable	

Property name	uAQL Data Type	Description	Platform
Process.Hashes	String	All enabled hashes for	Win
		process are output	
		comma-separated,	
		e.g.: MD5=	
		CFCD208495D565EF6	66E7DFF9F98764DA
		,SHA1=	
		·	F12099D1C2D40AB994
Parent.Hash.MD5	String	MD5 hash of the parent	Win
		process executable	
Parent.Hash.	String	SHA1 hash of the	Win
SHA1	G	parent process	
		executable	
Parent.Hash.	String	SHA256 hash of the	Win
SHA256	G	parent process	
		executable	
Parent.Hash.IMP	String	Import-table hash of	Win
	G	the parent process	
		executable	
Parent.Hashes	String	All enabled hashes for	Win
	<u> </u>	parent process are	
		output	
		comma-separated,	
		e.g.: MD5=	
		CFCD208495D565EF6	66F7DFF9F98764DA
		,SHA1=	,02,01,01,01,010,101
		BOSOST CONDUDEOZCI	12033010207000334
Process.	Boolean	Is the process signed?	Win
IsSigned		This evaluates to true	
		even if the certificate	
		was revoked or is	
		expired.	

Property name	uAQL Data Type	Description	Platform
Process. IsSignedByOSVendo	Boolean or	Is the process signed by the vendor of the operating system (e.g. Microsoft)? This evaluates to true even if the certificate was revoked or is expired.	all
Process. Signature	String	The signer name.	Win
Process. SignatureStatus	String	Evaluates to Valid for a valid certificate and, under Windows, Invalid for an invalid certificate. Furthermore, it evaluates to SelfSigned under macOS if the binary is ad-hoc signed. It is empty if the process is not signed.	all
Process. SigningId	String	The unique identifier associated with the developer's certificate used for signing the bundle or binary.	macOS
Process.TeamId	String	A unique identifier assigned by Apple to a specific development team.	macOS
Process.CdHash	String	The process's code directory hash.	macOS

Property name	uAQL Data Type	Description	Platform
Parent.IsSigned	Boolean	Is the parent process signed? This evaluates to true even if the certificate was revoked or is expired.	Win
Parent. IsSignedByOSVendo	Boolean	Is the parent process signed by the vendor of the operating system (e.g. Microsoft)? This evaluates to true even if the certificate was revoked or is expired.	all
Parent. Signature	String	The signer name.	Win
Parent. SignatureStatus	String	Evaluates to Valid for a valid certificate and, under Windows, Invalid for an invalid certificate. Furthermore, it evaluates to SelfSigned under macOS if the binary is ad-hoc signed. It is empty if the parent process is not signed.	all
Parent. SigningId	String	The parent process's unique identifier associated with the developer's certificate used for signing the bundle or binary.	macOS

Property name	uAQL Data Type	Description	Platform
Parent.TeamId	String	The parent process's unique identifier assigned by Apple to a specific development	macOS
Parent.CdHash	String	team. The parent process's code directory hash.	macOS

Note for macOS

As all binaries for macOS on Apple Silicon are signed, Process.IsSigned and Parent. IsSigned are always true. To reflect if a binary is ad-hoc signed (i.e. there is no valid certificate included) Process.SignatureStatus, respectively Parent.SignatureStatus, are set to SelfSigned. If the binary is not ad-hoc signed those fields are set to valid. If the binary is not signed at all (e.g. because it is an Intel binary running under Rosetta 2) those fields are empty.

In case a process is already running before uberAgent® is started, the following fields might be unavailable:

- *.CdHash
- *.IsSigned
- *.IsSignedByOSVendor
- *.SignatureStatus
- *.SigningId
- *.TeamId

As soon as the affected process calls fork or exec the values are available.

DNS Query Event Properties

September 12, 2025

The following event properties can be used with DNS query events in uAQL queries (event type DNS. Query). In addition to the properties listed here, the common properties are applicable, too.

Property name Dns.	uAQL Data Type String	Description	Platform
Dns	String	The mean stad DNC	
QueryRequest	3	The requested DNS name.	all
Dns. QueryResponse	String	Responses to the request. May be a semicolon; separated list of multiple	all
		responses.	

File System Activity Event Properties

December 11, 2025

You can use the following event properties with file system events in uAQL queries (event type File .*). In addition to the properties listed here, the common properties are applicable, too.

uAQL Data Type	Description	Platform
String	The file creation date	all
	timestamp in ms).	
Boolean S	Determined by checking the file's executable bits. Available for all event	macOS
	String	String The file creation date (format: Unix epoch timestamp in ms). Boolean Determined by checking the file's executable bits.

Property name	uAQL Data Type	Description	Platform
ile.	Boolean	Indicates whether the	Windows
Executable		file is an executable∖,	
		determined by	
		inspecting the file's	
		first two bytes.	
		Available for the	
		following event types:	
		File.Create,	
		File.Delete,	
		File.	
		ChangeCreationTin	ne
		•	
le.Name	String	The file name only,	all
		without the path.	
le.Path	String	The full path including	all
_		the file name.	
.e.	String	In case of File.	Windows
viousCreatio	nDate	ChangeCreationTin	ne
		events: the original	
le.	String	creation date. In case of	all
eviousName	String	File.Rename	all
eviousivallie		events: the original file	
		name.	
le.	String	In case of	all
eviousPath	···· ₀	File.Rename	
		events: the original file	
		path including the file	
		name.	

Image Load Event Properties

September 12, 2025

The following event properties can be used with image load events in uAQL queries (event type Image . Load and Driver. Load). In addition to the properties listed here, the common properties are

applicable, too.

Property name	uAQL Data Type	Description	Platform
Image.Name	String	The image's file name (e.g., userenv.dll)	Win
mage.Path	String	The image's full path including the image file name	Win
mage.Hash.MD5	String	MD5 hash of the image	Win
mage.Hash.SHA1	String	SHA1 hash of the image	Win
Emage.Hash. SHA256	String	SHA256 hash of the image	Win
Image.Hash.IMP	String	Import-table hash of the image	Win
[mage.Hashes	String	All enabled hashes for image are output comma-separated, e.g.: MD5= CFCD208495D565EF6, SHA1= B6589FC6AB0DC82CF	Win 66E7DFF9F98764DA F12099D1C2D40AB994E
mage.IsSigned	Boolean	Is the image signed?	Win
		This evaluates to true even if the certificate was revoked or is expired.	
Image. IsSignedByOSVendo	Boolean	Is the image signed by the vendor of the operating system (e.g. Microsoft)? This evaluates to true even if the certificate was revoked or is	Win
	String	expired. The signer name.	Win

Property name	uAQL Data Type	Description	Platform
Image.	String	Evaluates to Valid	Win
SignatureStatus		for a valid certificate	
		and Invalid for an	
		invalid certificate. It is	
		empty if the image is	
		not signed.	

Network Event Properties

September 12, 2025

The following event properties can be used with network events in uAQL queries (event type Net.*). In addition to the properties listed here, the common properties are applicable, too.

Property name	uAQL Data Type	Description	Platform
Net.Target.Ip	String	The network target's IP address (IPv4 or IPv6)	all
Net.Target. IpIsV6	Boolean	Indicates whether the network target's IP address is IPv6 (true) or not (false).	all
Net.Target.Name	String	The network target's name. This is only available if it can be resolved from the local DNS cache.	all
Net.Target.Port	Integer	The network target's port	all
Net.Target. PortName	String	A textual representation of the network target port, e.g: https	all

Property name	uAQL Data Type	Description	Platform
Net.Target. Protocol	String	Either TCP or UDP	all
Net.Source.Ip	String	The network source IP address (IPv4 or IPv6)	all
Net.Source. IpIsV6	Boolean	Indicates whether the network source IP address is IPv6 (true) or not (false).	all
Net.Source.Name	String	The network source name. This is only available if it can be resolved from the local DNS cache.	all
Net.Source.Port	Integer	The network source port	all
Net.Source. PortName	String	A textual representation of the network source port, e.g: https	all

Registry Event Properties

September 12, 2025

The following event properties can be used with registry events in uAQL queries (event type Reg.*). In addition to the properties listed here, the common properties are applicable, too.

Property name	uAQL Data Type	Description	Platform
Reg.Key.Path	String	The absolute path of the registry key (e.g., ^HKLM\\SYSTEM \\.*ControlSet .*\\Services\\ lmhosts\$). Not supported for Reg.Key.Rename.	Win
Reg.Key.Name	String	The name of the registry key - the last path element of the full path (e.g., ^lmhosts\$). Not supported for Reg.Key.Rename.	Win
Reg.Parent.Key. Path	String	The absolute path to the parent key (e.g., ^HKLM\\SYSTEM \\.*\\Services\$). Not supported for Reg.Key.Rename.	Win
Reg.Key.Path. New	String	The new absolute path of the registry key (e.g., ^HKLM\\SYSTEM \\.*ControlSet .*\\Services\\ lmhosts\$). Only supported for Reg.Key.Rename.	Win

Property name	uAQL Data Type	Description	Platform
Reg.Key.Path.	String	The old absolute path of the registry key (e.g., ^HKLM\\SYSTEM \\.*ControlSet	Win
		<pre>.*\\Services\\ lmhosts\$). Only supported for Reg.Key.Rename.</pre>	
Reg.Value.Name	String	The name of a key property (e.g., RequiredPrivilege).	Win es

Property name uAQL Data Type Description	Platform
Reg.Value.Data String The value is format	tted Win
to be compatible w	vith
Sysmon. DWORD	
values are formatte	ted
with a hexadecima	nl
representation, for	r
example: DWORD	(0
x00000001).	
QWORD values are	e
shown in a range	
format, such as:	
QWORD (0	
x0000001-0	
x00000002). Em	npty
Strings are denote	ed
as: (Empty). Bin a	ary
Data and Multiline	e
Strings, including	
Empty Multiline	
Strings, are all	
represented as:	
Binary Data.	
Regular Strings	
remain unchanged	
Expandable String	gs
have any percent (
characters escaped	d, so
%PATH% becomes	
%%PATH%%.	
Reg. Value. Data. Number Access to the	Win
Number non-formatted DWC	
and QWORD registry	ту
values as number.	\A/:
Reg. Value. Data. String Access to the	Win
String non-formatted regi	istry
value strings.	

Property name	uAQL Data Type	Description	Platform
Reg.Value.Type	Number	The numeric value	Win
		represents the	
		data-type of the	
		content written to the	
		registry value. Possible	
		values include: 0 =	
		REG_NONE 1 =	
		REG_SZ 2 =	
		REG_EXPAND_SZ 3 =	
		REG_BINARY 4 =	
		REG_DWORD 4 =	
		REG_DWORD_LITTLE_E	NDIAN
		5 =	
		REG_DWORD_BIG_END	IAN
		6 = REG_LINK 7 =	
		REG_MULTI_SZ 8 =	
		REG_RESOURCE_LIST	
		9 =	
		REG_FULL_RESOURCE_	_DESCRIPTOR
		10 =	
		REG_RESOURCE_REQU	IREMENTS_LIST
		11 = REG_QWORD 11	
			.VIDIVVI
		REG_QWORD_LITTLE_E For more details, see	INDIAN
		the Microsoft	
		documentation.	
Reg.EventType	String	The Event Type	Win
Reg. Everrerype	Jung	identifies the actual	******
		registry event.	
		Possible values	
		include: SetValue	
		DeleteValue	
		RenameKey DeleteKey	

Property name	uAQL Data Type	Description	Platform
Reg.File.Name	String	A file path (e.g.,	Win
		C:\TempHive.hiv).	
		Supported for	
		Reg.Key.Load,	
		Reg.Key.Restore,	
		Reg.Key.Save, or	
		Reg.Key.Replace.	
Reg.Key.Sddl	String	The security descriptor	Win
		(SD) of a registry key.	
Reg.Key.Hive	String	The name of the Hive	Win
		(e.g., HKLM).	
Reg.Key.Target	String	The absolute path of	Win
		the registry key. Takes	
		Reg.Key.Path.	
		Old or	
		Reg.Key.Pathand	
		is thus never empty.	
Reg.	String	This property is either	Win
TargetObject		the full path to the	
		registry key or the full	
		path to the registry	
		value.	

Remote Thread Event Properties

September 12, 2025

The following event properties can be used with create remote thread events in uAQL queries (event type Process.CreateRemoteThread). In addition to the properties listed here, the common properties are applicable, too.

Property name	uAQL Data Type	Description	Platform
Thread.Id	Integer	The thread identifier of the newly created thread.	Win
Thread. Timestamp	Integer	Event Timestamp	Win
Thread.Process. Id	Integer	The process identifier of the process that runs the newly created thread.	Win
Thread.Parent. Id	Integer	The process identifier of the process that has initiated the remote thread.	Win
Thread. StartAddress	Integer	The absolute address in virtual memory where the function is located.	Win
Thread. StartModule	String	The name of the library where the function that was started is located in.	Win
Thread. StartFunctionName	String	The name of the function that was started as entry point for the new thread.	Win

Process.DirectorySdSddl

September 12, 2025

The event property Process. Directory SdSddl is a powerful tool: it makes the **file system permissions** of a process' directory available for regex matching and rule evaluation.

Overview

Whenever an event occurs, uberAgent ESA checks if the event property Process. DirectorySdSddl is configured in at least one Threat Detection rule. If that is the case, uberAgent ESA does the following:

- 1. determine the **directory** of the process executable
- 2. read the directory's **security descriptor** (SD)
- 3. convert the SD to the SDDL string format
- 4. in the SDDL string, replace SIDs with user/group names
- 5. in the SDDL string, replace hex access masks with **readable permissions** strings
- 6. **match** the resulting string against the rule's regex

Security Descriptor Components

Security Descriptors are structures that contain multiple components, some of which are optional:

- Owner
- Primary group (rarely used, if at all)
- DACL (permissions)
- SACL (auditing configuration)
- Attributes (claims)
- Mandatory integrity label
- · Scoped policy ID

uberAgent ESA retrieves all of the SD components shown above.

How It Works in Detail

Converting the SD to the SDDL String Format

Security descriptors are binary structures. In order for humans to read or regular expressions to match their contents, SDs must be converted to strings. Microsoft established a common format for that purpose, the Security Descriptor Definition Language.

uberAgent ESA converts all the security descriptor components to SDDL, but it does not stop there because **SDDL has shortcomings.**

Converting User/Group SIDs to Names

SDDL strings are more or less 1:1 representations of the binary SD structure. This means that, with very few exceptions, users and groups are not shown by their names, but by their SIDs, for example

S-1-5-21-3803133166-2955000686-238773884-1029. Such a SID string is not very useful for regex matching, so uberAgent goes ahead and converts it to the well-known domain\user format before performing the regex matching.

Converting Hex Access Masks to Permission Strings

The same is true for access masks, which store the actual permission in a 32-bit unsigned integer. In a raw SDDL string, an access mask might look like this: 0×1200 a9. That is not very useful for regex matching because multiple permissions can be combined in one access mask through bitwise OR. Again, uberAgent does the heavy lifting by converting access masks to a string format that is processed easily: SetACL's. With this conversion, the cryptic access mask 0×1200 a9 becomes the easily understandable string read_execute.

If an access mask contains a combination of multiple individual permissions, uberAgent's SetACL string lists all the individual permission names separated by commas.

Example

SDDL string for C: \Windows\System32 as obtained by the Windows API before uberAgent ESA's simplifications:

```
1 0:S-1-5-80-956008885-3418522649-1831038044-1853292631-2271478464G:S
-1-5-80-956008885-3418522649-1831038044-1853292631-2271478464D:PAI(A
;;FA;;S
-1-5-80-956008885-3418522649-1831038044-1853292631-2271478464)(A;
CIIO;GA;;S
-1-5-80-956008885-3418522649-1831038044-1853292631-2271478464)(A;;0
x1301bf;;;SY)(A;OICIIO;GA;;;SY)(A;;0x1301bf;;;BA)(A;OICIIO;GA;;;BA)(A;;0x1200a9;;;BU)(A;OICIIO;GXGR;;;BU)(A;OICIIO;GA;;;CO)(A;;0x1200a9;;;AC)(A;OICIIO;GXGR;;;AC)(A;;0x1200a9;;;S-1-15-2-2)(A;OICIIO;GXGR;;;S-1-15-2-2)S:AINO_ACCESS_CONTROL
```

The same string after uberAgent® ESA replaced SIDs with names:

```
1 0:NT SERVICE\TrustedInstallerG:NT SERVICE\TrustedInstallerD:PAI(A;;FA
;;;NT SERVICE\TrustedInstaller)(A;CIIO;GA;;;NT SERVICE\
TrustedInstaller)(A;;0x1301bf;;;SY)(A;OICIIO;GA;;;SY)(A;;0x1301bf;;;
BA)(A;OICIIO;GA;;;BA)(A;;0x1200a9;;;BU)(A;OICIIO;GXGR;;;BU)(A;OICIIO
;GA;;;CO)(A;;0x1200a9;;;AC)(A;OICIIO;GXGR;;;AC)(A;;0x1200a9;;;
APPLICATION PACKAGE AUTHORITY\ALL RESTRICTED APPLICATION PACKAGES)(A
;OICIIO;GXGR;;;APPLICATION PACKAGE AUTHORITY\ALL RESTRICTED
APPLICATION PACKAGES)S:AINO_ACCESS_CONTROL
```

The same string after uberAgent ESA additionally **replaced hex access masks with permission strings:**

```
1 0:NT SERVICE\TrustedInstallerG:NT SERVICE\TrustedInstallerD:PAI(A;;full
;;;NT SERVICE\TrustedInstaller)(A;CIIO;full;;;NT SERVICE\
TrustedInstaller)(A;;change;;;SY)(A;OICIIO;full;;;SY)(A;;change;;;BA
)(A;OICIIO;full;;;BA)(A;;read_execute;;;BU)(A;OICIIO;read_execute;;;
BU)(A;OICIIO;full;;;CO)(A;;read_execute;;;AC)(A;OICIIO;read_execute
;;;AC)(A;;read_execute;;;APPLICATION PACKAGE AUTHORITY\ALL
RESTRICTED APPLICATION PACKAGES)(A;OICIIO;read_execute;;;APPLICATION
PACKAGE AUTHORITY\ALL RESTRICTED APPLICATION PACKAGES)S:
AINO_ACCESS_CONTROL
```

Deconstructing the SDDL String

Here is a quick explanation of the security descriptor string format. For the full specifications please see Microsoft's documentation.

Split into the SD's components, the SDDL string from the example above is already much more readable:

```
1  0:NT SERVICE\TrustedInstaller
2  G:NT SERVICE\TrustedInstaller
3  D:PAI(A;;full;;;NT SERVICE\TrustedInstaller)(A;CIIO;full;;;NT SERVICE\
    TrustedInstaller)(A;;change;;;SY)(A;OICIIO;full;;;SY)(A;;change;;;BA
    )(A;OICIIO;full;;;BA)(A;;read_execute;;;BU)(A;OICIIO;read_execute;;;
    BU)(A;OICIIO;full;;;CO)(A;;read_execute;;;AC)(A;OICIIO;read_execute
    ;;;AC)(A;;read_execute;;;APPLICATION PACKAGE AUTHORITY\ALL
    RESTRICTED APPLICATION PACKAGES)(A;OICIIO;read_execute;;;APPLICATION
    PACKAGE AUTHORITY\ALL RESTRICTED APPLICATION PACKAGES)
4  S:AINO_ACCESS_CONTROL
```

As you can see, the four main components of a security descriptor are prepended by the following:

- O:: owner
- G:: primary group
- D:: DACL
- S:: SACL

The DACL part of an SDDL string is a concatenation of **access control entries (ACEs)**, each wrapped in parentheses. In this example, there are 13 ACEs in the ACL:

```
1 (A;;full;;;NT SERVICE\TrustedInstaller)
2 (A;CIIO;full;;;NT SERVICE\TrustedInstaller)
3 (A;;change;;;SY)
4 (A;OICIIO;full;;;SY)
5 (A;;change;;;BA)
6 (A;OICIIO;full;;;BA)
7 (A;;read_execute;;;BU)
8 (A;OICIIO;read_execute;;;BU)
9 (A;OICIIO;full;;;CO)
10 (A;;read_execute;;;AC)
```

Please see Microsoft's documentation for an explanation of the ACE properties.

Logging

As you saw above, SDDL strings can be complex. When writing regular expressions to match them, you need to know what you are dealing with. In other words, you need log samples.

Tip: while working on a Threat Detection rule involving the security descriptor, set the rule's VerboseLogging config element to **true**. With verbose logging enabled, uberAgent's write messages like the following to its log file:

GetPermissionsSddl,Read the SD of <\\?\C:\WINDOWS\System32>

Security Score

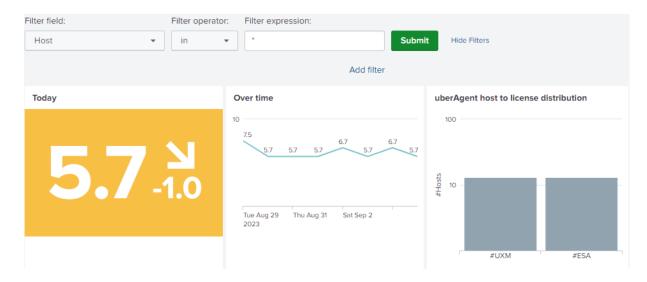
September 12, 2025

uberAgent ESA's security score is a scoring system that calculates and visualizes the current and past status of ESA's two primary data sources, Security and Compliance Inventory (SCI) and Threat Detection Engine (TDE). In short, SCI is a script-based test engine that detects insecure configurations, while TDE is a rules-based engine that continuously monitors endpoints for unusual or risky behavior. Security scores are assigned to the results of the two data sources and range from zero to ten. Scores of zero to four are considered **high risk**, scores of four to seven are considered **medium risk**, and scores of seven to ten are considered **low risk**.

Security Score Dashboard

The security score dashboard is the entry point to uberAgent ESA's Splunk app. The dashboard visualizes security scores for the entire estate monitored by uberAgent ESA, breaking down data by data source, category, test, and rule tag to highlight potential security risks.

Overall Score



The filter at the top allows filtering the dashboard to a subset of machines. By default, all devices are shown.

On the left, one can see the **overall score** and the trend compared to yesterday. In the middle, the **score development** over time is visualized. On the right, one can see the **host to license distribution** panel, which compares and highlights uberAgent UXM to ESA deployment mismatches.

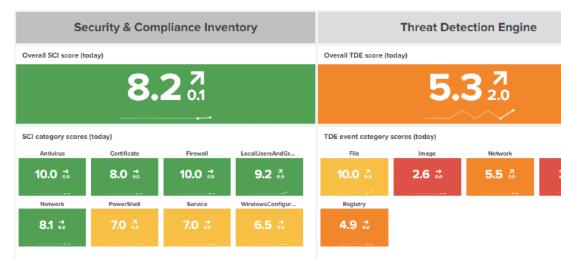
Security & Compliance Inventory and Threat Detection Engine Scores



The overall score is derived from two data sources, SCI and TDE:

- **SCI score**: indicator for *insecure or non-compliant* configured devices, user accounts, and applications.
- **TDE score**: indicator for *risky or unusual behavior* of devices, user accounts, and applications.

The charts show a trend indicator for the last day and a sparkline for the last seven days.



Score Components

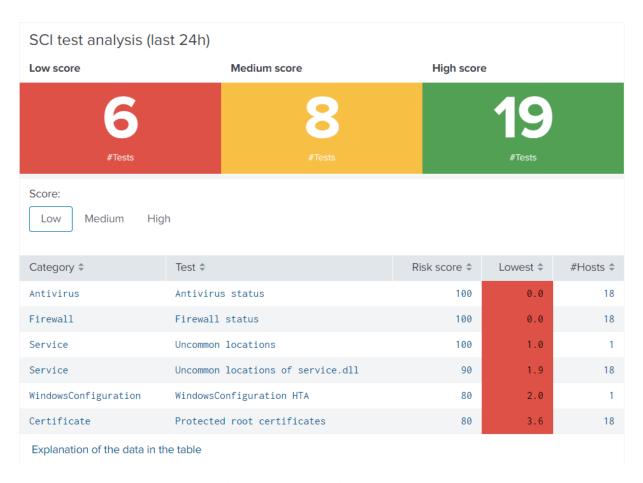
Each data source score is calculated from the underlying test category scores for the past seven days. See score calculation for further details. Each category score is displayed in a single-value visualization along with a sparkline and trend indicator.

uberAgent ESA ships with an extensive list of Security and Compliance Inventory tests to monitor various aspects of the endpoints. Each test belongs to a category. For each category, a security score is calculated and visualized in the dashboard panel. As customers may add their own tests, with their own categories, the dashboard dynamically displays test categories as test results are received by the (Splunk) backend.

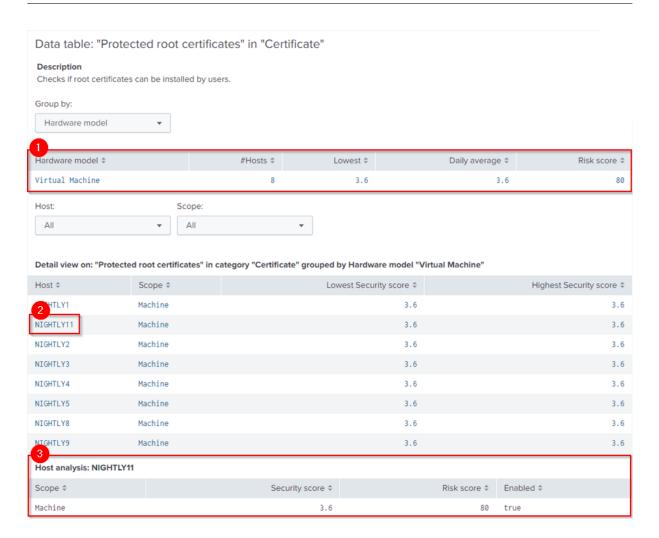
Threat Detection Events can originate from various event types. Each event type is associated with a TDE event category, such as file, image, or network. The Security Score dashboard displays and calculates a security score for each TDE event category found in the events processed by the backend.

SCI Test Analysis

The charts below show scores for tests executed within the last 24 hours. Tests with low (red) or medium (yellow) security scores may warrant your attention.

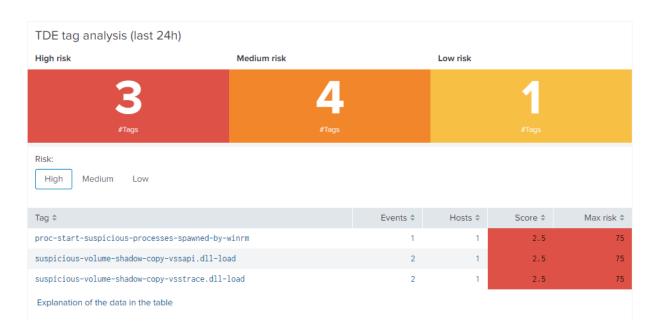


Click on an item in the table to perform a drilldown. If you do so, a new data table displays the results for a particular test. The table shows which endpoints the test was performed on. By default, hits are grouped by *hardware model*. Other groupings are available. To drilldown further, click the first column to display all hosts in the selected group by field (1). The new drilldown table displays the lowest and highest security score, as well as the scope of the test. To analyze a specific host, click the host (2). Another drilldown table displays the scope, security score, risk score, and the actual test result (3).



TDE Tag Analysis

The charts below show scores for TDE rule tags found within the last 24 hours. Low security scores are considered high risk (red), medium scores medium risk (orange) and high security scores low risk (yellow). Therefore, rule tags with low or medium risk scores may require the most attention. Click on an item in the table to analyze the tag in more detail on the **Threat Detection Events** dashboard.



Failed SCI Tests

Failed SCI tests

Test executions can fail on endpoints for various reasons. If a test script runs into an error, uberAgent sends the errors message to the configured backend. The dashboard dynamically creates a button at the bottom of the page to display information about the failed execution. Click on the plus sign next to *Failed SCI tests* to reveal information about affected devices or users and error messages received in the last 24 hours.

Score Calculation

The security score is calculated separately for the two data sources as they contain different elements to be considered in the calculation.

SCI Score Calculation

Each test result is sent to the backend with a result score (SecurityInventoryScore) as well as a risk score (SecurityInventoryRiskScore). The result score is contains the actual test result, whereas the risk score describes the test's importance (criticality). The following formula combines the result score with the risk score into the actual security score.

Each security score for SCI events is calculated as follows: (10 - (10 - Security Inventory Score) x Security Inventory Risk Score) / 100)

Automatic Score Calculation SCI security scores are automatically evaluated every 30 minutes for the past 60 minutes. Results are stored in a separate score index. Within the calculation, the corresponding search makes sure to avoid evaluating duplicates by comparing event timestamps with the timestamps of the last calculated events in the score index.

Trigger Score Calculation Manually The Security Score dashboard's last panel displays a time-stamp indicating the time of the latest calculation search results within the score index. To update the results, users can click the *Refresh Now* button. After successfully triggering the calculation, users see a spinner animation within the button. Once the dashboard reloads, the search job is finished. If the timestamp remains unchanged after clicking the button, it may indicate that no new SCI events were found. As a result, no new calculation events were written to the score index.

```
By default, Security and Compliance Inventory events are updated every 30 minutes. Latest SCI event timestamp: 2023-12-22 09:29:57.

To view the most recent data, click the Refresh Now button below. The dashboard reloads after the search job completes. Note that the timestamp is updated only when newer data is found.

Refresh Now
```

TDE Score Calculation

Events generated by the Threat Detection Engine do not come with a *result score*. Therefore, the following formula calculates a security score for TDE events.

```
Security score = ((101 - RiskScore)/10)x (1 - (#Events / #AllEvents)x 0.05 )x (1 - (#Devices / #AllDevices)x 0.05)
```

The formula uses the following variables:

- **RiskScore**: The risk score that was configured for the specific TDE rule.
- #Events: The number of events for the specific TDE rule.
- #AllEvents: The number of all events produced by any TDE rule.
- **#Devices**: The number of devices affected by the specific TDE rule.
- #AllDevices: The number of all devices affected by any TDE rule.

The formula is designed to take into account three factors: **risk score**, **number of events**, and the **number of devices**. The first part of the formula subtracts the risk score from 101 and divides the result by 10. This is done to invert the risk score scale so that a higher risk score marks a lower security score. The second and third parts of the formula are based on the concept of exponential decay. They calculate the proportion of events and devices relative to their respective maximum values and then convert these proportions into a decay using the exponential function. The decay factors are then multiplied and scaled by a factor of 0.05. Multiplying with that factor ensures that the impact of counts (events and devices) on the security score is not too strong. Finally, the three factors are combined by multiplying them to result in the final security score for TDE events.

Score Ranges

Security Score

The security score combines uberAgent ESA's main data sources, Security and Compliance Inventory and Threat Detection Engine. The score an indicator for insecurely configured devices, or risky behavior on endpoints. The table below shows the security score ranges, where their categorization changes and which colors are applied in the dashboard panels.

Туре	Threshold	SCI color	TDE color
High security score		green	yellow
	= 8		
Medium security score	1	yellow	orange
	= 4 & <8		
Low security score	< 4	red	red

Risk Score

The risk score is used to describe the importance of a SCI test or a TDE rule. As risk scores are used in the security score calculation, they are used to add weight to the actual result. Risk scores range from zero (low risk) to one hundred (high risk).

Risk score	Threshold
High	
Medium	=80
Medium	= 40 & <80
Low	< 40

Hash Calculation of PE Images

September 12, 2025

uberAgent ESA calculates hashes of executables (e.g., .exe, .dll or .sys files). Whenever a process is started or a DLL is loaded, uberAgent calculates the hash of the file located on disk. uberAgent supports the hash variants MD5, SHA-1, SHA-256, and ImpHash both individually and simultaneously.

Configuration

The uberAgent ESA hash calculation feature is configured through the process startup setting EnableCalculateHash. In the default configuration, MD5 hash calculation is enabled.

Process and library (DLL) hashes are cached to reduce CPU load. Cache lifetime is managed automatically. The cache's size can be configured (or disabled altogether) via the configuration setting HashesCacheMaxSize.

Metadata

Sourcetype

Process hashes are part of the sourcetypes uberAgent:Process:ProcessStartup and uberAgentESA:Process:ProcessStop. Please see the metrics documentation for a description of the fields.

Due to the huge amount of data being produced, hash values for image load events are not sent to the backend but can be used with the Threat Detection Engine.

Authenticode Signature Verification

September 12, 2025

uberAgent ESA verifies the Authenticode signature for every process that is started.

The following information is collected:

- Is the executable signed by the OS manufacturer, e.g., Microsoft?
- Is the Authenticode signature valid?
- The Authenticode signer's name

Configuration

uberAgent ESA Authenticode verification is configured through the process startup setting EnableAuthenticode. In the default configuration, Authenticode verification is enabled.

uberAgent ESA caches the results of Authenticode verifications. The number of cached results can be set via AuthenticodeCacheMaxSize, which is preset to 500 entries in the default configuration.

Metadata

Sourcetype

Authenticode signature information is part of the sourcetype uber Agent: Process: Process Startup . Please see the metrics documentation for a description of the fields.

Security & Compliance Inventory

September 12, 2025

uberAgent ESA Security & Compliance Inventory (SCI) is a testing and rating framework that **checks the attack surface** of your operating systems and applications. The test results are used to calculate **security scores** that pinpoint configuration and security hardening weaknesses.

Security & Compliance Inventory tests are scheduled to run at regular intervals to always provide a complete and accurate status of the security configuration of all devices in the fleet. Test results are reported to uberAgent's backend along with the other metrics and KPIs collected by uberAgent's endpoint agent. uberAgent ESA's Security Score dashboard intuitively visualizes the test scores, highlighting insecure device or application configurations.

uberAgent ESA comes with a comprehensive suite of ready-to-use SCI tests for many common attack vectors. Customizing and extending ESA's SCI tests are explicitly encouraged. By adding tests of their own, customers and partners can automate the verification of an organization's security policy or check the configuration of line-of-business applications.

Test Storage

uberAgent ESA Security & Compliance Inventory tests are part of uberAgent's configuration, which is maintained in the uberAgent Configuration GitHub repository.

Visualization

 $\label{lem:esase} ESA \, Security \, \& \, Compliance \, Inventory \, test \, results \, are \, visualized \, in \, the \, \textit{Security Score} \, dashboard, \, which \, is \, part \, of \, the \, uberAgent_ESA \, Splunk \, searchhead \, app.$

Test Configuration

September 12, 2025

uberAgent ESA's Security & Compliance Inventory tests are part of the configuration. This page documents the configuration syntax.

Example

Timer

In the following example, uberAgent® runs all Security & Compliance Inventory tests from the category Antivirus once every 24 hours:

SecurityInventoryTest

Each Security & Compliance Inventory test is defined in a stanza such as the following. Note the Category assignment, which corresponds to SecurityInventory.Antivirus from the Timer stanze above.

ScriptInterpreter

The method of execution is configured in ScriptInterpreter stanzas. PowerShell scripts are invoked as defined in the following example:

```
1 [ScriptInterpreter]
2 Name = PowerShell
3 Executable = C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe
4 Parameter = -ExecutionPolicy Bypass -file ###UA_SCRIPT###
```

Test Definition

There can be any number of [SecurityInventoryTest] stanzas, each defining one test script. Tests are processed in the order in which they are defined in the configuration. uberAgent ESA always processes all scripts for every timer run containing the metric SecurityInventory.CATEGORY where the timer stanza's CATEGORY matches the category from the SecurityInventoryTest stanza.

A [SecurityInventoryTest] stanza may contain the following settings.

ScriptId

• Setting name: ScriptId

• **Description:** a GUID that represents the script. Must be unique.

Valid values: a GUID Default: empty Required: yes

Category

• Setting name: Category

• **Description:** a category name for the test. Multiple tests can have the same category name (e.g., Antivirus).

• Valid values: Any string

Default: emptyRequired: no

Name

• Setting name: Name

• **Description:** a name for the test which is logged in the uberAgent log file in case of an error.

• Valid values: Any string

Default: emptyRequired: no

ScriptCommandline

Setting name: ScriptCommandline
Description: the full path to the script.
Valid values: any valid file system object

Default: emptyRequired: yes

Interpreter

Setting name: Interpreter

• **Description:** the interpreter that starts the script. See stanza [ScriptInterpreter]. If left empty, the ScriptCommandline is run "as is" without prepending the invocation of an interpreter.

• Valid values: any string

Default: emptyRequired: no

ScriptTimeoutMs

Setting name: ScriptTimeoutMs
Description: timeout in milliseconds.

• Valid values: any number

Default: 90000Required: no

OutputFormat

• Setting name: OutputFormat

• **Description:** defines the output format of the script.

Valid values: JSONDefault: JSONRequired: no

ScriptContext

• Setting name: ScriptContext

• **Description:** defines the context in which the script is started.

· Valid values:

- Session@AsSystem: runs the script once per timer run in the context of the local SYS-TEM user.
- UserSessionAsSystem: runs the script for each user logged in during the timer run in the context of the local SYSTEM user.
- UserSessionAsUser: runs the script for each user logged in during the timer run in the context of the user.

• Default: Session@AsSystem

• Required: no

IntegrityLevel

This setting is available on Windows only.

- Setting name: IntegrityLevel
- **Description:** defines the integrity level at which the script is started.

 Format: LEVEL [+Mitigation1] [-Mitigation2] [+Mitigation3] [...]

 See the sandbox documentation for details on the available mitigations.
- Valid values for LEVEL:
 - Low: integrity level is set to low.
 - Medium: integrity level is set to medium.
 - High: integrity level is set to high.

• Default: medium

• Required: no

Script Interpreter Definition

A [ScriptInterpreter] stanza may contain the following settings.

Name

Setting name: Name

• **Description:** a unique name for the interpreter. This name must be referred to in the Interpreter setting of the [SecurityInventoryTest] setting.

• Valid values: any string

Default: emptyRequired: yes

Executable

Setting name: Executable

• **Description:** the full path to the interpreter that executes the script.

• Valid values: full path to the script.

Default: emptyRequired: yes

Parameter

Setting name: Parameter

• **Description:** parameters for the interpreter. The script name must be specified here via the placeholder UA_SCRIPT (see below).

• Valid values: any string

Default: emptyRequired: yes

UA_SCRIPT Placeholder A script interpreter stanza specifies how to execute scripts from a given language. The script to be executed is specified via the placeholder ###UA_SCRIPT###, a variable that is replaced with the ScriptCommandline from the SecurityInventoryTest stanza before running a script.

Test Scripts

September 12, 2025

uberAgent ESA's Security & Compliance Inventory (SCI) test scripts can be authored in any interpreted or compiled programming language. Typically, an interpreted language such as PowerShell or Python is used. This page documents conventions and requirements for SCI test scripts.

Test Script Execution

Tests are scheduled by uberAgent's endpoint agent according to the test configuration.

Tests are run sandboxed according to the principle of least privilege. Please see the sandbox docs for details.

If a test is executed in user context, it is checked whether the user has read permissions. If not, the built-in group Users is added to the parent directory. If this is not desired, it can be disabled via the ConfigFlag DisableSetFilePermissionsOnExec.

Test Script Output

Multiple Tests per Script

A Security & Compliance Inventory test script may perform multiple independent tests per script invocation.

Console Output

uberAgent expects a test script's output on the console (stdout). The script must only print test output to the console. Any other console output must be suppressed.

Output Encoding Set the encoding to Unicode. When using PowerShell scripts, the following line should be specified at the beginning of each script:

```
[Console]::OutputEncoding = [System.Text.Encoding]::UTF8
```

Output Format

Format Specification The expected output format is configured in the OutputFormat setting of the [SecurityInventoryTest] stanza (docs).

JSON Format A test result that uses JSON output format looks like this:

```
1
      {
2
3
         "Name": "PowerShell v2 disabled",
4
         "Score": 2,
5
         "RiskScore": 0,
6
         "ResultData": "Yes",
7
         "ErrorCode": 0,
8
         "ErrorMessage": ""
9
       }
11
12
      {
13
         "Name": "PowerShell remoting allowed",
14
15
         "Score": 2,
```

Please note that the dashboard is designed to handle Security and Compliance Inventory test results as JSON objects only. Adding tests that do not use JSON output format may result in faulty dashboard panels or misleading information.

Modify Test Names and Descriptions

uberAgent ESA ships with an extensive set of pre-defined tests than can be executed through its Security and Compliance Inventory functionality. Each test is displayed with a human readable name and a short description. As customers may add their own tests, **test display names** and **descriptions** have to be added as well.

To modify existing or add new tests to this table, change the following input lookup file in \$SPLUNK_HOME/etc/apps/uberAgent_ESA/lookups/security_inventory_checknames.csv. Please make sure to distribute the changed input lookup file to all search heads.

The lookup file contains three columns.

- **SecurityInventoryName**: this field contains the test name that was used in the script. To save data volume, this name may be abbreviated. Example: *CMProtRoot*
- **SecurityInventoryDisplayName**: this field contains the display name of the test to improve readability. Example: *protected root certificates*
- **SecurityInventoryNameDescription**: this field contains a description of the test to be displayed in the data table after selecting a test in the SCI test analysis chart. Example: *Checks if root certificates can be installed by users.*

Output Fields

The following table describes the fields that may be part of a test script's output:

Field name	Format	Valid values	Description
Name	String	Any string	The name of the test. Must be quoted to avoid parsing errors.

Field name	Format	Valid values	Description
Score	Number	0-10	The resulting test score on a scale from 0 (very
			bad) to 10 (excellent).
RiskScore	Number	0-100	The severity of the test
			(how risky is the tested
			thing).
ResultData	String	Any string	Configuration
			information
			determined by the test.
			Should be quoted to
			avoid parsing errors.
ErrorCode	Number	Any number	Indicates success or
			failure. 0 = success.
ErrorMessage	String	Any string	Optional error
			message returned by
			the test. This message
			is logged to the agent
			log.

Script Sandbox

September 12, 2025

uberAgent ESA's Security & Compliance Inventory test scripts are run sandboxed according to the principle of least privilege. This page documents the sandbox security levels and all available mitigations. A script's sandbox is configured via the IntegrityLevel setting of the SecurityInventoryTest stanza in the test configuration.

Mitigations & UI Limits

The following tables list the mitigations and UI limits that are available to limit the capabilities of a script sandbox.

Please note that the three integrity levels are just convenient aliases for common sets of mitigations. As described on the test configuration page, any mitigation and limit can be explicitly enabled or disabled.

Mitigations

Mitigation		Integrity Level	Integrity Level	Integrity Level	
name	Description	low	medium	high	Supported OS
ControlFlowGuar fi nables		√	√	-	Windows 8.1
	Control Flow				and newer
	Guard for the				
	started				
	executable.				
DataExecutionP	rePrentiots code	\checkmark	\checkmark	-	Windows 8.0
	execution				and newer
	from code				
	inside a				
	memory page				
	marked as				
	non-				
	executable.				
DataExecutionF	o PC bild Ptrocedses	Fr⁄omATL	\checkmark	-	Windows 8.0
	execution				and newer
	from code				
	inside a				
	memory page				
	marked as				
	non-				
	executable				
	(active				
	template				
	library thunk				
	layer).				

Mitigation	Int	tegrity Level	Integrity Level	Integrity Level	
name	Description lov	W	medium	high	Supported OS
DisableVarious	sUr Ræwent enDllExten⁄si	onPoints	-	-	Windows 8.0
	some built-in				and newer
	third-party				
	extension				
	points from				
	being turned				
	on, which				
	prevents				
	legacy				
	extension				
	point DLLs				
	from being				
	loaded into				
	the process.				
DynamicCode	Mu AtβreSigns ed √		-	-	Windows 8.1
	must be either				and newer
	signed by				
	Microsoft, by				
	the Windows				
	Store, or by				
	the Windows				
	Hardware				
	Quality Labs				
	(WHQL).				
ForceRelocate	lm a⁄geis/adeqsuthe Relocát	cionSection	\checkmark	-	Windows 8.0
	"Address				and newer
	space layout				
	randomiza-				
	tion"				
	technique,				
	which loads				
	the address				
	space of key				
	data areas of				
	a process into				
	random				
	positions.				

Mitigation		Integrity Level	Integrity Level	Integrity Level	
name	Description	low	medium	high	Supported OS
HeapTerminateF	Production the	√	√	-	Windows 8.0
	heap to				and newer
	terminate if it				
	becomes				
	corrupt.				
AllowChildProce	s Set s=the	2	2	∞	Windows 8.1
	number of				and newer
	allowed child				
	processes.				
NonRemoteImag	g estseitheLtoyapde d	\checkmark	✓	-	Windows 10
	of executable				and newer
	images that				
	are allowed to				
	be mapped				
	into the				
	process.				
	When turned				
	on, images				
	cannot be				
	loaded from				
	some				
	locations,				
	such as				
	remote				
	devices or				
	files that have				
	a low				
	mandatory				
	integrity label.				
NonSystemFont	sBlocked	\checkmark	-	-	Windows 10
	loading of				and newer
	fonts outside				
	of the				
	standard				
	Windows				
	fonts				
	directory.				

Mitigation		ntegrity Level	Integrity Level	Integrity Level	
name	Description lo	DW	medium	high	Supported OS
PreferSystem	n32In 3:te&d:06 Applicatiø	nDirectory	\checkmark	-	Windows 10
	preferably				and newer
	loaded from				
	the				
	System32				
	directory				
	instead of the				
	application				
	directory.				
StrictHandle	Chec t∕s e process ✓		-	-	Windows 8.0
	will receive a				and newer
	fatal error if it				
	manipulates a				
	handle that is				
	not valid.				
StructuredEx	cept Poret/leantdithr© verw/r	riteProtection	-	-	Windows 8.0
	code from				and newer
	overwriting				
	the structured				
	exception				
	handler.				

UI Limits

UI limit name	Description	Integrity Level low	Integrity Level medium	Integrity Level high	Supported OS
UiLimitHandles	Prevents processes from using user handles owned by processes not associated with the same job.	✓	✓	-	Windows

		Integrity Level	Integrity Level	Integrity Level	
UI limit name	Description	low	medium	high	Supported OS
UiLimitReadCliր	obPorærvdents	✓	✓	-	Windows
	processes				
	from reading				
	data from the				
	clipboard				
UiLimitWriteCli	pbPomerkoents	\checkmark	\checkmark	-	Windows
	processes				
	from writing				
	data to the				
	clipboard.				
UiLimitSystemF	Pa Panervetiet rs	✓	\checkmark	-	Windows
	processes				
	from				
	changing				
	system				
	parameters by				
	using the				
	SystemParam	netersInfo			
	function.				
UiLimitDisplayS	Se ftriege nts	\checkmark	\checkmark	-	Windows
	processes				
	from calling				
	the				
	ChangeDispl	.aySettings			
	function.				
UiLimitGlobalA	to Pre vents	✓	✓	-	Windows
	processes				
	from				
	accessing				
	global atoms.				
	When this flag				
	is used, each				
	job has its				
	own atom				
	table.				

UI limit name	Description	Integrity Level low	Integrity Level medium	Integrity Level high	Supported OS
UiLimitDesktop	Prevents	√	√	-	Windows
	processes				
	from creating				
	desktops and				
	switching				
	desktops				
	using the				
	CreateDeskt	ор			
	and				
	SwitchDeskt	ор			
	functions.				
UiLimitExitWind	o Rvæ vents	✓	✓	-	Windows
	processes				
	from calling				
	the				
	ExitWindows				
	and				
	ExitWindows	Ex			
	functions.				

DNS Query Monitoring

September 12, 2025

uberAgent ESA monitors outgoing DNS queries and their responses. This includes all DNS queries that are processed by the operating system.

Functionality

The implementation and functionality of DNS query monitoring differ between operating systems.

Windows

uberAgent uses the local DNS machine's DNS resolver as the data source. uberAgent sees all DNS requests that are handled by the OS, including requests via encrypted DNS (DoT or DoH). uberAgent doesn't see requests that bypass the OS resolver, e.g., requests from tools such as nslookup.

uberAgent cannot differentiate between requests that go over the wire and requests that can be answered from the local DNS cache. Both types of requests are collected by uberAgent.

macOS

uberAgent monitors network traffic at the packet level. uberAgent sees any and all DNS requests, but it cannot process encrypted DNS (DoT or DoH). uberAgent only collects requests that go over the wire, it doesn't process requests that can be answered from the local DNS cache.

Configuration

uberAgent ESA DNS query monitoring is enabled or disabled through the timer metric DnsMonitoring . For Windows clients, this feature requires Windows 8.1 or newer versions of Windows since the data source for this event is not available in previous Windows versions, such as Windows 7. Enabling the metric on unsupported Windows versions has no effect. For macOS, all versions are supported.

Metadata

Sourcetype

DNS query monitoring events are sent with the sourcetype uberAgentESA: Process: DnsQuery (documentation). This feature may significantly increase the data volume and can be limited using event data filtering. uberAgent's configuration includes a comprehensive set of rules to exclude known and harmless DNS requests.

Threat Detection

DNS monitoring events are also available via uberAgent's Threat Detection engine. This allows the creation of rules to report specific DNS events (e.g., malicious events or threat detection).

Visualization

DNS query monitoring events are visualized in the *DNS Exfiltration and Tunneling* dashboard, which is part of the uberAgent_ESA Splunk searchhead app.

MITRE ATT&CK Integration

September 12, 2025

MITRE ATT&CK

The MITRE ATT&CK® framework is a knowledge base of adversary tactics and techniques based on real-world observations of cybersecurity threats. With the help of ATT&CK, different stakeholders (offense, defense, SOCs, third-party vendors, and so on) can speak the same language to describe attacks on enterprise IT and mobile devices. While there are other similar frameworks available, ATT&CK is the de-facto industry standard.

Integration With uberAgent® ESA

When an uberAgent ESA Threat Detection rule matches suspicious activity, uberAgent's endpoint agent sends an event to its configured SIEM backend. uberAgent annotates Threat Detection events with ATT&CK technique IDs.

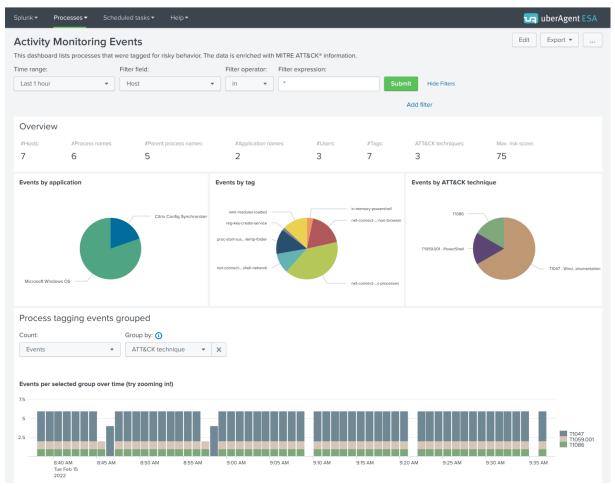
Annotations are part of the ESA Threat Detection rule specification. Implementation details can be found here. Below is a rule sample:

```
1 [ActivityMonitoringRule]
2 # Detects suspicious DNS queries known from Cobalt Strike beacons
3 RuleName = Cobalt Strike DNS Beaconing
4 EventType = Dns.Query
5 Tag = cobalt-strike-dns-beaconing
6 RiskScore = 100
7 Annotation = {
8  "mitre_attack": ["T1071", "T1071.004"] }
9
10 Query = (Dns.QueryRequest like r"aaa.stage.%" or Dns.QueryRequest like r"post.1%")
11 GenericProperty1 = Dns.QueryRequest
12 GenericProperty2 = Dns.QueryResponse
```

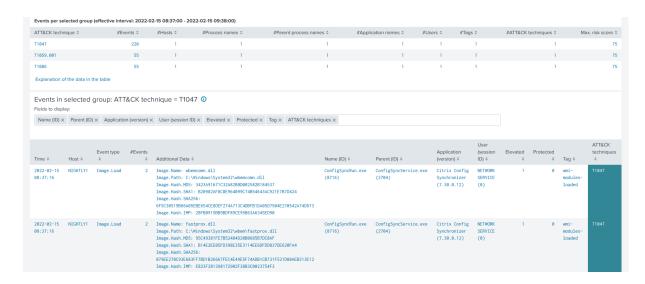
Visualization

The uberAgent ESA Splunk app processes the Threat Detection events with technique ID annotations and adds context like the technique's name, its description and detection, and the URL to the technique on the MITRE website.

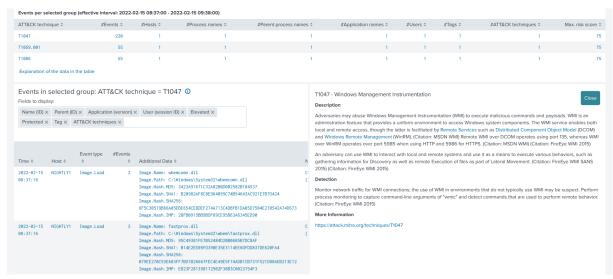
This processed information is visualized in the **Threat Detection Events** dashboard. In the screenshot below you can see the number of events by technique ID, and the distribution of events by ID over time.



The further you scroll down the more details you get. The first table in the screenshot below shows details for each technique. A click on a technique row lists all events where the technique was detected in the second table in the screenshot below.



Note that the rightmost column **ATT&CK techniques** is highlighted in blue. When you click on it you get detailed ATT&CK information on the technique ID in a pop-up.



Installation

The ATT&CK integration is enabled by default. You don't need to do anything except install the uber-Agent ESA Splunk app on your Splunk search heads. The installation is documented here.

Keeping ATT&CK Up-to-Date

Every uberAgent release includes the latest ATT&CK information. If you notice that MITRE made changes to their ATT&CK framework and want the updated data in Splunk, you have two options:

1. Wait for the next uberAgent version and update the ESA Splunk app

- 2. Update the CSV file for the ATT&CK Splunk lookup manually
 - a) The current CSV is always accessible in our GitHub repository. Download the file annotation_mitre_attack.csv from there.
 - b) Replace the file in \$SPLUNK_HOME/etc/apps/uberAgent_ESA/lookups
 - c) Restart Splunk
- 3. Context: in the year 2021, MITRE made five changes to the source

uberAgent ESA and Splunk Enterprise Security

Splunk Enterprise Security also has an ATT&CK integration and uberAgent integrates with ES, too. Below is a short summary of both integrations to avoid confusion.

uberAgent MITRE ATT&CK Data in uberAgent ESA Dashboards

The uberAgent ESA Splunk app visualizes the data collected by uberAgent's endpoint agents. The uberAgent ESA Splunk app is compatible with Splunk Enterprise and Cloud. It has an ATT&CK integration built-in that can be used without the need to purchase Splunk Enterprise Security.

Use it when:

- You don't have Splunk Enterprise Security
- You only need ATT&CK and no other cybersecurity framework

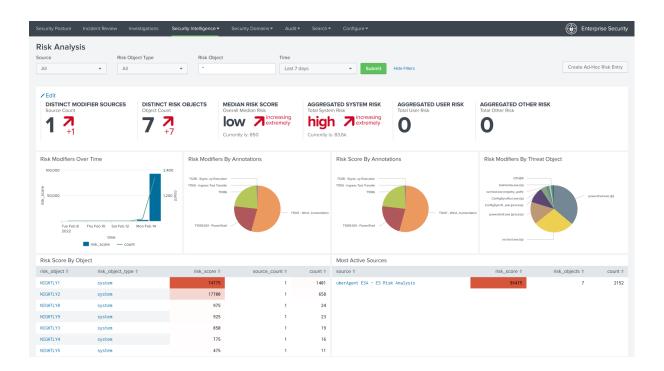
uberAgent MITRE ATT&CK Data in Splunk Enterprise Security

Splunk Enterprise Security is a paid premium app developed by Splunk that needs to be licensed on top of Splunk Enterprise or Cloud. It comes with support for multiple cybersecurity frameworks, ATT&CK is one of them. If you are an ES customer you may want to install the *uberAgent ESA ES companion* app to enjoy the benefits of uberAgent ESA data in Enterprise Security, enriched with data from cybersecurity frameworks (more information).

Use it when:

- You have Splunk Enterprise Security
- You need more cybersecurity frameworks than ATT&CK

Note: in this scenario, you can use both the uberAgent ESA app and Splunk's Enterprise Security dashboards.



Event Log Forwarding

September 12, 2025

uberAgent® can collect Windows system logs like Application, Security, System, etc. Events can be filtered based on their provider, event ID, and level (Information, Error, etc.). Additionally, more finegrained event-filtering is possible with the XPath-querying functionality.

Requirements

- Eventlog forwarding is supported on Windows
- uberAgent 7.3 or newer

Configuring Eventlog Forwarding

Eventlog forwarding is configured with a configuration file. By default, no logs are collected. Eventlog collection needs to be enabled by an administrator.

The [EventLog] Stanza

The stanza [EventLog] starts a new log configuration, followed by multiple settings.

Setting	Description	Required	Values
EventLog	The name of the event log to query.	Yes	Any valid log name, like System.
LevelName	The event's level. Specify multiple levels separated by commas.	Yes	Information, Warning,Error, Critical,Verbose
EventID	Limit the collection to specific event IDs. Specify multiple IDs separated by commas.	No	Any valid event IDs
EventFilterXPath			Any valid XPath filter.
Provider	Limit the collection to specific providers.	No	Any valid provider name.

Collection Frequency

Eventlogs can be queried on a configurable schedule, or on-demand.

Schedule To schedule the log collection, first create a new [EventLog] stanza.

```
1 [EventLog Name=TimerBased-System-Errors-Warnings]
2 EventLog = System
3 LevelName = Error, Warning
```

Second, create a new timer and reference the name the Eventlog stanza's name.

```
1 [Timer]
2 Name = System Eventlog collection
3 EventLog = TimerBased-System-Errors-Warnings
4 Interval = 60000
```

On-demand Create a new [EventLog] stanza without a corresponding timer. When uberAgent can't find the Eventlog stanza's name in any timer, it collects events as they occur.

```
1 [EventLog Name=OnDemand-Security-Events]
2 EventLog = Security
3 LevelName=Information
```

Collecting events as they occur can be resource intensive. Hence, collecting on a schedule is the preferred option.

Default Configuration

uberAgent does not collect any logs by default. Event log collection needs to be enabled by an administrator. However, the infrastructure is already prepared. uberAgent comes with the uberAgent-ESA-eventlog-windows.conf file, which holds a few examples that can be activated by uncommenting the lines.

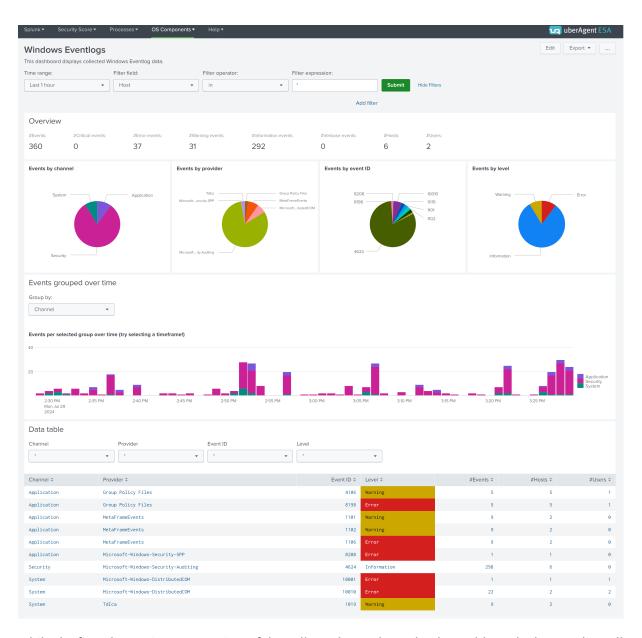
Metadata

Sourcetype

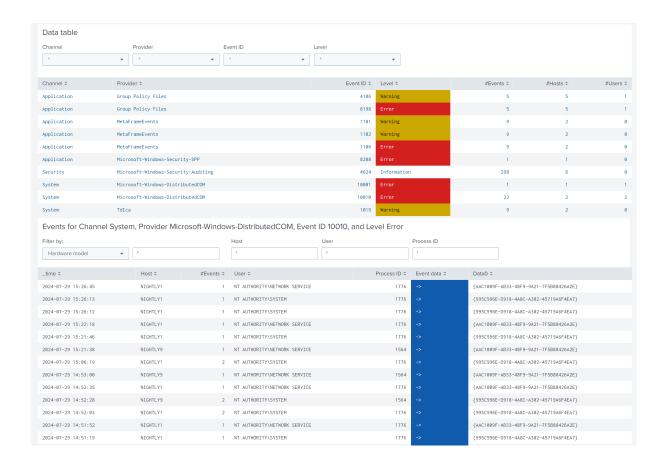
Windows Eventlog events are sent with the sourcetype uber Agent ESA: System: WinEvtLogForwarding (documentation).

Visualization

The collected Eventlogs are visualized on the **Windows Eventlogs** dashboard in the uberAgent ESA Splunk app.



While the first charts give an overview of the collected Eventlogs, the data table at the bottom lists all of them grouped by channel, provider, ID, and level. Click a row in the table and a new chart with all details opens below. You can use the provided filter panels to limit the output to specific hosts, users, or process IDs.



Process Tree Dashboard

September 12, 2025

Tracking Process Lifetime & Child Creation

Process GUID

uberAgent ESA assigns each process a GUID. Such a unique ID is necessary because the operating system's process IDs are reused. By leveraging process GUIDs, uberAgent can track processes throughout their lifetime, from the start (sourcetype uberAgent: Process: ProcessStartup) to the end (sourcetype uberAgentESA: Process: ProcessStop) as well as during the runtime (sourcetype uberAgent: Process: ProcessDetail).

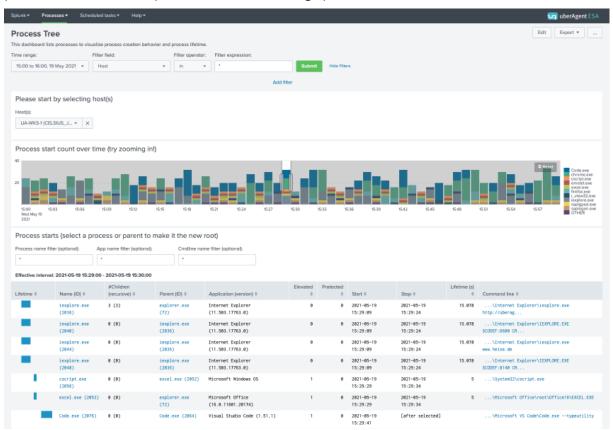
Process Parent

uberAgent ESA not only identifies unique process instances; it also keeps track of parent-child relationships. All process start and stop events include names and GUIDs of the parent process.

Process Tree

A process tree is an essential tool for understanding process creation behavior. uberAgent ESA comes with a powerful Process Tree dashboard that makes it easy to identify a process'descendants, listing important process properties such as the process **lifetime**, the **command line**, the **elevation** status, or the name and **version** of the application the process is a part of. Additionally, the number of child processes is calculated, both direct children as well as their children recursively.

By selecting any process in the tree, it becomes the new root, and the table updates to show its child processes. This makes it possible to browse through process hierarchies.



Scheduled Task Monitoring

September 12, 2025

uberAgent ESA monitors changes to Windows scheduled tasks. Whenever a task is created, updated, or deleted, uberAgent generates an event with all available details. This includes properties that are not displayed in the Windows Task Scheduler UI, such as COM actions or custom triggers.

Configuration

uberAgent ESA scheduled task monitoring is enabled or disabled through the on-demand metric ScheduledTaskMonitoring. In the default configuration, scheduled task monitoring is enabled.

Metadata

Sourcetype

ESA scheduled task monitoring events are assigned the sourcetypes:

- uberAgentESA:System:ScheduledTasks
- uberAgentESA:System:ScheduledTaskActions
- uberAgentESA:System:ScheduledTaskTriggers

Please see the metrics documentation for a description of the fields.

Visualization

ESA scheduled task monitoring events are visualized in the *Scheduled Tasks* dashboard which is part of the uberAgent_ESA Splunk searchhead app.

Splunk Enterprise Security Integration

September 12, 2025

Splunk Enterprise Security

Splunk Enterprise Security (ES) solves a wide range of security analytics and operations use cases including continuous security monitoring, advanced threat detection, compliance, incident investigation, forensics, and incident response. Splunk ES delivers an end-to-end view of orga-

nizations's ecurity postures with flexible investigations, unmatched performance, and the most flexible deployment options offered in the cloud, on-premises, or hybrid deployment models.

Source: Splunk

Integrating uberAgent® ESA

uberAgent ESA comes with native support for Splunk Enterprise Security. This article summarizes all related information in one place.

Installation

Detailed installation instructions can be found here. In short, you need to install the following uberAgent apps on your ES server:

- uberAgent_searchhead.tgz: contains uberAgent UXM CIM information
- uberAgent_ESA_searchhead.tgz: contains uberAgent ESA CIM information
- uberAgent_ESA_ES_companion.tgz: required for Splunk's risk-based alerting. Available on Splunkbase.

CIM Support

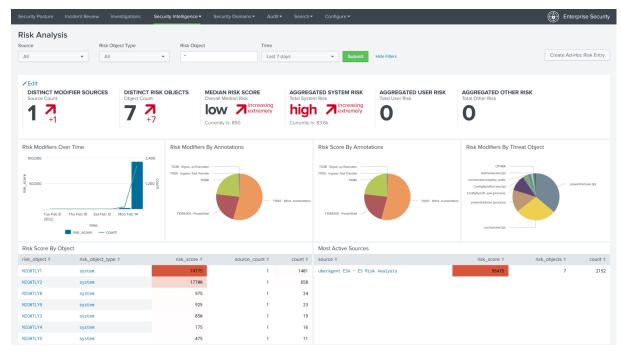
Splunk Enterprise Security works with data sources from many different vendors. This diverse data set needs to be normalized to allow users to search and interact with it in a standardized way. Splunk uses the CIM data model to achieve that.

While uberAgent had CIM support for a long time, we have extended the integration greatly with uber-Agent ESA. If you are used to working with Sysmon data in ES, you will notice no difference when switching to uberAgent. **uberAgent supports all CIM fields populated by popular Sysmon add-ons found in Splunkbase, and more!**



Risk-Based Alerting

Splunk introduced **risk-based alerting (RBA)** in ES to reduce alert volume and enhance security operations. uberAgent supports RBA through the **uberAgent ESA ES companion** app. See the installation section above for installation instructions. When all requirements are met, the Splunk Enterprise Security dashboard **Risk Analysis** is populated automatically with uberAgent data:



Security Frameworks RBA supports annotations with cyber security frameworks like MITRE ATT&CK®, CIS 20, NIST Controls, and more. uberAgent does, too, and comes with ATT&CK annotation out-of-the-box. You may add other cyber security frameworks anytime.

Annotations are part of the ESA Threat Detection rule specification. Implementation details can be found here. Below is a rule sample:

```
1 [ActivityMonitoringRule]
2 # Detects suspicious DNS queries known from Cobalt Strike beacons
3 RuleName = Cobalt Strike DNS Beaconing
4 EventType = Dns.Query
5 Tag = cobalt-strike-dns-beaconing
6 RiskScore = 100
7 Annotation = {
8  "mitre_attack": ["T1071", "T1071.004"] }
9
10 Query = (Dns.QueryRequest like r"aaa.stage.%" or Dns.QueryRequest like r"post.1%")
11 GenericProperty1 = Dns.QueryRequest
12 GenericProperty2 = Dns.QueryResponse
```

UXM Metrics

September 7, 2025

uberAgent UXM collects many different metrics, logically grouped into sourcetypes. All metrics are explained in detail in this chapter, including:

- · Name and description
- Supported platform
- Unit and example
- Related source type and where to find it in the dashboards
- Calculated fields and and their availability in Splunk's data model and/or "Search Processing Language" (SPL)
- The uberAgent template configuration files can be found at our Github uberAgent-config repository.

Application Metrics

September 7, 2025

Application Crashes & Hangs Metrics

September 12, 2025

Application Errors

For every application error uberAgent collects metrics like application name and version, process lifetime as well as the exception code.

Notes:

- Processes are auto-grouped into applications, i.e. the application name is determined automatically without requiring any configuration. Information on how this works are available here.
- Field: AppVersion uberAgent® has an internal filter to minimize data volume by suppressing version information for system processes and system services. As a result, the AppVersion field is typically empty for most system processes and services.
- macOS: The fields Module* are not available for ErrorTypeName Hang.

Details

- Source type: uberAgent: Application: Errors
- Used in dashboards: Application Errors, Single Machine Detail, Single Application Detail, Single User Detail
- Enabled through configuration setting: ApplicationErrors
- Related configuration settings: n/a
- Supported platform: all

				Measuremer	nt	
Field	Description	Data type	Unit	type	Example	Platform
ErrorType	Error type	Number		Snapshot	1	all
	code.					
	Possible					
	values: 1, 2.					
	Please take					
	a look at					
	the field					
	ErrorTypel	Name				
	, too.					
ProcName	Process name.	String		Snapshot	chrome.exe	all
ProcPath	Process	String		Snapshot	C:\Program	all
	path.				Files	
					(x86)\Google\	Chrome\Application
ProcVersion	Process	String		Snapshot	67.0.3396.99	all
	version.	-				
ProcTimestan	n ß uild	String		Snapshot	2017-06-02	Windows
	timestamp				11:43:43.000	
	of the				+0200	
	process					
	binary,					
	embedded					
	PE header					
	informa-					
	tion.					
ModuleName	_	String		Snapshot	msvcrt.dll	all
	module					
	name.					
ModulePath	Faulting	String		Snapshot	C:\Windows\s	sy at em32\msvcrt.dll
	module					
	path.					
ModuleVersio	•	String		Snapshot	7.0.9600.1741	.5all
	module					
	version.					

				Measureme	nt	
Field	Description	Data type	Unit	type	Example	Platform
ModuleTime	staBnopid	String		Snapshot	2014-10-29	Windows
	timestamp				04:04:30.000	
	of the				+0200	
	faulting					
	module,					
	embedded					
	PE header					
	informa-					
	tion.					
ProcID	Process ID.	Number		Snapshot	456	all
ProcLifetime	eM ₽ rocess	Number	ms	Sum	82744165	all
	lifetime.					
ExceptionCodeException		String		Snapshot	0xc0000005	all
	code.					
FaultOffset	An address	String		Snapshot	0x0000b5f0	all
	offset					
	relative to					
	the base					
	address of					
	the crashed					
	image.					
AppPackage		String		Snapshot	Microsoft.Xbc	ox /0/amde 0xallableUI_100
	UWP app					
	full name.					
	More infor-					
A D	mation.	Chaire -		Consultat		MC - d
AppPackage		String		Snapshot	xbox	Windows
	UWP app					
	relative ID.					
	More infor-					
	mation.					

				Measuremer	nt	
Field	Description	Data type	Unit	type	Example	Platform
Appld	Associated application ID. Used by uberAgent to lookup application names and populate field AppName.	String		Snapshot	GglChrm	all
ProcUser	Process user.	String		Snapshot	Domain\Joh	n Dadle
SessionGUID	Unique identifier that is generated by uberAgent when the session is created. Valid for this session only.	String		Snapshot	00000002- f295-9109- e7c7- c964011dd40	all
ProcGUID	Unique identifier that is generated by uberAgent when the process is started.	String		Snapshot	00000000- 0599-6955- eb63- a00bb127d40	all D1
AppVersion	Application version.	String		Snapshot	67.0.3396.99	all

				Measureme	nt	
Field	Description	Data type	Unit	type	Example	Platform
HangType	Hang type.	String		Snapshot	Cross-	Windows
	Requires				process	
	Windows 10					
	1903.					
	Possible					
	values:					
	Cross-					
	process,					
	Cross-					
	thread,					
	Quiesce,					
	Тор					
	level					
	window					
	is idle,					
	Unknown.					
ProcImageU		String		Snapshot	D61D3713-	macOS
	identifier of				69F9-32C3-	
	the binary				B001-	
	image that				E509C0A8EE	0A
	was					
	executed.					
ModuleImag		String		Snapshot	D61D3713-	macOS
	identifier of				69F9-32C3-	
	the binary				B001-	
	image in				E509C0A8EE	0A
	which the					
	crash					
	occurred.					

List of Calculated Fields

				Measurement Where		
Field	Description	Data type	Unit	type	available	Example
ErrorTypeNa	name of the ErrorType field. Possible values: Crash,	String		Snapshot	Splunk data model, Splunk SPL	Hang
User	Hang. User name.	String		Snapshot	Splunk data	Domain\JohnDoe
		6			model	
AppName	Associated	String		Snapshot	Splunk data	Google
	application				model,	Chrome
	name.				Splunk SPL	

Application & Process Performance Metrics

December 11, 2025

Process Detail

uberAgent collects rich metrics per process & per application. This includes the user and domain, CPU & RAM usage as well as network latency & throughput, to name just a few.

Notes:

- Processes are auto-grouped into applications, i.e., the application name is determined automatically. Information on how automatic application identification works is available here.
- Field: AppVersion uberAgent® has an internal filter to minimize data volume by suppressing version information for system processes and system services. As a result, the AppVersion field is typically empty for most system processes and services.

Details

• Source type: uberAgent:Process:ProcessDetail

- Used in dashboards: Process Performance, Application Performance, Machine Performance, Application Usage, Process GPU, Single Machine Detail, Single Application Detail, Single User Detail, Analyze data over time
- Enabled through configuration setting: ProcessDetailTop5 or ProcessDetailFull
- Related configuration settings: [ProcessToApplicationMapping], [ApplicationMappingIgnor], [ProcessDetail_SendCommandline], [ProcessStartupSettings]

				Measureme	nt	
Field	Description	Data type	Unit	type	Platform	Example
ProcName	Process name.	String		Snapshot	all	chrome.exe
ProcCPUTin	neMerocess CPU usage (absolute usage in millisec- onds).	Number	ms	Sum	all	5000
ProcCPUPer	celerrocess CPU usage (relative usage in percent).	Number	%	Average	all	12
ProcIOPSRe	read operations per second.	Number		Average	Win	200
ProcIOPSWr	write operations per second.	Number		Average	Win	200
ProcIORead	Co Pno cess I/O read operation count.	Number		Count	Win	100

				Measureme	nt	
Field	Description	Data type	Unit	type	Platform	Example
ProcIOWrite(Co Brd cess I/O write	Number		Count	Win	100
	operation					
ProcIOReadN	count. MBProcess I/O read data	Number	МВ	Sum	all	150
D 1014 ': 1	volume.				11	450
ProciOWritel	MBProcess I/O write data volume.	Number	MB	Sum	all	150
ProcIOLaten		Number	ms	Average	Win	300
ProcIOLaten	operations.	Number	ms	Average	Win	300
	write operations.					
ProcWorking	S&\text{MB}ess RAM usage (working set).	Number	MB	Snapshot	all	100
ProcNetKBP:	S Process network traffic data volume per	Number	КВ	Sum	all	500
ProcUser	second. Process user.	String		Snapshot	all	Domain\JohnDo
ProcGpuCon	npB toPess ent GPU compute usage	Number	%	Average	Win	20
	(relative usage in percent).					

				Measuremen	t	
Field	Description	Data type	Unit	type	Platform	Example
ProcGpuMem	GPU	Number	МВ	Average	Win	150
	memory usage.					
Appld	Associated application ID. Used by uberAgent to lookup application names and populate field AppName.	String		Snapshot	all	GglChrm
AppVersion	Associated application version.	String		Snapshot	all	67.0.3396.99
ProcID	Process ID generated by the OS. Process IDs are reused and cannot be used to uniquely identify a process. Use ProcGUID for that purpose instead.	Number		Snapshot	all	456
ProcCmdline	The process' command line.	String		Snapshot	all	C:\Program Files (x86)\Google\Chrome\A –url http://citrix.com

				Measureme	nt	
Field	Description	Data type	Unit	type	Platform	Example
ProcGUID	Unique	String		Snapshot	all	0000000-
	identifier					ebe5-469c-
	for a					63ae-
	process					f5a1de28d40
	instance					
	that is					
	generated					
	by					
	uberAgent.					
ProcGpuEn	gin ēMestUs fed	Number		Snapshot	Win	1
	the most					
	used GPU					
	engine					
	(requires at					
	least					
	Windows 10					
	1709).					
ProcGpuEng	gin eTMestidplad ,Di	isp StryiN game		Snapshot	Win	3D
	name of the					
	most used					
	GPU engine					
	(requires at					
	least					
	Windows 10					
	1709).					

				Measureme	nt	
Field	Description	Data type	Unit	type	Platform	Example
SessionID	Session ID	Number		Snapshot	all	1
	generated					
	by the OS.					
	Session IDs					
	are reused					
	and cannot					
	be used to					
	uniquely					
	identify a					
	session.					
	Use					
	SessionGU	ID				
	for that					
	purpose					
	instead.					

Notes

- The following fields are empty unless EnableExtendedInfo is set to true: ProcGUID.
- The following field is empty unless EnableExtendedInfo and [ProcessDetail_SendCommandlin] are configured: ProcCmdline.

List of Calculated Fields

				Measuren	nent Where	
Field	Description	Data type	Unit	type	available	Example
ProcCPUTime	Process	Number	S	Sum	Splunk data	5
	CPU usage				model	
	(absolute					
	usage in					
	seconds).					
ProclOCount	ProcIORea	dStringt		Sum	Splunk data	200
	+				model	
	ProcIOWri	teCount				

				Measureme	nt Where	
Field	Description	Data type	Unit	type	available	Example
ProcIOPS	ProcIOPSR	e a ldimber		Sum	Splunk data	400
	+				model	
	ProcIOPSW	rite				
	•					
ProcIOMB	ProcIORea	dMBmber	MB	Sum	Splunk data	300
	+				model	
	ProcIOWri	teMB				
ProclOMBPS	ProcIOMB	Number	MB	Sum	Splunk data	600
	/				model	
	ProcIOCou	nt				
	Χ					
	ProcIOPS					
	•					
ProcIOLatenc	:yMsocI0Lat	e Nambe rd Ms	ms	Sum	Splunk data	600
	+				model	
	ProcIOLat	encyWriteM	s			
	•					
ProclODuration	onReadMSLat	e Nayrībe r d M s	ms	Sum	Splunk data	30000
	Х				model	
	ProcIOCou	ntRead				
ProclODuration	on Wite MSLat	e Nambe krit	e ms	Sum	Splunk data	30000
	Χ				model	
	ProcIOCou	ntWrite				
ProclODuration	omMscIODur	a Niumber adM	S ms	Sum	Splunk data	60000
	+			-	model	
	ProcIODur	ationWrite	MS			
User	Alias for	String		Snapshot	Splunk data	Domain\JohnDo
JJC1	ProcUser	Julia		Shapshot	model	20mam (30mi)
					model	
	•					

				Measureme	Measurement Where		
Field	Description	Data type	Unit	type	available	Example	
AppName	Associated	String		Snapshot	Splunk data	Google	
	application				model,	Chrome	
	name.				Splunk SPL		
time	Alias for	Number		Snapshot	Splunk data	2018-07-	
	_time.				model	31T18:34:32.451+02:0	

Process Statistics

uberAgent collects rich metrics per process. This includes the handle count, page faults, and priority, to name just a few.

Notes:

• Processes are auto-grouped into applications, i.e., the application name is determined automatically. Information on how automatic application identification works is available here.

Details

- Source type: uberAgent:Process:ProcessStatistics
- Used in dashboards: *Process Performance*, *Application Performance*, *Single Application Detail*, , *Analyze data over time*
- Enabled through configuration setting: ProcessStatistics
- Related configuration settings:

				Measuremei		
Field	Description	Data type	Unit	type	Platform	Example
ProcName	Process	String		Snapshot	all	chrome.exe
	name.					

				Measureme	Measurement			
Field	Description	Data type	Unit	type	Platform	Example		
ProcID	Process ID generated by the OS. Process IDs are reused and cannot be used to uniquely identify a process. Use ProcGUID for that purpose instead.	Number		Snapshot	all	456		
ProcGUID	Unique identifier for a process instance that is generated by uberAgent.	String		Snapshot	all	00000000- ebe5-469c- 63ae- f5a1de28d40		
ProcUser	Process user.	String		Snapshot	all	Domain\Joh		
Appld	Associated application ID. Used by uberAgent to lookup application names and populate field AppName.	String		Snapshot	all	GglChrm		

			Measurement			
Field	Description	Data type Unit	type	Platform	Example	
ProcHandleC	o O mt	Number	Snapshot	all	810	
	Windows:					
	Handle					
	count. On					
	macOS:					
	Number of					
	open file					
	descriptors.					
ProcThreadC	ou Pmo cess	Number	Snapshot	all	20	
	thread					
	count.					
ProcPriority	Process	Number	Snapshot	all	4	
	priority.					
	Valid values					
	on					
	Windows:					
	0, 1, 2, 3, 4,					
	5 or 6. The					
	numerical					
	priority is					
	used by					
	uberAgent					
	to look up					
	and					
	populate					
	the field					
		ityDisplayName				
	. Valid					
	values on					
	macOS:					
	0-127 the					
	higher the					
	number,					
	the higher					
	the current					
	process					
	priority is.					

				Measureme		
Field	Description	Data type	Unit	type	Platform	Example
ProcPriva	teMBProcess	Number	MB	Snapshot	Win	512
	allocated					
	private					
	memory.					
ProcVirtua	alSizeMn & cess	Number	MB	Snapshot	Win	128
	allocated					
	virtual					
	memory.					
ProcPage	Fault sPr6 cess	Number	S	Average	all	10
	page faults					
	per second.					
ProcPage	FileM B rocess	Number	MB	Snapshot	Win	256
	page file					
	usage.					
ProcInput	:Dela yMaxxim sm	Number	ms	Max	all	20
	input delay					
	per timer					
	interval and					
	process.					
ProcInput	:Dela %SunnoM s	Number	ms	Sum	all	500
	input delay 					
	per timer					
	interval and					
Dua alii ii i	process.	Ni		Carret	-11	50
Procinput	:Dela ∲©enht ount	Number		Count	all	50
	per timer interval and					
	process.					

List of Calculated Fields

				Measureme	nt Where	
Field	Description	Data type	Unit	type	available	Example
ProcPrior	ityDis Prlagets me	String		Snapshot	Splunk data	Above
	priority				model,	normal
	display				Splunk SPL	
	name (see					
	also					
	ProcPrior	ity				
). Valid					
	values					
	(Windows):					
	Above					
	normal,					
	Below					
	normal,					
	High,					
	Idle,					
	Normal,					
	Realtime					
	and					
	Unknown.					

Application Inventory & Usage Metrics

September 12, 2025

Application Inventory

uberAgent collects application inventory information like name, publisher, version, and install date.

Notes:

- Processes are auto-grouped into applications, i.e. the application name is determined automatically without requiring any configuration. Information on how this works are available here.
- Field: AppVersion uberAgent® has an internal filter to minimize data volume by suppressing version information for system processes and system services. As a result, the AppVersion field is typically empty for most system processes and services.

Details

- Source type: uberAgent: Application: ApplicationInventory
- Used in dashboards: *Application Inventory*, *Single Application Inventory*, *Single Machine Inventory*
- Enabled through configuration setting: ApplicationInventory
- Related configuration settings: *n/a*

				Measureme	nt	
Field	Description	Data type	Unit	type	Platform	Example
DisplayName	Application	String		Snapshot	all	Google
	name					Chrome
DisplayVersio	nApplication version	String		Snapshot	all	67.0.3396.99
Publisher	Application publisher	String		Snapshot	all	Google
InstallDate	Application installation date	String		Snapshot	all	2018-03-19
Language	Application language	String		Snapshot	Win	en-US
IsMsiPackage	Indicates if application was installed through a MSI	String		Snapshot	Win	1
IsMachineInst	all dicates if application is installed for all users	String		Snapshot	all	1
InstallLocatio	nApplication installation location	String		Snapshot	all	C:\Program Files (x86)\Google

Application Usage

DEPRECATED: this sourcetype is deprecated and will be removed in a future release. uberAgent's dashboards use the ProcessDetail sourcetype instead.

uberAgent collects application usage information like name (even for App-V, Java, and UWP apps), version, and number of concurrent users.

Details

- Source type: uberAgent:Application:ApplicationUsage
- Used in dashboards: Application Usage
- Enabled through configuration setting: ApplicationUsage
- Related configuration settings: n/a

List of Fields in the Raw Agent Data

				Measureme		
Field	Description	Data type	Unit	type	Platform	Example
AppName	Application name	String		Snapshot	all	Google Chrome
UserName	User name	String		Snapshot	all	Domain\JohnDoe
AppVersion	Application version	String		Snapshot	all	67.0.3396.99
RemotingCli	en R\damot ing client name	String		Snapshot	Win	ThinClient1

Application Name to ID Mapping Metrics

September 12, 2025

Application Name to ID Mapping

uberAgent maps application names to IDs to save data volume sent over the network.

Note: processes are auto-grouped into applications, i.e. the application name is determined automatically without requiring any configuration. Information on how this works are available here.

Details

• Source type: uberAgent:Application:AppNameIdMapping

• Used in dashboards: *n/a*

• Enabled through configuration setting: AppNameIdMapping

• Related configuration settings: n/a

• Supported platform: all

List of Fields in the Raw Agent Data

				Measurement	
Field	Description	Data type	Unit	type	Example
AppName	Application name.	String		Snapshot	Google Chrome
Appld	Associated application ID. Used by uberAgent to lookup application names and populate field AppName.	Number		Snapshot	GlgChrm

Application & Process Startup Metrics

December 11, 2025

Process Startup

For each application or process that is being launched, uberAgent collects metrics like startup performance (duration, IOPS), as well as process properties (e.g., elevation status). If the configuration setting <code>EnableExtendedInfo</code> is enabled, uberAgent also collects metrics like the full path to the process executable in the file system as well the full command line the process was launched with.

Notes:

- As with all other metrics, process startup duration is recorded automatically without requiring any configuration. uberAgent optionally only shows new processes never seen before in the Splunk dashboards.
- Processes are auto-grouped into applications, i.e., the application name is determined automatically. Information on how automatic application identification works is available here.
- A fork or exec system call can trigger process startup events on macOS. To distinguish between both, see the StartupEventSource field.
- Field: AppVersion uberAgent® has an internal filter to minimize data volume by suppressing version information for system processes and system services. As a result, the AppVersion field is typically empty for most system processes and services.

Details

- Source type: uberAgent:Process:ProcessStartup
- Used in dashboards: Application Startup, Process Startup, Single Application Detail, Analyze data over time
- Enabled through configuration setting: ProcessStartup
- Related configuration settings: [ProcessStartupSettings], [ProcessStartupDurationWaitI]

				Measuremer	nt	
Field	Description	Data type	Unit	type	Platform	Example
ProcName	Process name.	String		Snapshot	all	chrome.exe
ProcUser	Process user.	String		Snapshot	all	Domain\JohnDoe
StartupTime	Mstartup time duration (how long it took the process to initialize).	Number	ms	Sum	Win	300

				Measureme	nt	
Field	Description	Data type	Unit	type	Platform	Example
StartupIOPS	I/O operations per second generated during the process' startup phase (see StartupTi	Number		Count	Win	150
Appld	Associated application ID. Used by uberAgent to look up the application name and populate the field AppName.	String		Snapshot	all	GglChrm
ProcID	Process ID generated by the OS. Process IDs are reused and cannot be used to uniquely identify a process. Use ProcGUID for that purpose instead.	Number		Snapshot	all	456

				Measureme	nt	
Field	Description	Data type	Unit	type	Platform	Example
ProcParentID	Parent	Number		Snapshot	all	789
	process ID					
	(also see					
	ProcID).					
SessionID	Session ID	Number		Snapshot	all	3
	generated					
	by the OS.					
	Session IDs					
	are reused					
	and cannot					
	be used to					
	uniquely					
	identify a					
	session.					
	Use					
	SessionGU	ID				
	for that					
	purpose					
	instead.					
	macOS: for					
	consistency					
	with					
	Windows all					
	non-user					
	sessions					
	are					
	assigned to					
	a fictitious					
	system					
	session 0.					

				Measureme	nt	
Field	Description	Data type	Unit	type	Platform	Example
ProcGUID	Unique identifier for a process instance that is generated by uberAgent.	String		Snapshot	all	00000000- ebe5-469c- 63ae- f5a1de28d401
SessionGUID	Unique identifier for a session that is generated by uberAgent.	String		Snapshot	Win	00000002- f295-9109- e7c7- c964011dd401
ProcParentNa		String		Snapshot	all	powershell.exe
ProcPath	Full path to the process executable in the file system.	String		Snapshot	all	C:\Windows\System32\
ProcCmdline	-	String		Snapshot	all	C:\Program Files (x86)\Google\Chrome\/ –url http://citrix.com
StartupEventS	Struction test if the startup event was generated by a fork (1) or exec (2) call.	String		Snapshot	macOS	1

				Measureme		
Field	Description	Data type	Unit	type	Platform	Example
IsElevated	Indicates if the process is elevated (has admin rights).	String		Snapshot	all	1
AppVersion	Associated application version.	String		Snapshot	all	67.0.3396.99
ProcParentG	UIDnique identifier of the parent process (the parent' s ProcGUID).	String		Snapshot	all	00000000- ebe5-469c- 54ae- f5a1de28d4
IsProtected) or protected light	String cedTypeProt	cected cectedLight	Snapshot	Win	1

				Measureme	nt	
Field	Description	Data type	Unit	type	Platform	Example
HashMD5	MD5 hash of the process executable (requires ESA). Configurable via settings	String		Snapshot	Win	7FFE122B109F1B586DE
	EnableCal	culateHash				
	and					
	HashAlgor	ithm				
	•					
HashSHA1	SHA1 hash of the process executable (requires ESA). Configurable via settings EnableCal and HashAlgor	String culateHash ithm		Snapshot	Win	26DBC241A37881072689
HashSHA256	hash of the process executable (requires ESA). Configurable via settings	String culateHash ithm		Snapshot	Win	95F0FBBAEF2899923859

				Measureme	Measurement		
Field	Description	Data type	Unit	type	Platform	Example	
HashIMP	Import- table hash of the	String		Snapshot	Win	188392D5FBCC485811B	
	process executable						
	(requires						
	ESA). Con-						
	figurable						
	via settings						
	_	culateHash	า				
	and						
	HashAlgor ⁻	ithm					
	•						
SignatureSta	tu s uthenticode	String		Snapshot	Win	1	
	signature						
	status. Can						
	be 0, 1, 2,						
	3, 4, 5, 6 or						
	7. See also	- •					
	_	StatusDisp	olayName				
	(requires						
: 51 JD. 0	ESA).			a .la	- 11	-	
IsSignedByO		String		Snapshot	All	1	
	whether the						
	Authenti-						
	code signer is the OS						
	manufac-						
	turer (e.g.,						
	Microsoft).						
	Requires						
	ESA.						
SignerName		• String		Snapshot	Win	Microsoft	
G-16	signer	J		•		Windows	
	name						
	(requires						
	ESA).						

				Measuremei	nt	
Field	Description	Data type	Unit	type	Platform	Example
CdHash	Hash of the code directory of a signed executable (requires ESA). Configurable via setting EnableCdH	String		Snapshot	macOS	24e4b80198b220e4a0e

Notes

- The following fields are empty unless EnableExtendedInfo is set to true: ProcID , ProcParentID, SessionID, ProcGUID, SessionGUID, ProcParentName, ProcPath, ProcCmdline, ProcParentGUID.
- The maximum supported timer Interval for the ProcessStartup metric is 300000 (5 minutes).

List of Calculated Fields

				Measuremen	t Where	
Field	Description	Data type	Unit	type	available	Example
User	Alias for ProcUser	String		Snapshot	Splunk data model	Domain\JohnDoe
StartupTimeS	Startup time duration.	Number	S	Sum	Splunk data model	0.3
StartupIOCou	nstartupIO	Number		Sum	Splunk data model	45
	StartupTin/1000.	meMs				

e: 1.1	5	5		Measuremer		
Field	Description	Data type	Unit	type	available	Example
AppName	Associated	String		Snapshot	Splunk data	Google
	application				model,	Chrome
	name.				Splunk SPL	
SignatureStatuB Dissibbey NameString				Snapshot	Splunk data	Ok
	values:				model	
	Unknown,					
	Ok,					
	Revoked,					
	Expired,					
	InvalidHa	sh				
	,					
	Untrusted	Root				
	,					
	TrustedRo	otNotInCA				
	and					
	Error.					

Application UI Unresponsiveness Metrics

September 12, 2025

UI Unresponsiveness

Whenever an application's user interface is unresponsive for more than a few hundred milliseconds uberAgent collects information like the application name (even for App-V, Java, and UWP apps), application version and the unresponsiveness duration.

Notes:

- Processes are auto-grouped into applications, i.e. the application name is determined automatically without requiring any configuration. Information on how this works are available here.
- Field: AppVersion uberAgent® has an internal filter to minimize data volume by suppressing version information for system processes and system services. As a result, the AppVersion field is typically empty for most system processes and services.

Details

- Source type: uberAgent:Application:UIDelay
- Used in dashboards: Application UI Unresponsiveness, Process UI Unresponsiveness,__Single Machine Detail, Single Application Detail, Single User Detail
- Enabled through configuration setting: ApplicationUIDelay
- Related configuration settings: n/a
- Supported platform: Windows

				Measuremen	t
Field	Description	Data type	Unit	type	Example
Appld	Associated application ID. Used by uberAgent to lookup application names and populate field AppName.	String		Snapshot	GglChrm
AppVersion	Application version.	String		Snapshot	67.0.3396.99
ProcessName	Process name.	String		Snapshot	chrome.exe
ProcessId	Process ID.	Number		Snapshot	456
UIDelayMs	UI delay/unre- sponsiveness.	Number	ms	Sum	5000
User	User name.	String		Snapshot	Domain\JohnDo

Field	Description	Data type	Unit	Measurement type	t Example
SessionGUID	Unique identifier that is generated by uberAgent when the session is created. Valid for this session only.	String		Snapshot	0000002- f295-9109- e7c7- c964011dd401
HasFocus	Indicates if the application is in the foreground (is being used actively). Possible values: 0, 1.	String		Snapshot	1

				Measureme	nt Where	
Field	Description	Data type	Unit	type	available	Example
AppName	Associated application name.	String		Snapshot	Splunk data model, Splunk SPL	Google Chrome
UIDelayS	UI delay/un- responsive- ness.	Number	S	Sum	Splunk data model	5

				Measureme	nt Where	
Field	Description	Data type	Unit	type	available	Example
HasFocusNu	ım be dicates if	Number		Snapshot	Splunk data	1
	the				model	
	application					
	is in the					
	foreground					
	(is being					
	used					
	actively).					
	Possible					
	values: 0,					
	1.					
ProcName	Process	String		Snapshot	Splunk data	chrome.e
	name.				model	

Software Update Metrics

September 10, 2025

Software Update

uberAgent collects the name and install date per update.

Details

- Source type: uberAgent:Application:SoftwareUpdateInventory
- Used in dashboards: Update inventory, Single Machine Detail, Single Update Detail
- Enabled through configuration setting: SoftwareUpdateInventory
- Related configuration settings: n/a
- Supported platform: Windows

				Measurement	
Field	Description	Data type	Unit	type	Example
Guid	GUID.	String		Snapshot	AC76BA86- 7AD7-0000- 2550- AC120B4E4800
DisplayName	Update name.	String		Snapshot	KB2565063
ProductName	Product name.	String		Snapshot	Microsoft Visual C++ 2010 x86 Redistributable - 10.0.40219
State	Update state. Possible values: applied, superseded ,obsolete.	String		Snapshot	applied
InstallDate	Installation date.	String		Snapshot	2018-04-13

Browser Metrics

September 7, 2025

Google Chrome Metrics

September 10, 2025

Google Chrome

uberAgent collects performance data per Chrome (Edge, Citrix Enterprise Browser) process type like Browser (main process) or GPU (graphics acceleration).

Details

- Source type: uberAgent:Application:BrowserPerformanceChrome
- Used in dashboards: Browser Performance: Chrome, Browser Performance: Edge, Browser Performance: CEB, Analyse data over time
- Enabled through configuration setting: BrowserPerformanceChrome,BrowserPerformanceEdge ,BrowserPerformanceCEB
- Related configuration settings: *n/a*
- Supported platform: Windows

Field	Description	Data type	Unit	Example
ProcUser	User who ran the process.	String		Domain\JohnDoe
ProcType	Process type. Possible values: Browser, Extension, Flash, GPU, Java, Tab.	String		Tab
CPUTimeMs	Consumed CPU time.	Number	ms	11859
CPUPercent	Consumed CPU performance.	Number		5.05
IOPS	I/O operations per second.	Number		2000
IOCount	Count of I/O operations.	Number		500
IOMB	Amount of data I/O operation volume.	Number	МВ	200
IOLatencyMs	I/O operation duration divided by count of I/O operations.	Number	ms	1.20
WorkingSetMB	Consumed RAM.	Number	MB	68.08

Field	Description	Data type	Unit	Example
NetKBPS	Generated	Number	КВ	19.06
	network traffic.			

					Where
Field	Description	Data type	Unit	Example	available
User	User who ran the process.	String		Domain\Joh	nDo&plunk data model
CPUTimeS	Consumed CPU time.	Number	S	11.859	Splunk data model
IOMBPS	Amount of data I/O operation volume per second.	Number	MB	2	Splunk data model
IODurationMs	I/O operation duration.	Number	ms	600	Splunk data model

Internet Explorer Metrics

December 11, 2025

Internet Explorer

Contains metrics per website (URL) like CPU and RAM usage.

Details

- Source type: uberAgent:Application:BrowserPerformanceIE
- Used in dashboards: Browser Performance: Internet Explorer, Analyze data over time
- Enabled through configuration setting: BrowserPerformanceIE
- Related configuration settings: n/a
- Supported platform: Windows

List of Fields in the Raw Agent Data

Field	Description	Data type	Unit	Example
ProcID	Process ID.	Number		456
ProcType	Process type. Possible values: frame, undefined, worker.	String		frame
URL	URL.	String		https://www.citrix.co
CPUTimeMs	Consumed CPU time.	Number	ms	11859
CPUPercent	Consumed CPU performance.	Number	%	5.05
IOPS	I/O operations per second.	Number		2000
IOCount	Count of I/O operations.	Number		500
IOMB	Amount of data I/O operation volume.	Number	МВ	200
IOLatencyMs	I/O operation duration divided by count of I/O operations.	Number	ms	1.20
WorkingSetMB	Consumed RAM.	Number	MB	68.08
NetKBPS	Generated network traffic.	Number	КВ	19.06

Field	Description	Data type	Unit	Example	Where available
URLHost	URL host address.	String		www.citrix.com	Splunk data model
CPUTimeS	Consumed CPU time.	Number	S	11.859	Splunk data model

Field	Description	Data type	Unit	Example	Where available
IOMBPS	Amount of data I/O operation volume per second.	Number	МВ	2	Splunk data model
IODurationMs	I/O operation duration.	Number	ms	600	Splunk data model

Web App Metrics

December 11, 2025

Browser Web Requests

uberAgent determines UX metrics for SaaS and web apps like page load and XMLHttpRequest duration for every web request made.

Details

- Source type: uberAgent:Application:BrowserWebRequests2
- Used in dashboards: Browser Web App Performance
- Enabled through configuration setting: BrowserPerformanceChrome, BrowserPerformanceEdge , BrowserPerformanceFirefox, BrowserPerformanceIE, BrowserPerformanceCEB
- Related configuration settings: [BrowserWebAppURL_Filter]
- Supported platforms: all

Field	Description	Data type	Unit	Example
Browser	Browser ID. Possible values: 1, 2, 3,4,5. Also see the field BrowserDisplay below.	Number yName		1
BrowserVersion	Browser version.	String		69.0.3497.81
IsFrame	Indicates if a page is a frame or not. Possible values: 0, 1.	String		1
ProcUser	User who ran the process.	String		Domain\JohnDoe
TabHost	Host address of the entered URL.	String		citrix.com
TabUriScheme	Uri scheme ID of the entered URL. Possible values: 0, 1, 2, 3, 4. Also see the field TabUriSchemeD below.	Number isplayName		3
RequestType	Type of the requested URL. Possible values: 0, 1, 2, 3. Also see the field RequestTypeDi	String splayName		1
	below.			
RequestHost	Host address which was requested by the TabHost address.	String		uberagent.com

Field	Description	Data type	Unit	Example
RequestUriScheme	Uri scheme ID of	Number		3
	the requested			
	URL. Possible			
	values: 0, 1, 2, 3,			
	4. Also see the			
	field			
	RequestUriSch	emeDisplayName		
	below.			
RequestCount	Total count of	Number		40
	requests			
WebRequestDuration	n D\us ration for all	Number	ms	140
	web requests.			
	Does not work			
	with Internet			
	Explorer.			
PageLoadTotalDura	tiliotMsduration for	Number	ms	300
	page load.			
PageLoadNetworkD	OuNtation Mksduration	Number	ms	150
	for page load.			
PageLoadRenderDu	ır Rtiod⊌ rsduration	Number	ms	150
	for page load.			
HttpStatusCount2x	x Count of 2xx http	Number		2
	errors.			
HttpStatusCount3x	•	Number		3
THE CLASS C	errors.	Normalism		4
HttpStatusCount4xx	•	Number		4
HttpStatucCouptEv	errors.	Number		5
HttpStatusCount5xx	errors.	Nullibel		J
	EITOI3.			

Field	Description	Data type	Unit	Example	Where available
BrowserDisplayI	NBrowser name. Possible values: Chrome ,Internet Explorer ,Firefox ,Edge ,Citrix Enterprise Browser.	String		Chrome	Splunk data model, Splunk SPL
User	User name.	String		Domain\JohnDo	o & plunk data model
TabUriSchemeD	istpliasyNhamme name of the entered URL. Possible values: Other, http, https, ftp, file.	String		https	Splunk data model, Splunk SPL
RequestUriSche	numberDissphlenyNeame name of the requested URL. Possible values: Other, http, https, ftp, file.	String		https	Splunk data model, Splunk SPL

Field	Description	Data type	Unit	Example	Where available
RequestTypeDi	spTaypNeaufithe requested URL. Possible values: Unknown, XmlHttpReq , WebSocket, PageLoad.			XmlHttpRequ	uest Splunk data model, Splunk SPL

Citrix NetScaler® (ADC) Metrics

December 11, 2025

Citrix NetScaler (ADC) monitoring requires its metrics to be enabled on at least one machine. See the documentation for details.

Appliance Inventory

uberAgent collects metrics like MAC address, model, and version for the primary as well as the secondary appliance.

Details

- Source type: uberAgent:CitrixADC:ApplianceInventory
- Used in dashboards: NetScaler Inventory, Single NetScaler Inventory
- Enabled through configuration setting: CitrixADCInventory
- Related configuration settings: [CitrixADC_Config]
- Supported platform: Windows

Field	Description	Data type	Unit	Example
HostName	Appliance name.	String		CitrixADC1
Version	Firmware version.	String		NS12.0: Build 59.8.nc Date: Sep 12 2018 06:16:17
License	Installed license.	String		Platinum
Model	Appliance model.	Number		1000
LicensingMode	Configured licensing mode. Possible values: Local, Pooled, CICO.	String		Local
HwDescription	Hardware and its ports detail.	String		NetScaler Virtual Appliance.
SysId	System id.	String		450088
ManufactureDay	Day the appliance was manufactured.	Number		17
ManufactureMonth	Month the appliance was manufactured.	Number		2
ManufactureYear	Year the appliance was manufactured.	Number		2009
CpuFrequncy	CPU frequency.	Number		3890
SerialNo	Serial number.	Number		ABCDEFG12
EncodedSerialno	Encoded serial number.	String		68310055cb267307ffg
MACAddress	MAC address.	String		00155d3d890d
HostId	Host id.	String		123456789
LastConfigSaveTime	eTime when the configuration was last saved.	String		2018-12-07 12:06:36
Timezone	Timezone.	String		GMT+01:00-CET- Europe/Berlin
WeakPassword	List of all weak passwords.	String		password

Field	Description	Data type	Unit	Example
SystemType	System type.	String		НА
	Possible Values:			
	Standalone,			
	HA,Cluster.			
LastConfigChange	dTTimee when the	String		2018-12-07
	configuration was			12:06:21
	last changed.			
LastStartupTime	Time when the	String		2018-11-24
	appliance was			15:26:25
	last started.			
CurrentHAStatus	Indicates the high	String		Primary
	availability state			
	of the node.			
	Possible values:			
	Staysecondary			
	,Primary,			
	Secondary,			
	Claiming,			
	Force change			
LastHAStatusChan	geTime when the	String		2018-12-04
	last master state			10:34:51
	transition			
	occurred.			
SSLCards2	Number of	Number		0
	available SSL			
	cards.			
SSLCardsUp2	Number of	Number		0
	working SSL			
	cards.			

Field	Description	Data type	Unit	Example	Where available
SSLCards	Number of available SSL cards.	Number		0	Splunk data model
SSLCardsUp	Number of working SSL cards.	Number		0	Splunk data model

Appliance Performance

uberAgent collects metrics like CPU usage, RAM usage as well as network throughput for the primary appliance.

Details

- Source type: uberAgent:CitrixADC:AppliancePerformance
- Used in dashboards: NetScaler Appliance Performance
- Enabled through configuration setting: CitrixADCPerformance
- Related configuration settings: [CitrixADC_Config]
- Supported platform: Windows

Field	Description	Data type	Unit	Example
HostName	Appliance name.	String		CitrixADC1
MemUsagePcnt	Memory usage.	Number	%	17.62
MgmtCpuUsagePcr	ntManagement CPU usage.	Number	%	14.6
PktCpuUsagePcnt	Packet CPU usage.	Number	%	3
Disk0PerUsage	/flash disk usage.	Number	%	41
Disk0Size	/flash disk size.	Number	МВ	1585
Disk0Used	/flash disk allocated space.	Number	МВ	598

Field	Description	Data type	Unit	Example
Disk0Avail	/flash disk free space.	Number	МВ	860
Disk1PerUsage	/var disk usage.	Number	%	45
Disk1Size	/var disk size.	Number	MB	14179
Disk1Used	/var disk allocated space.	Number	МВ	5988
Disk1Avail	/var disk free space.	Number	МВ	7056
ApplianceBytesRec	ei kerc bunt of incoming network data.	Number	Bytes	608359
ApplianceBytesSer	nt Amount of outgoing network data.	Number	Bytes	616856
NumCpus2	Number of CPUs.	Number		3
MemSizeMB2	Memory size.	Number	МВ	8096
MemUseInMB2	Memory usage.	Number	MB	196
CpuFan0Speed	CPU fan 0 speed. Acceptable range is 3000 through 6000 RPM.	Number		5000
CpuFan1Speed	CPU fan 1 speed. Acceptable range is 3000 through 6000 RPM.	Number		5000
SystemFanSpeed	System fan speed. Acceptable range is 3000 through 6000 RPM.	Number		5000
Cpu0Temp	CPU 0 temperature.	Number		80
Cpu1Temp	CPU 1 temperature.	Number		80

Field	Description	Data type Unit	Example
InternalTemp	Internal	Number	80
	temperature of		
	health		
	monitoring chip.		
PowerSupply1Stat	tusPower supply 1	Number	1
	failure status.		
	Can be 0, 1, 2, 3,		
	or 4. See also		
	PowerSupply1S	tatusDisplayName	
PowerSupply2Stat	tusPower supply 2	Number	1
1.1.2	failure status.		
	Can be 0, 1, 2, 3,		
	or 4. See also		
		itatusDisplayName	
PowerSupply3Stat	tusPower supply 3	Number	1
	failure status.		_
	Can be 0, 1, 2, 3,		
	or 4. See also		
		itatusDisplayName	
PowerSupply4Stat	tusPower supply 4	Number	1
	failure status.		
	Can be 0, 1, 2, 3,		
	or 4. See also		
	PowerSupply4S	tatusDisplayName	
	•		
VoltageV33Main	Main power	Number	3.630
	supply +3.3V		
	output.		
	Acceptable range		
	is 2.970 through		
	3.630 volts.		
ICAOnlySessions	Number of ICA	Number	45

Field	Description	Data type	Unit	Example
ICAOnlyConnect	ionsNumber of ICA	Number		45
SmartAccessSes	sionNumber of VPN sessions.	Number		45
SmartAccessICA	ConnNeuctrindoress of VPN	Number		45
SSLSessions	ICA connections. Number of SSL	Number		400
	sessions.			

Field	Description	Data type	Unit	Example	Where available
ApplianceMbps	Sembount of outgoing network data.	Number	Mbps	602.39	Splunk data model
NumCpus	Number of CPUs.	Number		3	Splunk data model
MemSizeMB	Memory size.	Number	МВ	8096	Splunk data model
MemUseInMB	Memory usage.	Number	МВ	196	Splunk data model
PowerSupply1StattonDeisplayNam 1 failure		neNumber		Normal	Splunk data model,
	status. Can be Unknown,				Splunk SPL
	Normal, Failed, Not				
	present, orNot				
	supported. Based on the				
	lookup file citrixadc_p.csv.	powersupply	status		

Field	Description Da	ata type	Unit	Example	Where available
PowerSupp	oly2Sta RosæisplæppNy ameN	Normal	Splunk data		
	2 failure				model,
	status. Can be				Splunk SPL
	Unknown,				
	Normal,				
	Failed, Not				
	present,				
	or Not				
	supported.				
	Based on the				
	lookup file				
	citrixadc_pow	ersupply	status		
	.CSV.				
PowerSupp	oly3Sta RosæisplappN ameN	umber		Normal	Splunk data
	3 failure				model,
	status. Can be				Splunk SPL
	Unknown,				
	Normal,				
	Failed, Not				
	present,				
	or Not				
	supported.				
	Based on the				
	lookup file				
	citrixadc_pow	ersupply	status		

Field	Description	Data type	Unit	Example	Where available
PowerSupp	oly4StaPlanaDeiispulapyNya	meNumber		Normal	Splunk data
	4 failure				model,
	status. Can be				Splunk SPL
	Unknown,				
	Normal,				
	Failed, Not				
	present,				
	or Not				
	supported.				
	Based on the				
	lookup file				
	citrixadc_	powersupply	status		
	.csv.				

Certificates

uberAgent collects certificate metrics like name, type, and expiration date for the primary as well as the secondary appliance.

Details

- Source type: uberAgent:CitrixADC:Certificate
- Used in dashboards: Single NetScaler Inventory
- Enabled through configuration setting: CitrixADCInventory
- Related configuration settings: [CitrixADC_Config]
- Supported platform: Windows

Field	Description	Data type	Unit	Example
HostName	Appliance name.	String		CitrixADC1
CertName	Certificate name.	String		nsmgmtcer
CertFile	Certificate file.	String		nsmgmt.cer

Field	Description	Data type	Unit	Example
CertType	Certificate type.	String		Client;Server
	Possible values:			
	Client,			
	Server,			
	Client;			
	Server, Root,			
	Intermediate			
CertExpirationDate	Certificate	String		2020-11-22
	expiration date.			11:06:46

Gateways

uberAgent collects gateway metrics like network throughput and SSL as well as authentication policies for the primary appliance.

Details

- Source type: uberAgent:CitrixADC:Gateway
- Used in dashboards: NetScaler Gateway Performance, Single NetScaler Inventory
- Enabled through configuration setting: CitrixADCGateway
- Related configuration settings: [CitrixADC_Config]
- Supported platform: Windows

Field	Description	Data type	Unit	Example
HostName	Appliance name.	String		CitrixADC1
vServerName	Gateway name.	String		_XD_10.1.1.22_443
PrimaryIpAddress	IP address.	IPv4		10.1.1.22
PrimaryPort	Port.	Number		443
Туре	vServer type. Possible values: SSL.	String		SSL

Field	Description	Data type	Unit	Example
State	vServer state.	String		Up
RequestBytesRate	Incoming network traffic.	Number	Bytes	1024
ResponseBytesRate	Outgoing network traffic.	Number	Bytes	1024
AuthLDAPPolicies	Bound LDAP authentication policies.	String		pol_ldap1;pol_ldap2
AuthRadiusPolicies	Bound Radius authentication policies.	String		pol_radius1;pol_rad
AuthSAMLPolicies	Bound SAML authentication policies.	String		pol_saml1
SessionPolicies	Bound session policies.	String		sp_storefront
STAs	Secure ticket authorities.	String		http://DDC.citrix.con
ResponderPolicies	Bound responder policies.	String		rp_storefront
RewritePolicies	Bound rewrite policies.	String		rw_clientname
Certificates	Bound certificates.	String		wildcard.citrix.com
PortalTheme	Bound portal theme.	String		Default
SSL2*	Indicates if SSL2 is enabled.	String		0
SSL3*	Indicates if SSL3 is enabled.	String		0
ΓLS1*	Indicates if TLS1 is enabled.	String		0
TLS11*	Indicates if TLS1.1 is enabled.	String		0
TLS12*	Indicates if TLS1.2 is enabled.	String		1

Field	Description	Data type	Unit	Example
DiffeHellman*	Indicates if Diffie-Hellman is enabled.	String		1
SSLProfile	Name of the bound SSL profile.	String		ns_default_ssl_profile_fror
Ciphers*	Bound ciphers.	String		DEFAULT
CipherSuites*	Bound cipher suites.	String		DEFAULT
FotalRequests2	Total number of requests received.	Number		456789
TotalResponses2	Total number of responses.	Number		456789
SessionTimeout2*	Session timeout.	Number		120
HSTS	State of HSTS protocol support for the SSL Virtual Server. Using HSTS, a server can enforce the use of an HTTPS connection for all communication with a client. Can be Enabled or Disabled.	String		Disabled
HSTSMaxAge	The maximum time, in seconds, in the strict transport security (STS) header during which the client must send only HTTPS requests to the server.	Number		0

Field	Description	Data type	Unit	Example
HSTSInclSubdom	Indicates if HSTS for subdomains is enabled or disabled. If set enabled, a client must send only HTTPS requests for subdomains.	String		No
	Can be Yes or			
TLS13	Indicates if TLS1.3 is enabled.	String		Enabled
VpnUsers	Number of users on this gateway .	Number		10
SslVpnUsers	Number of AAA sessions on this gateway.	Number		56

^{*} If an SSL profile is bound, then these settings are taken from it.

Field	Description	Data type	Unit	Example	Where available
RequestRespons	s eByqesRate Byte + ResponseByt		Bytes	2048	Splunk data model
RequestRespons	seRatteMlt(ps	Number	Mbps	2	Splunk data
	RequestResp /125000,1)		•		model
TotalRequests2	Total number of requests received.	Number		456789	Splunk data model
TotalResponses2		Number		456789	Splunk data model

Field	Description	Data type	Unit	Example	Where available
SessionTimeo	ut2\$ession	Number		120	Splunk data
	timeout.				model

Ips

uberAgent collects Ip metrics like address, type, and if it is used for management access for the primary as well as the secondary appliance.

Details

- Source type: uberAgent:CitrixADC:Ip
- Used in dashboards: Single NetScaler Inventory
- Enabled through configuration setting: CitrixADCInventory
- Related configuration settings: [CitrixADC_Config]
- Supported platform: Windows

Field	Description	Data type	Unit	Example
HostName	Appliance name.	String		CitrixADC1
IpAddress	IP address.	IPv4		10.1.1.25
IpNetmask	IP netmask.	String		255.255.0.0
ІрТуре	IP type. Possible values: SNIP, VIP, NSIP, GSLBsiteIP, CLIP, LSN.	String		VIP
IpvServer	Indicates if the IP is bound to a vServer.	String		Yes
IpMgmtAccess	Indicates if management access is allowed.	String		0

Services

uberAgent collects service metrics like protocol, state as well as bound monitors for the primary appliance.

Details

• Source type: uberAgent:CitrixADC:Service

• Used in dashboards: Single Virtual Server Performance

• Enabled through configuration setting: CitrixADCvServer

• Related configuration settings: [CitrixADC_Config]

• Supported platform: Windows

Field	Description	Data type	Unit	Example
HostName	Appliance name.	String		CitrixADC1
ServiceName	Service name.	String		webserver1

Field	Description	Data type	Unit	Example
Protocol	Service protocol.	String		HTTP
	Possible values:			
	HTTP, FTP, TCP,			
	UDP, SSL,			
	SSL_BRIDGE,			
	SSL_TCP, DTLS,			
	NNTP, DNS,			
	DHCPRA, ANY,			
	SIP_UDP,			
	SIP_TCP,			
	SIP_SSL,			
	DNS_TCP, RTSP,			
	PUSH,			
	SSL_PUSH,			
	RADIUS, RDP,			
	MYSQL, MSSQL,			
	DIAMETER,			
	SSL_DIAMETER,			
	TFTP, ORACLE,			
	SMPP,			
	SYSLOGTCP,			
	SYSLOGUDP,			
	FIX,SSL_FIX,			
	USER_TCP,			
	USER_SSL_TCP			
	•			
PrimaryIpAddress	IP address.	IPv4		10.1.1.11
PrimaryPort	Port.	Number		80

Field	Description	Data type	Unit	Example
State	Service state. Possible values: UP, DOWN, UNKNOWN, OFS (Out of Service), TROFS (Transition Out of Service), TROFS_DOWN (Down when going Out of Service).	String		Up
vServerName	Name of the vServer the service is bound	String		lbvs_CompanyWebserve
ServiceMonitors	to. Bound service monitors.	String		tcp-default

Field	Description	Data type	Unit	Example	Where available
ServiceMonitorsSplitviceMonitNumber			MB		Splunk data
split by					model
	semicolon.				

Service Groups

uberAgent collects service group metrics like protocol, state as well as bound monitors for the primary appliance.

Details

- Source type: uberAgent:CitrixADC:ServiceGroup
- Used in dashboards: Single Virtual Server Performance
- Enabled through configuration setting: CitrixADCvServer
- Related configuration settings: [CitrixADC_Config]
- Supported platform: Windows

Field	Description	Data type	Unit	Example
HostName	Appliance name.	String		CitrixADC1
ServiceGroupName	Service group name.	String		sgr1
Protocol	Service group protocol: ADNS, DNS, MYSQL, RTSP, SSL_DIAMETER, ADNS_TCP, DNS_TCP, NNTP, SIP_UDP, SSL_TCP, ANY, FTP, RADIUS, SNMP, TCP, DHCPRA, HTTP, RDP, SSL, TFTP, DIAMETER, MSSQL, RPCSVR, SSL_BRIDGE,	String		HTTP

Field	Description	Data type	Unit	Example
State	Service group state. Possible values: UP, DOWN, UNKNOWN, OFS (Out of Service), TROFS (Transition Out of Service), TROFS_DOWN (Down when going Out of Service).	String		Up
EffectiveState	Indicates the effective servicegroup state based on the state of the bound service items. Possible values: UP, DOWN, OUT OF SERVICE, PARTIAL-UP, PARTIAL-DOWN	String		Up
vServerName	Name of the vServer the service group is bound to.	String		lbvs_Storefront
ServiceGroupMen	nbeservices which are members of the service group.	String		Service1;Service2
ServiceGroupMor		String		ping;tcp

					Where
Field	Description	Data type	Unit	Example	available
ServiceGro	oupMer@bers\$plitGro split by semicolon.	up Næmber s	МВ	Service1 Service2	Splunk data model
ServiceGro	oupMon dtorsSplit Gro split by semicolon.	up Nombė ors	МВ	ping tcp	Splunk data model

Virtual Server

uberAgent collects virtual server (load-balancing virtual server only) metrics like network throughput and bound policies for the primary appliance.

Details

- Source type: uberAgent:CitrixADC:vServer
- Used in dashboards: NetScaler Virtual Server Performance, Single Virtual Server Performance, Single NetScaler Inventory
- Enabled through configuration setting: CitrixADCGateway
- Related configuration settings: [CitrixADC_Config]
- Supported platform: Windows

Field	Description	Data type	Unit	Example
HostName	Appliance name.	String		CitrixADC1
vServerName	Virtual server name.	String		vs_Storefront
PrimaryIpAddress	IP address.	IPv4		10.1.1.5
PrimaryPort	Port.	Number		443

Field	Description	Data type	Unit	Example
Туре	vServer type.	String		SSL
	Possible values:			
	HTTP, FTP, TCP,			
	UDP, SSL,			
	SSL_BRIDGE,			
	SSL_TCP, DTLS,			
	NNTP, DNS,			
	DHCPRA, ANY,			
	SIP_UDP,			
	SIP_TCP,			
	SIP_SSL,			
	DNS_TCP, RTSP,			
	PUSH,			
	SSL_PUSH,			
	RADIUS, RDP,			
	MYSQL, MSSQL,			
	DIAMETER,			
	SSL_DIAMETER,			
	TFTP, ORACLE,			
	SMPP,			
	SYSLOGTCP,			
	SYSLOGUDP,			
	FIX, SSL_FIX,			
	USER_TCP,			
	USER_SSL_TCP			
State	vServer state.	String		Up
RequestBytesRate	Incoming	Number	Bytes	1024
	network traffic.		,	
ResponseBytesRate		Number	Bytes	1024
	network traffic.		,	
RewritePolicies	Bound rewrite	String		rw_clientname
	policies.	_		
ResponderPolicies	Bound responder	String		rp_storefront
,	policies.	J		1 — ** * * *
Certificates	Bound	String		Cert1;Cert2

Field	Description	Data type	Unit	Example
SSL2*	Indicates if SSL2	String		0
	is enabled.			
SSL3*	Indicates if SSL3	String		0
	is enabled.			
TLS1*	Indicates if TLS1	String		0
	is enabled.			
TLS11*	Indicates if	String		0
	TLS1.1 is enabled.			
TLS12*	Indicates if	String		1
	TLS1.2 is enabled.			
DiffeHellman*	Indicates if	String		1
	Diffie-Hellman is			
	enabled.			
SSLProfile	Name of the	String		citrix_ssl_profile
	bound SSL			
	profile.			
Ciphers*	Bound ciphers.	String		Secure_Cipher_Grou
CipherSuites*	Bound cipher	String		DEFAULT
	suites.			
ActSvcs2	Active services.	Number		2
VSLBHealth2	The health of the	Number	%	100
	vserver. This			
	gives the			
	percentage of UP			
	services bound to			
	this vserver.			
SessionTimeout2*	Session timeout.	Number		120
CCCCIOIIIIICOULZ	Session anneout.			

Field	Description	Data type	Unit	Example
HSTS	State of HSTS protocol support for the SSL Virtual Server. Using HSTS, a server can enforce the use of an HTTPS connection for all communication with a client. Can be Enabled or Disabled.	String		Disabled
HSTSMaxAge	The maximum time, in seconds, in the strict transport security (STS) header during which the client must send only HTTPS requests to the server.	Number		0
HSTSInclSubdom	Indicates if HSTS for subdomains is enabled or disabled. If set enabled, a client must send only HTTPS requests for subdomains. Can be Yes or No.	String		No
TLS13	Indicates if TLS1.3 is enabled.	String		Enabled
HitsRate	Rate (/s) of vServer hits.	Number		5000
RequestsRate	Rate (/s) of vServer requests.	Number		5000

Field	Description	Data type	Unit	Example
ResponsesRate	Rate (/s) of	Number		25
	vServer			
	responses.			
CurrentClientCon	ne ddioms berof	Number		80
	current client			
	connections.			
CurrentServerCon	ne lstuomis er of	Number		60
	current			
	connections to			
	the actual servers			
	behind the virtual			
	server.			

^{*} If an SSL profile is bound, then these settings are taken from it.

					Where
Field	Description	Data type	Unit	Example	available
RequestMbpsRa	ntencoming network traffic.	Number	Mbps	1	Splunk data model
ResponseMbpsF	Rathertgoing network traffic.	Number	Mbps	1	Splunk data model
ActSvcs	Active services.	Number		2	Splunk data model
VSLBHealth	The health of the vserver. This gives the percentage of UP services bound to this vserver.	Number	%	100	Splunk data model
SessionTimeout	t Session timeout.	Number		120	Splunk data model

Citrix Session Metrics

September 10, 2025

Virtual Channel Detail

uberAgent collects the input and output data volume for every virtual channel per Citrix session.

Details

- Source type: uberAgent:CitrixSession:VirtualChannelDetail
- Used in dashboards: Citrix Session Protocol Insights, Single User Detail, Analyze data over time
- Enabled through configuration setting: CitrixSessionVirtualChannelDetail
- Related configuration settings: CitrixSessionConfig

Field	Description	Data type	Unit	Example	Platform
SessionGUID	Unique identifier that is generated by uberAgent when the session is created. Valid for this session only.	String		00000002- f295-9109- e7c7- c964011dd401	Windows
SessionUser	User name.	String		Domain\JohnD	o e Windows
VirtualChannel\	/e Adoriၺae ne identifier for a virtual channel.	String		CTXTW	Windows

Field	Description	Data type	Unit	Example	Platform
VirtualChannelDa \aVoluntnef nputM \u umber		MB	1	Windows	
	data volume				
	received by				
	the session				
	per virtual				
	channel.				
VirtualCha	nnelDa 4aVooluurtne fOutp	out M Bmber	MB	10	Windows
	data volume				
	sent by the				
	session per				
	virtual				
	channel.				

Field	Description	Data type	Unit	Example	Where available
VirtualChannel	Da ītatadluimtelal pu channel data volume.	itO ùluprat)4 B	МВ	11	Splunk data model
VirtualChannel	Di Delacyfilative virtual channel name Possible values: too many to list here. Please check the lookup file	String .	channels	Thinwire Graphics	SPL

Field	Description	Data type	Unit	Example	Where available		
VirtualChannel	Content of	String		Thinwire	Splunk data		
	VirtualCha	nnelDisplay	Name	Graphics	model		
	. If						
	VirtualCha	nnelDisplay	Name				
	is not filled,						
	VirtualCha	nnelVendorN					
	is used						
	instead.						

Session Config

uberAgent collects detailed information about applied Citrix HDX policies and important active session settings.

Details

- Source type: uberAgent:CitrixSession:SessionConfig
- Used in dashboards: Citrix Session Configuration Details, Single User Detail
- Enabled through configuration setting: CitrixSessionConfig
- Related configuration settings: CitrixSessionVirtualChannelDetail, TriggerCitrixSessionConfig

Field	Description	Data type	Unit	Example	Platform
SessionGUID	Unique identifier that is generated by uberAgent when the session is created. Valid for this session only.	String		00000002- f295-9109- e7c7- c964011dd401	Windows
SessionUser	User name.	String		Domain\JohnD	o & Windows

F: -1.4	Danamintian	Data trus	1114	Evenente	Dietferme
Field	Description	Data type	Unit	Example	Platform
AudioActualPri		String		RealTime	Windows
	virtual				
	channel				
	priority for				
	audio.				
AudioPolicyAllo	ow ©tcixopabic yeRoed	inSaturtinogn		1	Windows
	allow/deny				
	microphone				
	redirection.				
AudioPolicyAllo	ow Ried in excelling to	String		1	Windows
	allow/deny				
	audio				
	redirection.				
AudioPolicyPri	ori © ytrix policy to	String		RealTime	Windows
	set the virtual				
	channel				
	priority.				
AudioPolicySou	un đ@rialito licy to	String		High	Windows
	configure the				
	sound quality.				
CdmActualPrio	rit y pplied	String		Medium	Windows
	virtual				
	channel				
	priority for				
	client drive				
	mapping.				
CdmVolumes	Volumes the	String		Local Disk (C:	Windows
	client			on MACHINE1)	
	mapped into				
	the session.				
CdmPolicyAllov	wDCitreiRpdliegttion	String		1	Windows
	allow/deny				
	client drive				
	mapping.				
CdmPolicyPrio	rit ¢ itrix policy to	String		Medium	Windows
	set the virtual				
	channel				
	priority.				

Field	Description	Data type	Unit	Example	Platform
CdmPolicyRead	Ocityrix policy to allow/deny read-only client drive access.	String		1	Windows
DisplayMode	Active display mode. See DisplayMode for details.	Number Name		4	Windows
ThinwireActuall	PrApriptlyed virtual channel priority for this display mode.	String		High	Windows
ThinwireColorD	e At plied session color depth.	Number	bit	24	Windows
ThinwireCompo	on&ppEiecoddeo component encoder.	String		DeepCompress	io WW2dfowo sder
ThinwireHardw	arsemifodeInUse hardware encode is actually in use.	String		1	Windows
ThinwireVideoC		String		H264	Windows
ThinwireColors	paqueplied session color space.	String		Yuv420	Windows
ThinwireVideoC	co depUse video codec usage setting.	String		For actively changing regions	Windows
ThinwirePolicyF	configure the maximum session FPS.	Number		30	Windows

Field	Description	Data type	Unit	Example	Platform
ThinwirePolicy	Pr icitity policy to	String		High	Windows
	set the virtual				
	channel				
	priority.				
ThinwirePolicy	yUs @ittnaixchwoalince yEtrocco	od Sob ging		1	Windows
	enable/dis-				
	able hardware				
	encoding.				
ThinwirePolicy	yUs @litiribep6bid yeto	String		UseVideoCod	leclf ?Viefelo wed
	configure the				
	video codec.				
ThinwirePolicy	yVis CitatiQupadits yy to	String		Medium	Windows
	configure the				
	visual quality.				
FramehawkAc	tua Alpipidieid y	String		High	Windows
	virtual				
	channel				
	priority for				
	this display				
- -	mode.	.			14.5
FramehawkPo	licy@itrioriptolicy to	String		High	Windows
	set the virtual				
	channel				
DODA I ID:	priority.	C1 :		re t	14.5° I
D3DActualPric		String		High	Windows
	virtual channel				
	priority for				
	this display mode.				
D3DPolicyAero	mode. Re Clitneixtpoon licy to	String		1	Windows
DOD! GlicyAero	enable/dis-	Julia		<u> </u>	VVIIIGOVVS
	able DCR aero				
	redirection.				
D3DPolicyGra	ohi cs@ivabiby icy to	String		Medium	Windows
) - -	configure the	J			
	DCR graphics				
	quality.				

Field	Description	Data type	Unit	Example	Platform
D3DPolicyPriori	tyCitrix policy to	String		High	Windows
•	set the virtual	J		G	
	channel				
	priority.				
GraphicsActualF	Pr Appriotti jed	String		High	Windows
	virtual				
	channel				
	priority for				
	this display				
	mode.				
GraphicsPolicyD) i Spiteiy. Opeoglica yd teo l (ot Stylihse r		1	Windows
	notify the user				
	about display				
	quality				
	degradation.				
GraphicsPolicyD) i Spiteiy. Opeoglicayd teo P c	oli &t ring		DEGRADE_RES	TRSTI <u>&wkoohii</u> w⊔C
	configure the				
	display				
	quality				
	degradation.				
GraphicsPolicyF	Pr icitity policy to	String		High	Windows
	set the virtual				
	channel				
	priority.				
NetworkConnec	cteRolVaidadress the	String		10.1.1.150	Windows
	session				
	connected				
	from. This is				
	the same				
	information				
	as shown in				
	Citrix Director.				
NetworkEdtMtu		Number		1400	Windows
	Enlightened				
	Data				
	Transport				
	MTU size.				

Field	Description	Data type	Unit	Example	Platform
NetworkPolicy	yAc Ceipt&essliio n; R e l	ia ßiliity gonnect	ions	1	Windows
	enable/dis-				
	able session				
	reliability.				
NetworkPolicy	y I C <i>A</i> Qitste poerl Royrtiol (um Nuem ber		1494	Windows
	configure the				
	ICA listener				
	port.				
NetworkPolicy	ySe £sitoin x Rped liedayi Itioby	P o\tu mber		2598	Windows
	configure the				
	session				
	reliability				
	port.				
NetworkPolicy	ySe £sitoin a Roed Liechyi Itioby	Ti N hwenonwloter	S	180	Windows
	configure the				
	session				
	reliability				
	timeout.				
PrinterActualF	Prio Androplied	String		Low	Windows
	virtual				
	channel				
	priority for				
	printing.				
PrinterSession	nPri Alte mapped	String		Microsoft	Windows
	session			Print to PDF	
	printers.			(from	
				MACHINE1) in	
				session 9	
PrinterPolicyA	llow? Reidipedtic ynto	String		1	Windows
	allow/deny				
	printer				
	redirection.				
PrinterPolicyA	llow?Reidipedticynto	String		Allowed	Windows
	allow/deny				
	printer				
	redirection.				

Field	Description	Data type	Unit	Example	Platform
PrinterPolic	yAuto Citeixtp6lient Br	in te umber		3	Windows
	configure				
	printer				
	auto-creation.				
	See				
	PrinterPoli	cyAutoCrea ⁻	teClientPri	ntersDisplayN	Name
	for details.				
PrinterPolic	yPrio tity rix policy to	String		Low	Windows
	set the virtual				
	channel				
	priority.				
USBActualP	riorit y Applied	String		Medium	Windows
	virtual				
	channel				
	priority for				
	USB devices.				
USBPolicyA	llowP ©iiRRepioreict iolog	String		1	Windows
	allow/deny				
	PNP				
	redirection.				
USBPolicyA	llow US iB Six popolicity to	String		1	Windows
	allow/deny				
	USB support.				
USBPolicyP	riorityCitrix policy to	String		Medium	Windows
	set the virtual				
	channel 				
	priority.				

Field	Description	Data type	Unit	Example	Where available
DisplayModeNa	display mode name. Possible values: Thinwire,	String		Thinwire	SPL
	Framehawk,				
	DCR, Legacy				
	Graphics.				

```
PrinterPolicyAutdleseatietliventPrintetristlessplayName
                                                                           SPL
                                                            Auto-create
               name of how
                                                            the client's
               client printer
                                                            default printer
               creation is
                                                            only
               configured.
               Possible
              values: Do
               not auto-
               create
               client
               printers,
               Auto-
               create the
                client's
               default
               printer
               only,
               Auto-
               create
               local (non
               -network)
               client
               printers
               only,
               Auto-
               create all
                client
```

Citrix Virtual Apps™ & Desktops Site Metrics

printers.

December 11, 2025

Citrix Virtual Apps and Desktops site metrics can be determined from on-premises machines or from the Citrix Cloud.

Citrix site monitoring requires its metrics enabled on at least one machine. See the documentation for details.

Applications

uberAgent collects metrics like application name, site name as well as several application properties (is enabled, creation date, modification date, type) for each published application.

Details

- Source type: uberAgent:Citrix:Applications
- Used in dashboards: Citrix Virtual Apps and Desktops
- Enabled through configuration setting: CitrixDCApplication
- Related configuration settings: n/a
- Supported platform: Windows, Citrix Virtual Apps and Desktops on-premises, Citrix Cloud

Field	Description	Data type	Unit	Example
Id	Application ID.	String		10
Name	Application name.	String		GoogleChrome
PublishedName	Application published name.	String		Google Chrome
SiteName	Related Citrix site name.	String		vl-Site
SiteGuid	Related Citrix site GUID.	String		0a0fda60-aebf- 4ac0-920d- 44bd509ca927
DesktopGroupId	Desktop group ID.	String		05bddbe7-cf12- 4ee2-ab02- 93d0428d3847
DesktopGroupNan	neDesktop group name.	String		Finance users
ApplicationType	Application type. Possible values: 0, 1.	Number		0
Enabled	Indicates if application is enabled. Possible values: 0, 1.	String		1

Field	Description	Data type	Unit	Example
AdminFolder	Application admin folder.	String		Finance
Tags	Configured tags.	String		Germany France
ApplicationGroupId	Application group	String		f5411e59-bc4f-
	ID.			4dfa-a893-
				c54015aa4a66
ApplicationGroupN	a App lication group	String		Finance apps
	name.			
CustomerId	Citrix Cloud	String		a230abcdej1e
	CustomerId.			

					Where
Field	Description	Data type	Unit	Example	available
ApplicationTypeD ispplingationn e		String		HostedOnDek	sto ß plunk data
	type name.				model,
	Possible				Splunk SPL
	values:				
	HostedOnDe	kstop			
	,				
	Installed0	nClient			
	•				
TagsSplit	Tags split by	String		Germany;Fran	ce Splunk data
	semicolon.				model
SiteNameExter	nd &i te name	String		cloudxdsite	Splunk data
	including the			(a230abcdej1e	e) model
	Citrix Cloud				
	CustomerId.				

Databases

uberAgent collects information like name and data store about databases configured in a site.

Details

- Source type: uberAgent:Citrix:Databases
- Used in dashboards: Citrix Virtual Apps and Desktops Databases
- Enabled through configuration setting: CitrixDCGeneralInformation
- Related configuration settings: n/a
- Supported platform: Windows, Citrix Virtual Apps and Desktops on-premises

List of Fields in the Raw Agent Data

Field	Description	Data type	Unit	Example
SiteName	Related Citrix site	String		vl-Site
SiteGuid	Related Citrix site GUID.	String		0a0fda60-aebf- 4ac0-920d- 44bd509ca927
DataStore	Datastore type. Possible values: 1, 2, 3 (1 = Site, 2 = Logging, 3 = Monitor).	Number		1
IntegratedSecurity	Database authentication method. Possible values: 1 (1 = true).	String		1
MirrorServerAddres	ssMirror database server address.	String		DB2.domain.ad
Name	Database name.	String		CitrixSiteDB
ServerAddress	Database server address.	String		DB1.domain.ad

Desktops

uberAgent collects metrics like desktop name, site name as well as tags for each published desktop.

Details

- Source type: uberAgent:Citrix:PublishedDesktops
- Used in dashboards: Citrix Virtual Apps and Desktops
- Enabled through configuration setting: CitrixDCPublishedDesktops
- Related configuration settings: n/a
- Supported platform: Windows, Citrix Virtual Apps and Desktops on-premises, Citrix Cloud

Field	Description	Data type	Unit	Example
Id	Published	String		10
	desktop ID.			
Name	Published	String		Finance Desktop
	desktop name			
	(internal).			
PublishedName	Published	String		Finance Desktop
	desktop name			
	(published).			
SiteName	Related Citrix site	String		vl-Site
	name.			
SiteGuid	Related Citrix site	String		0a0fda60-aebf-
	GUID.			4ac0-920d-
				44bd509ca927
DesktopGroupId	Related desktop	String		05bddbe7-cf12-
	group ID.			4ee2-ab02-
				93d0428d3847
DesktopGroupNan	neRelated desktop	String		Finance users
	group name.			
BrowserName	Unique published	String		FinanceDesktop
	desktop name in			
	a site.			
ColorDepth	Color depth.	Number		3
	Possible values:			
5	0, 1, 2, 3.	CI.		5 11 (
Description	Description.	String		Desktop for
				finance users

Field	Description	Data type	Unit	Example
Enabled	Indicates if the published	String		1
	desktop is enabled. Possible			
	values: 0, 1.			
ExcludedUserFilterI		String		1
	excluded user	· ·		
	filter is enabled.			
	Possible values:			
	0, 1.			
ExcludedUsers	Excluded users.	String		AD\Marketing AD\HR
IncludedUserFilterE	nadleated if the	String		1
	included user	og		-
	filter is enabled.			
	Possible values:			
	0, 1.			
IncludedUsers	Included users.	String		AD\Finance
LeasingBehavior	Leasing behavior. Possible values:	Number		1
	0, 1.			
RestrictToTag	Indicates if a	String		Finance
	published			
	desktop is			
	restricted to			
	machines with			
Caranalaa Barani'aa d	specific tags.	Chaire		
SecurelcaRequired	SecureICA is	String		1
	required.			
	Possible values:			
	. 500.2.0 10.0000			

Field	Description	Data type	Unit	Example
SessionReconnectionIndicates the		Number		2
	session			
	reconnection			
	behaviour.			
	Possible values:			
	0, 1, 2.			
Tags	Configured tags.	String		Germany France
CustomerId	Citrix Cloud	String		a230abcdej1e
	CustomerId.			

					Where
Field	Description	Data type	Unit	Example	available
ColorDepthBits	Color depth. Possible values: 4, 8, 16, 24.	Number		24	Splunk data model, Splunk SPL
ColorDepthDisp	layoNermepth. Possible values: FourBit, EightBit, SixteenBit , TwentyFourB	String		TwentyFourBit	Splunk data model, Splunk SPL
ExcludedUsersS	. p Ex cluded user split by semicolon.	String		AD\Marketing;Al	D'\$₱ R unk data model
IncludedUsersS _I		String		AD\Finance	Splunk data model

Field	Description	Data type	Unit	Example	Where available
LeasingBehavio	r Disapslinyg Name	String		Allowed	Splunk data
	behavior.				model,
	Possible				Splunk SPL
	values:				
	Allowed,				
	Disallowed				
SessionReconne	ed tridir@itsqpslallye lla	m&tring		SameEndpoint	On Sp lunk data
	session				model,
	reconnection				Splunk SPL
	behaviour.				
	Possible				
	values:				
	Always,				
	Disconnect	edOnly			
	,				
	SameEndpoi	ntOnly			
TagsSplit	Tags split by	String		Germany;Franc	e Splunk data
	semicolon.				model
SiteNameExtend	d &i te name	String		cloudxdsite	Splunk data
	including the			(a230abcdej1e)	model
	Citrix Cloud				
	CustomerId.				

Desktop Groups

uberAgent collects metrics like desktop group name and tags for each desktop group in a site.

Details

- Source type: uberAgent:Citrix:DesktopGroups
- Used in dashboards: Citrix Virtual Apps and Desktops, Citrix Virtual Apps and Desktops Machines
- Enabled through configuration setting: CitrixDCDesktopGroup
- Related configuration settings: n/a
- Supported platform: Windows, Citrix Virtual Apps and Desktops on-premises, Citrix Cloud

Field	Description	Data type	Unit	Example
Id	Desktop group ID.	String		10
Name	Desktop group name.	String		Finance
SiteName	Related Citrix site name.	String		vl-Site
SiteGuid	Related Citrix site GUID.	String		0a0fda60-aebf- 4ac0-920d- 44bd509ca927
IsRemotePC	Indicates if a desktop group is configured for Remote PC. Possible values: 0, 1.	String		0
DesktopKind	Kind of contained desktops. Possible values: 0, 1.	Number		1
LifecycleState	Lifecycle state. Possible values: 0, 1, 2, 3.	Number		1
SessionSupport	Indicates a desktop group's session support. Possible values: 0, 1, 2.	Number		1
DeliveryType	Desktop group delivery type. Possible values: 0, 1, 2.	Number		2
Tags	Configured tags.	String		Germany France
CreatedDate	Desktop group creation date.	String		2018-03-16 14:16:07.008 +0200

Field	Description	Data type	Unit	Example
ModifiedDate	Desktop group modification	String		2018-03-16 14:16:07.008
	date.			+0200
CustomerId	Citrix Cloud CustomerId.	String		a230abcdej1e

Field	Description	Data type	Unit	Example	Where available
DesktopGroupId	I Content of field Id.	String		05bddbe7- cf12-4ee2- ab02- 93d0428d3847	Splunk data model, Splunk SPL
DesktopKindDis	pkindaufne contained desktops. Possible values: Private, Shared.	String		Shared	Splunk data model, Splunk SPL
LifecycleStateDis		String		Active	Splunk data model, Splunk SPL

Field	Description	Data type	Unit	Example	Where available
SessionSupportDlisplaytesrae		String		SingleSession	Splunk data
	desktop				model,
	group's				Splunk SPL
	session				
	support.				
	Possible				
	values:				
	Unknown,				
	SingleSess	ion			
	,				
	MultiSessi	on			
	•				
DeliveryType	eDisp Dæydktamp e	String		DesktopAndAp	psSplunk data
	group delivery				model,
	type. Possible				Splunk SPL
	values:				
	Desktops0n	ly			
	,AppsOnly,				
	DesktopAnd	Apps			
	•				
TagsSplit	Tags split by	String		Germany;Franc	ce Splunk data
	semicolon.				model
SiteNameExt	end &i te name	String		cloudxdsite	Splunk data
	including the			(a230abcdej1e) model
	Citrix Cloud				
	CustomerId.				

Hypervisors

DEPRECATED: this sourcetype is deprecated and will be removed in a future release.

uberAgent collects information like name and lifecycle state about hypervisors configured in a site.

Details

- Source type: uberAgent:Citrix:Hypervisors
- Used in dashboards: *n/a*

• Enabled through configuration setting: CitrixDCHypervisor

• Related configuration settings: *n/a*

• Supported platform: Windows

List of Fields in the Raw Agent Data

Field	Description	Data type	Unit	Example
Id	Hypervisor ID.	String		10
Name	Hypervisor name.	String		XenServer1
SiteName	Related Citrix site name.	String		vl-Site
SiteGuid	Related Citrix site GUID.	String		0a0fda60-aebf- 4ac0-920d- 44bd509ca927
LifecycleState	Lifecycle state. Possible values: 0, 1, 2, 3.	Number		2
CustomerId	Citrix Cloud CustomerId.	String		a230abcdej1e

Field	Description	Data type	Unit	Example	Where available
LifecycleStateD	is þlæðyahes tate	String		Active	Splunk data
•	name.	J			model,
	Possible				Splunk SPL
	values:				·
	Active,				
	Deleted,				
	RequiresRes	solution			
	,Stub.				
SiteNameExten	d &i te name	String		cloudxdsite	Splunk data
	including the	· ·		(a230abcdej1e)	model
	Citrix Cloud				
	CustomerId.				

Licenses

uberAgent collects metrics like site name and ID as well as license server for each active license in a site. It also collects Citrix DaaS license usage. Please note that license details are not available for Citrix Cloud Government instances.

Details

- Source type: uberAgent:Citrix:Licenses
- Used in dashboards: Citrix Virtual Apps and Desktops Licensing
- Enabled through configuration setting: CitrixDCLicenseInformation
- Related configuration settings: n/a
- Supported platform: Windows, Citrix Virtual Apps and Desktops on-premises

Field	Description	Data type	Unit	Example
SiteName	Related Citrix site name.	String		vl-Site
SiteGuid	Related Citrix site GUID.	String		0a0fda60-aebf- 4ac0-920d- 44bd509ca927
LicenseServer	License server. CVAD only.	String		licsrv1
LicenseProductNa	meicense product name. Possible values CVAD: XDS, XDT, MPS. Possible values DaaS: arbitrary.	String		XDT
LicenseEdition2	License edition. Possible values CVAD: PLT, ENT, APP, STD, ADV. Possible values DaaS: arbitrary.	String		PLT

Field	Description	Data type	Unit	Example
LicenseExpirationD	a te cense	String		2019-04-16
	expiration date.			02:00:00.000
	CVAD & DaaS.			+0200
LicenseSubscription Aitkensta geDate		String		2019-03-16
	subscription			02:00:00.000
	advantage date.			+0200
	CVAD only.			
LicenseType	License type.	String		NFR
	CVAD only.			
LicenseTypeLocaliz	e d icense type	String		Not For Resale
	localized. CVAD			
	only.			
LicensesInUse	Indicates how	Number		5
	many licenses are			
	in use. CVAD only.			
LicensesAvailable	Indicates how	Number		100
	many licenses are			
	available. CVAD &			
	DaaS.			
LicenseOverdraft	Indicates how	Number		0
	many overdraft			
	licenses were in			
	use. CVAD only.			
LicenseModel	License model.	String		UD
	Possible values:			
	CCS, UD, CCU.			
	CVAD only.			
CustomerId	CustomerId.	String		a230abcdej1e
	DaaS only.			
LicenseUserUsage	User license	Number		3
· ·	usage. DaaS only.			
LicenseDeviceUsag	e Device license	Number		7
9	usage. DaaS only.			

Field	Description	Data type	Unit	Example	Where available
LicenseProduct	Disiptent teame product name. Possible values CVAD: XenDesktop (Legacy), XenDesktop , XenApp. Possible values DaaS: same as LicenseProd	String		XenDesktop	Splunk data model, Splunk SPL
LicenseEditionD	Dispitation. Possible values CVAD: Platinum Edition, Enterprise Edition, App Edition, VDI Edition, Advanced Edition. Possible values DaaS: same as LicenseEdit.	String		Platinum Edition	Splunk data model, Splunk SPL

Field	Description	Data type	Unit	Example	Where available
LicenseModelD	isplayName model. Possible values: Concurrent , User/ Device, Concurrent	String		User/Device	Splunk data model, Splunk SPL

Machines

uberAgent collects metrics like machine name and ID as well as the load index for each machine in a site. The terms "desktop group" and "delivery group" are used interchangeably.

Details

- Source type: uberAgent:Citrix:Machines
- Used in dashboards: Citrix Virtual Apps and Desktops Machines, Citrix Virtual Apps and Desktops
- Enabled through configuration setting: CitrixDCMachine
- Related configuration settings: n/a
- Supported platform: Windows, Citrix Virtual Apps and Desktops on-premises, Citrix Cloud

Field	Description	Data type	Unit	Example
Id	Machine ID.	String		10
Sid	Machine SID.	String		S-1-5-21- 3286265390- 2319899195- 874027928-2628

Field	Description	Data type	Unit	Example
Name	Machine name with Active Directory	String		Domain\VM1
NameHost	domain. Machine name without Active Directory domain.	String		VM1
SiteName	Related Citrix site name.	String		vl-Site
SiteGuid	Related Citrix site GUID.	String		0a0fda60-aebf- 4ac0-920d- 44bd509ca927
EffectiveLoadIndex	Effiective load index.	Number		10000
DnsName	Machine name with full qualified domain name.	String		VM1.domain.ad
LifecycleState	Lifecycle state. Possible values: 0, 1, 2, 3.	Number		1
IPAddress	IP address.	String		10.1.1.100
HostedMachineId	Hypervisor identifier for this Machine.	String		F8143B4F-7371- 4efa-868A- 54787EF9F64E
HostingServerNam	e DNS name of the hypervisor that is hosting the machine if managed.	String		XenServer1.domain.ad
HostedMachineNar	_	String		XenServer1

Field	Description	Data type	Unit	Example
IsAssigned	Indicates if	String		1
	machine is			
	assigned.			
	Possible values:			
	0, 1.			
IsInMaintenanceModlendicates if		String		0
	machine is in			
	maintenance			
	mode. Possible			
	values: 0, 1.			
IsPendingUpdate	Indicates if	String		0
	machine is in			
	pending update			
	state. Possible			
	values: 0, 1.			
AgentVersion	Citrix VDA	String		7.15.1000.150
	version.	_		
AssociatedUserFul	lN Eเทโตร ames of the	String		Testuser 1
	users that have			
	been associated			
	with the machine.			
	Associated users			
	are the current			
	user(s) for shared			
	machines and the			
	assigned users for			
	private machines.			
AssociatedUserNa	medsernames of the	String		AD\Testuser1
	users that have	_		
	been associated			
	with the machine.			
	Associated users			
	are the current			
	user(s) for shared			
	machines and the			
	assigned users for			
	private machines.			
	-			

Field	Description	Data type	Unit	Example
AssociatedUserUP	NsThe User	String		Testuser1@domain.ac
	Principal Names			
	of the users			
	associated with			
	the machine.			
	Associated users			
	are the current			
	user(s) for shared			
	machines and the			
	assigned users for			
	private machines.			
CurrentRegistration Starte ent		Number		1
	registration state.			
	Possible values:			
	0, 1, 2.			
Registration State C	haDnagteeDnatheen the	String		2018-07-29
	registration state			03:03:43.953
	changed.			+0200
LastDeregisteredCo	odMachine's last	Number		207
	deregistration			
	code. Possible			
	values: too many			
	to list here.			
	Please have a			
	look at the			
	citrix_deregi	strationreasonco	ode	
	lookup.			
LastDeregisteredDa	at ⊌ lachine's last	String		2018-07-29
Ö	deregistration	J		02:33:34.037
	date.			+0200
CurrentPowerState		Number		9
	state. Possible			
	values: 0, 1, 2, 3,			
	4, 5, 6, 7, 8, 9,			
	10.			
CurrentSessionCou	un € urrent session	Number		20
	count.			

Field	Description	Data type	Unit	Example
ControllerDnsNam	ne Controller name.	String		DDC1.domain.ad
PoweredOnDate	Date when	String		2018-03-16
	machine was			15:18:27.407
	powered on.			+0200
PowerStateChange	eD Dtat e when power	String		2018-03-16
	state changed.			15:18:27.407
				+0200
FunctionalLevel	Functional level.	Number		6
	Possible values:			
	0, 1, 2, 3, 4, 5, 6.			
FailureDate	Date when	String		2018-03-16
	machine failed.			15:18:27.407
				+0200
WindowsConnecti	on \&\eittdlog vs	Number		1
	connection			
	setting. Possible			
	values: 0, 1, 2, 3,			
	4.			
IsPreparing	Indicates if the	String		0
	machine is in			
	preparing state.			
	Possible values:			
	0, 1.			
FaultState	Fault state.	Number		1
	Possible values:			
	0, 1, 2, 3, 4, 5.			
CatalogId	Related catalog	String		10
Dealte - Cue wald	ID.	Ctuin -		055445-7-412
DesktopGroupId	Related desktop	String		05bddbe7-cf12-
	group ID.			4ee2-ab02-
HypervisorId	Related	String		93d0428d3847 10
rrypervisoria	hypervisor ID.	String		10
Hash	Hash.	String		CC7200E01AEED2402700B7D
		String		CC7380E01A5FD3403708B7D
MachineRole	Machine role.	Number		2
	Possible values:			
	0, 1, 2.			

Field	Description	Data type	Unit	Example
HypervisorDispla	yNa Rel ated hypervisor name.	String		XenServer1
CatalogDisplayNa	ameRelated catalog name.	String		Finance machines
DesktopGroupDis	spla Relantee l desktop group name.	String		Finance
CreatedDate	Machine creation date.	String		2018-03-16 14:16:07.008 +0200
ModifiedDate	Machine modification date.	String		2018-03-16 14:16:07.008 +0200.
Tags	Configured tags.	String		Germany France
CustomerId	Citrix Cloud Customerld.	String		a230abcdej1e

Field	Description	Data type	Unit	Example	Where available
LifecycleStateD	isplædyahestate name. Possible values: Active, Deleted, RequiresRes	String		Active	Splunk data model, Splunk SPL
IsVDA	Indicates if machine is a VDA. Possible values: 0, 1. Is 1 if field MachineRole is either Vda or Both.	String eDisplayName		1	Splunk data model

					Where
Field	Description	Data type	Unit	Example	available
IsVDANumber	Indicates if machine is a VDA. Possible values: 0, 1. Is 1 if field	Number		1	Splunk data model
	is either Vda	DisplayName			
IsDDC	or Both. Indicates if machine is a DDC. Possible values: 0, 1. Is 1 if field	String		1	Splunk data model
	is either Ddc	DisplayName			
IsRegistered	or Both. Indicates if machine registered.	String		1	Splunk data model
	Possible values: 0, 1. Is 1 if field				
	CurrentRegiis 1.	strationSta	te		
IsRegisteredNu	mbædicates if machine registered. Possible values: 0, 1. Is 1 if field	Number		1	Splunk data model
	CurrentRegi is 1.	strationSta	te		

Field	Description	Data type	Unit	Example	Where available
CurrentRegis	registration state. Possible values: Unknown, Registered , Unregister			Registered	Splunk data model, Splunk SPL
LastDeregisto	ered Whate Disp's dans to deregistration code. Possible values: too many to list here. Please have a look at the citrix_der lookup.	Ū	reasoncode	ContactLost	Splunk data model, Splunk SPL
CurrentPowe	state. Possible values: Unknown, Unavailabl ,Off,On, Suspended, TurningOn, TurningOff , Suspending ,Resuming, Unmanaged, NotSupport	e		Unmanaged	Splunk data model, Splunk SPL

Field	Description	Data type	Unit	Example	Where available
FunctionalLeve	lDFsplatiblaahe level. Possible values: Unknown, L5, L7, L7_6, L7_7, L7_8, L7_9 / MAX	String		L7_9 / MAX	Splunk data model, Splunk SPL
WindowsConne	ctivinslettingDisp connection setting. Possible values: Unknown, LogonEnable , Draining, DrainingUnt	ed tilRestart		Unknown	Splunk data model, Splunk SPL
FaultStateDispl	ay Manhetate. Possible values: Unknown, None, FailedToSta , StuckOnBoot , Unregistere , MaxCapacity	ed		None	Splunk data model, Splunk SPL

Field	Description	Data type	Unit	Example	Where available
MachineRoleDisp MayOhime role. Possible values: Vda, Ddc, Both.		String		Both	Splunk data model, Splunk SPL
TagsSplit	Tags split by semicolon.	String		Germany;Fran	ce Splunk data model
SiteNameExtendedte name including the Citrix Cloud CustomerId.		String		cloudxdsite (a230abcdej1e	Splunk data) model

Machine Catalogs

uberAgent collects metrics like catalog name and ID as well as site name for each machine catalog in a site.

Details

- Source type: uberAgent:Citrix:Catalogs
- Used in dashboards: Citrix Virtual Apps and Desktops Machines
- Enabled through configuration setting: CitrixDCCatalog
- Related configuration settings: n/a
- Supported platform: Windows, Citrix Virtual Apps and Desktops on-premises, Citrix Cloud

Field	Description	Data type	Unit	Example
Id	Machine catalog ID.	String		10
Name	Machine catalog name.	String		Finance machines
SiteName	Related Citrix site name.	String		vl-Site

Field	Description	Data type	Unit	Example
SiteGuid	Related Citrix site GUID.	String		0a0fda60-aebf- 4ac0-920d- 44bd509ca927
LifecycleState	Lifecycle state. Possible values: 0, 1, 2, 3.	Number		0
ProvisioningType	Provisioning type. Possible values: 0, 1, 2, 3.	Number		1
PersistentUserChar	where user changes should be saved. Possible values: 0, 1, 2, 3.	Number		1
IsMachinePhysical	Indicates if machine catalog contains physical machines. Possible values: 0, 1.	String		0
AllocationType	Allocation type. Possible values: 0, 1, 2, 3.	Number		2
SessionSupport	Indicates a machine catalog's session support. Possible values: 0, 1, 2.	Number		1
ProvisioningSchem		String		0a0fda60-aebf- 4ac0-920d- 44bd509ca927
CreatedDate	Machine catalog creation date.	String		2018-03-16 14:16:07.008 +0200
ModifiedDate	Machine catalog modification date.	String		2018-03-16 14:16:07.008 +0200

Field	Description	Data type	Unit	Example
CustomerId	Citrix Cloud	String		a230abcdej1e
	CustomerId.			

Field	Description	Data type	Unit	Example	Where available
CatalogId	Content of	String		10	Splunk data
	field Id.				model
LifecycleState	Dis plædyahee tate	String		Active	Splunk data
	name.				model,
	Possible				Splunk SPL
	values:				
	Active,				
	Deleted,				
	RequiresRes	solution			
	,Stub.				
ProvisioningT	ype Drioplaiydhamg e	String		MCS	Splunk data
	type. Possible				model,
	values:				Splunk SPL
	Unknown,				
	MCS, PVS,				
	Manual.				
PersistentUse	rCh lamdjeaDeispil ayN	an Se ring		Discard	Splunk data
	and where				model,
	user changes				Splunk SPL
	should be				
	saved.				
	Possible				
	values:				
	Unknown,				
	Discard,				
	OnLocal,				
	OnPvd.				

Field	Description	Data type	Unit	Example	Where available
AllocationTypeDi &bllagataon e		String		Random	Splunk data
	type. Possible				model,
	values:				Splunk SPL
	Unknown,				
	Static,				
	Random,				
	Permanent.				
SessionSupportI	Dli splagtes nae	String		SingleSession	Splunk data
	machine				model,
	catalog's				Splunk SPL
	session				
	support.				
	Possible				
	values:				
	Unknown,				
	SingleSessi	on			
	,				
	MultiSessio	n			
SiteNameExtend	l &i te name	String		cloudxdsite	Splunk data
	including the			(a230abcdej1e)	model
	Citrix Cloud				
	CustomerId.				

Machine Metrics

September 7, 2025

Machine Crashes & Hangs Metrics

September 10, 2025

Windows Blue Screens and Hangs

uberAgent collects information on every blue screen and hang, like the type of error (blue screen, hard power off or hang) and the stop error code.

Details

• Source type: uberAgent:System:Bugcheck

• Used in dashboards: Stop Errors (Blue Screen & Power Loss)

• Enabled through configuration setting: ApplicationErrors

• Related configuration settings: n/a

• Supported platform: Windows

Field	Description	Data type	Unit	Example
BugcheckCode	Stop error code ID. Possible values: too many to list here. Please check the lookup file bugcheck_code .csv or Microsoft's bug check code	Number		0x1
reference. BugcheckParameter Stop error parameter 1. The meaning of this value depends on the bugcheck code and can be looked up in Microsoft's bug check code reference.		String		0x7ffd8e8c7864

Field	Description	Data type	Unit	Example
BugcheckParamet	er % top error	String		0x1
	parameter 2. The			
	meaning of this			
	value depends on			
	the bugcheck			
	code and can be			
	looked up in			
	Microsoft's bug			
	check code			
	reference.			
BugcheckParamet	er 3 top error	String		0x0
	parameter 3. The			
	meaning of this			
	value depends on			
	the bugcheck			
	code and can be			
	looked up in			
	Microsoft's bug			
	check code			
	reference.			
BugcheckParamet	er \$ top error	String		0xffffe181ead22b8
	parameter 4. The			
	meaning of this			
	value depends on			
	the bugcheck			
	code and can be			
	looked up in			
	Microsoft's bug			
	check code			
	reference.			
SleepInProgress	Indicates if the	Number		0
	machine was in			
	sleep mode when			
	stop error			
	occurred.			
	Possible values:			
	0, 1.			

Field	Description	Data type	Unit	Example
PowerButtonTime	esta nф cates if the	Number		13176817100318250
	power button on			
	the computer			
	was pushed and			
	held for at least			
	four seconds.			
	Possible values:			
	0 or Windows			
	FILETIME			
	timestamp of			
	when the power			
	button was			
pressed.				
PowerButtonTimesta nфEateshi f the		Number		1532343500318
	power button on			
	the computer was			
	pushed and held			
	for at least four			
	seconds. Possible			
	values: 0 or Unix			
	epoch timestamp			
	of when the			
	power button			
	was pressed.			
BootAppStatus	n/a	String		0
Checkpoint	n/a	Number		0
ConnectedStand	oyIn Picbigatess if the	String		0
	machine was in			
	connected			
	standby mode			
	when a stop error			
	occurred.			
	Possible values:			
	0, 1.			

Field	Description	Data type	Unit	Example
SystemSleep1	Fransitions Teachine was in the transition from sleep to on mode when a stop error occurred. Possible values:	Number		0
CsEntryScena	0, 1. rioInst an⁄a eId	Number		0

Field	Description	Data type	Unit	Example	Where available
BugcheckCodeDi Spbbpy&taror e		String		Hard power	Splunk data
	code name.			off	model
	Possible				
	values: too				
	many to list				
	here. Please				
	check the				
	lookup file				
	bugcheck_c	odes			
	.csv or				
	Microsoft's				
	bug check				
	code				
	reference.				

Interpreting the Data

The data collected by uberAgent helps to identify three different types of blue screens and hangs:

"Normal" Bugcheck Conditions:

• BugcheckCode > 0

Explanation: the bugcheck code can be determined and written to disk before the computer shuts down or restarts.

Hard Power Off Conditions:

• PowerButtonTimestamp > 0

Explanation: the machine was turned off by pressing and holding the power button for at least 4 seconds.

Random Restart Conditions:

- BugcheckCode = 0
- PowerButtonTimestamp = 0

Explanation: power loss or hard hang.

macOS Kernel Panics

uberAgent collects information on every macOS kernel panic and reports details like bug type, kernel version and more.

Details

- Source type: uberAgent:System:MacOsErrors
- Enabled through configuration setting: ApplicationErrors
- Related configuration settings: n/a
- Supported platform: macOS

Field	Description	Data type	Example
KernelBuild	The macOS build version that the system was running when the panic occurred.	String	macOS 14.1 (23B74)

Field	Description	Data type	Example
KernelProduct	The model identifier for the machine.	String	Mac13,1
KernelVersion	The version of the Darwin kernel that was running.	String	Darwin Kernel Version 23.1.0: Mon Oct 9 21:27:24 PDT 2023; root:xnu- 10002.41.9~6/RELEASE_ARM64_T6
KernelIncident	A unique identifier for the specific panic incident.	String	0039B7C3-9D24-4DF4- B08F-432475FCA067
KernelCrashReporterKey	A unique identifier that helps Apple track the crash report without revealing personal information.	String	7E439903-F3C7-16EB- ED55-F393AE09615C
KernelPanicString	The actual panic message which contains the reason for the panic. CPU state and the call stack leading up to the panic are excluded.	String	panic(cpu 2 caller 0xfffffe001a373598): dtrace: panic action at probe dtrace:::BEGIN (ecb 0xfffffe1b2f31a140) @dtrace.c:6673
KernelPanicFlags	Flags that provide additional information about the panic, useful for debugging.	String	0x802
KernelBugType	An internal Apple classification code for the type of crash or panic. Available from macOS 14 (Sonoma) upwards.	Number	210
KernelErrorType	The type of system error that occurred. Value 1 indicates system error type Crash	Number	1

Machine Inventory Metrics

December 11, 2025

Machine Inventory

Contains inventory metrics for machines like operating system name and hardware manufacturer.

Details

- Source type: uberAgent:System:MachineInventory
- Used in dashboards: Machine Inventory, Single Machine Inventory, Single Application Inventory, Update Inventory
- Enabled through configuration setting: MachineInventory
- Related configuration settings: n/a

Field	Description	Data type	Unit	Example	Platform
OsName	Operating system name	String		Windows 7 Enterprise	all
OsSpName	Operating system service pack name	String		Service Pack 1	Win
OsVersion	Operating system version	Number		6.1	all
OsBuild	Operating system build	Number		7601	Win
OsBuildString	Operating system build	String		19D76	macOS

Field	Description	Data type	Unit	Example	Platform
OsUpdateBuildi	R @pæcat ing system Update Build Revision number.	Number		165	Win
OsArchitecture	Operating system architecture	String		x64	all
OsSpVersion	Operating system service pack version	Number		1.0	Win
OsType	Operating system type. Possible values: Client, Domain Controller ,Server, Terminal Server	String		Client	all
OsInstallDate	Operating system installation date.	String		2018-04-13	all
HwManufacture	manufacturer	String		LENOVO	all
HwModel	Hardware model	String		ThinPad T470s	all
HwBiosVersion	Hardware bios version	String		N1WET46W (1.25)	Win
AdDomainDns	Active Directory DNS domain name	String		Citrix.com	Win
AdDomainNetBi	iosctive Directory NetBios name	String		CITRIX	Win

Field	Description	Data type	Unit	Example	Platform
AdSite	Active	String		Default-First-	Win
	Directory site			Site-Name	
AdOu	Active	String		Citrix/Comput	ters Wih ients
	Directory				
	organizational				
	unit				
ComputerName	eDîomputer	String		CN=Client1,O	U= Oli⁄e mts,OU=Compu
	name Dn				
	formatted				
ComputerName	-	String		citrix.com/Co	mp \/vin s/Clients/Clien
	name				
	canonical				
C. F. N.	formatted	C 1 ·		611 . E	\A.C.
CtxFarmName	Citrix [®] farm	String		Citrix Farm	Win
CtyMachineCata	name al ©ġtviame achine	String		Machine	Win
CtxMacrimeCata	_	String			VVIII
Cty Dolivory Cro	catalog name	Ctring		Catalog 1	Min
CtxDeliveryGro		String		Delivery	Win
DAMC:CD	group name	Ni wala au	CD	Group 1	- II
RAMSizeGB	RAM size	Number	GB	15.86	all
PowerSupports	C omdieated S itandl	byString		0	Win
	the operating				
	system				
	supports				
	Connected				
	Standby.				
	Possible				
	values: 0, 1				
PowerSupports	S1ndicates if	String		0	Win
	the operating				
	system				
	supports				
	sleep state S1.				
	Possible				
	values: 0, 1				

Field	Description	Data type	Unit	Example	Platform
PowerSupports	sS2ndicates if	String		0	Win
	the operating				
	system				
	supports				
	sleep state S2.				
	Possible				
	values: 0, 1				
PowerSupports	sS3ndicates if	String		0	Win
	the operating				
	system				
	supports				
	sleep state S3.				
	Possible				
	values: 0, 1				
PowerSupports	sS 4 ndicates if	String		1	Win
	the operating				
	system				
	supports				
	sleep state S4.				
	Possible				
	values: 0, 1				
PowerSupports	sS 5 ndicates if	String		1	Win
	the operating				
	system				
	supports				
	sleep state S5.				
	Possible				
	values: 0, 1				
IsUpsPresent	Indicates if	String		0	all
	there is an un-				
	interruptible				
	power supply				
	(UPS) present.				
	Possible				
	values: 0, 1				

Field	Description	Data type	Unit	Example	Platform
IsBatteryPrese	ent Indicates if	String		1	all
isbatter yr rese	there is a	String		1	att
	battery				
	present.				
	Possible				
Dattan Maari	values: 0, 1	Niconala au	0/	7.0	-11
BatteryWearLe		Number	%	7.8	all
	battery 				
	capacity gone.				
	The accuracy				
	strongly 				
	depends on				
	the built-in				
CDUN	hardware.	cı :			
CPUName	CPU name	String		Intel(R)	all
				Core(TM)	
				i7-7500U CPU	
				@ 2.70GHz	
CPUSockets	CPU sockets	Number		1	Win
CPUCoresPhys	sicatPU physical	Number		2	all
	cores				
CPUCoresLogi	calCPU logical	Number		4	all
	cores				
CPUMaxMhz	CPU base	Number	MHz	2904	all
	frequency				
HwHypervisor	VenDoebonected	String		Microsoft Hv	Win, Mac
	hypervisor				(Intel)
	technology				
	for this				
	system.				
HwIsVirtualMa	ch ìne licates if	String		0	all
	machine is a	<u> </u>			
	virtual				
	machine.				
	Possible				
	values: 0 ,1				
	values. U,I				

Field	Description	Data type	Unit	Example	Platform
BIOSSerial	BIOS serial	String		YM5S012345	Win
BaseboardSerial	Baseboard serial number	String		50123445	All
IsSipEnabled	Status of the System Integrity Protection	String		1	macOS
OsInstallDateOri	ghate of the first clean operating system installation.	String		2018-04-13	All
CoverageEndDat	tend date of device warranty coverage. Only available if a user signed in with an Apple-ID.	String		2025-01-01	macOS

Field	Description	Data type	Unit	Example	Where available
OsBuildUbr	Operating system build and Update Build Revision combined. For operating systems lower than Windows 10 it is just the content of OsBuild.	Number		17134.165	Splunk data model
HwManufactur	er Mad dware	String		LENOVO	Splunk data
	manufacturer			ThinkPad	model
	and model			T470s	
	combined				

Disk Inventory

Contains inventory metrics for physical disks like disk name and capacity.

Details

- Source type: uberAgent:System:DiskInventory
- Used in dashboards: Machine Storage
- Enabled through configuration setting: MachineInventory
- Related configuration settings: *n/a*

Field	Description	Data type	Unit	Example	Platform
Name	Disk name	String		SAMSUNG MZVLW1T0HML	all
				000L7	11-

Field	Description	Data type	Unit	Example	Platform
Enumerator	Disk enumerator (e.g., IDE, SCSI, USBSTOR)	String		SCSI	all
DiskNumber	Disk number	Number		0	all
CapacityMB	Disk capacity	Number	МВ	976762	all
IsWritable	Indicates if the disk is writable. Possible values: 0, 1	String		1	all
IsRemovable	Indicates if the disk is removable. Possible values: 0, 1	String		0	all

Monitor Inventory

Contains inventory metrics for monitors like resolution and color depth.

Details

- Source type: uberAgent:System:MonitorInventory
- Used in dashboards: Machine Inventory, Single Machine Inventory
- Enabled through configuration setting: MachineInventory
- Related configuration settings: *n/a*

Field	Description	Data type	Unit	Example	Platform
MonitorIndex	Monitor index	Number		1	all

Field	Description	Data type	Unit	Example	Platform
MonitorHRes	Monitor	Number		3440	all
	horizontal				
	resolution				
MonitorVRes	Monitor	Number		1440	all
	vertical				
	resolution				
${\sf MonitorColorD}$	ep M onitor color	Number		32	all
	depth				
MonitorIsPrima	aryIndicates if	String		1	all
	monitor is the				
	primary one.				
	Possible				
	values: 0, 1				
MonitorDisplay	N a⁄me itor name	String		Generic PnP	all
-		-		Monitor	

Network Configuration Information

Contains inventory metrics for network connections like interface type and SSIDs.

Details

- Source type: uberAgent:System:NetworkConfigInformation
- Used in dashboards: Machine Inventory, Single Machine Inventory, Machine Network Configuration
- Enabled through configuration setting: NetworkConfigInformation
- Related configuration settings: *n/a*

Field	Description	Data type	Unit	Example	Platform
NetworkConfig	Fr NeeldWyNla me friendly name	String		WiFi	all

Field	Description	Data type	Unit	Example	Platform
NetworkCo	onfigD esetipolid en description	String		Intel(R) Dual Band Wireless-AC	all
				8265	
NetworkCo	onfigIn terface rType	Number		71	all
	interface type				
	ID. Possible				
	values: 0, 6,				
	23, 63, 71,				
	243				
NetworkCo	onfigIn t\ertaværli ypeDisp	lastNagne		WiFi	all
	interface type				
	name.				
	Possible				
	values:				
	Other,				
	Ethernet,				
	VPN, ISDN,				
Naturadica	WiFi, WWAN	Chrima		fuite bay	الم
NetworkCo	onfigDn isStwffbx k DNS suffix	String		fritz.box	all
NetworkCo	onfigSs Ne twork SSID	String		HomeWiFi	all
	_	· ·			
NetworkCo	onfigls Crootine et de di fToInto	ebieng		1	all
	network is connected to				
	the Internet.				
	Possible				
	values: 0, 1				
NetworkCo	onfigIP l pN4 address	IPv4		192.168.178.40	all
	onfigIP \p 6v6 address	String		2001:0db8:85a	3:0 d0 0:0000:8a2e:0370:7334
				AC-ED-5C-02-	all
networkco	onfigM A/CA/Claldels sess	String		F0-30	all
NetworkCo	onfigW WiSigingnl@l uality	Number	%	100	all
Networked	quality	Number	70	100	att
NetworkCo	onfigW WiF ype	Number		7	all
	connection	.10.11001		•	
	type				
	2760				

Field	Description	Data type	Unit	Example	Platform
NetworkConf	igW Wi Au abeheict it	ionNumber		7	all
	cation				
	method				

Field	Description	Data type	Unit	Example	Where available
	I				
Ipv4Address	Ipv4 address	IPv4		192.168.178.40	Splunk data model
NetworkConfig	;W MiFÿþyepDei splayl	Na Ste ing		IEEE 802.11n	Splunk data
	display name				model
NetworkConfig	;W ik∀iÆüalbelneio datio	on Disiplg yName		WPA2	Splunk data
	cation display				model
	name				

Volume Inventory

Contains inventory metrics for volumes like capacity and filesystem.

Details

- Source type: uberAgent:System:VolumeInventory
- Used in dashboards: Machine Storage
- Enabled through configuration setting: MachineInventory
- Related configuration settings: n/a

Field	Description	Data type	Unit	Example	Platform
Guid	Volume GUID	String		{d4eadd95- 6dce-426e- b55b- 521800346789}	all
DeviceName	Device name	String		DeviceHarddis	
Label	Volume label	String		Windows	all
FileSystem	Volume file system	String		NTFS	all
MountPoints	Volume mount points	String		С	all
DiskNumbers	Disk numbers	String		0	all
FreeMB	Volume free capacity	Number		695395	all
CapacityMB	Volume capacity	Number		975485	all
UsedSpacePerc	ei V folume used space	Number	%	29	all
PartitionStyle	Volume partition style	String		GPT	all
IsSystemVolum	e Indicates if volume is a system volume. Possible values: 0, 1	String		1	Win
IsBootVolume	Indicates if volume is a boot volume. Possible values: 0, 1	String		1	all

Field	Description	Data type	Unit	Example	Platform
IsDirty	Indicates if volume has a dirty bit. If yes, the volume might be corrupted. Possible values: 0, 1	String		0	Win

Field	Description	Data type	Unit	Example	Where available
IsBootVolumeN	u mble rates if volume is a boot volume. Possible values: 0, 1	Number		1	Splunk data model
IsDirtyNumber	Indicates if volume has a dirty bit. If yes, the volume might be corrupted. Possible values: 0, 1	Number		0	

Machine Performance And Utilization Metrics

September 12, 2025

GPU Usage

uberAgent collects information about GPU compute and memory usage.

Details

• Source type: uberAgent:System:GpuUsage

• Used in dashboards: Machine GPU, Analyze data over time

• Enabled through configuration setting: GpuUsage

• Related configuration settings: n/a

• Supported platform: Windows

List of Fields in the Raw Agent Data

Field	Description	Data type	Unit	Example
DisplayAdapterNam	n € PU name.	String		Intel(R) HD Graphics 520
DisplayAdapterInde	exGPU index.	Number		1
MemorySharedMB	Shared memory usage.	Number	МВ	512
MemoryDedicatedN	MBedicated memory usage.	Number	МВ	64
MemorySharedPero	ce sht ared memory usage.	Number	%	50
MemoryDedicatedF	Pe Dexhit ated memory usage.	Number	%	50
MemorySharedSize	Mshared memory size.	Number	МВ	1024
MemoryDedicatedS	si ÆMÆ cated memory size.	Number	МВ	128
ComputeUsagePero	ceCntrAllEuntgeinuesage for all engines.	Number	%	10.00

					Where
Field	Description	Data type	Unit	Example	available
DisplayAdapterIn dexEinal ex -		Number		1	Splunk data
	validated.				model

GPU Usage per Engine

uberAgent collects information about GPU compute usage per engine. This requires Windows 10 1709 or newer. On older versions of Windows ComputeUsagePercentEngineN is populated instead.

Details

• Source type: uberAgent:System:GpuUsageEngine

• Used in dashboards: Machine GPU

• Enabled through configuration setting: GpuUsage

• Related configuration settings: *n/a*

• Supported platform: Windows

List of Fields in the Raw Agent Data

Field	Description	Data type	Unit	Example
DisplayAdapterInd	exGPU index.	Number		1
GpuEngineIndex	GPU engine index.	Number		8
GpuEngineType	GPU engine type ID. Possible	Number		4
	values: 0, 1, 2, 3, 4, 5, 6, 7, 8.			
GpuEngineCompu	te GsageAgine nt compute usage.	Number	%	10.00

Field	Description	Data type	Unit	Example	Where available
GpuEngine	·Combih@d∪'' +	String		GPU1-E8-	Splunk data
	DisplayAda +"-E"+	pterIndex		Video processing	model
	GpuEngineI +"-"+	ndex			
	GpuEngineT	ypeDisplayN	ame		
GpuEngine	TypeDGPlagNgime	String		Video	Splunk data
	type name.			processing	model
	Possible				
	values:				
	Other,3D,				
	Video				
	decode,				
	Video				
	encode,				
	Video				
	processing				
	,				
	Scene				
	assembly,				
	Copy,				
	Legacy				
	overlay,				
	Crypto.				

SMB Client Performance

uberAgent collects metrics per network share the endpoint is connected to, such as share path and latency.

Details

- Source type: uberAgent:System:SmbClient
- Used in dashboards: SMB Client Performance, Machine Storage, Machine Uptime, Analyze data over time

• Enabled through configuration setting: SMBClientSharePerformance

• Related configuration settings: *n/a*

• Supported platform: Windows

List of Fields in the Raw Agent Data

Field	Description	Data type	Unit	Example
SharePath	Share path.	String		\dc1\home
IOPSRead	I/O operations read.	Number		100
IOPSWrite	I/O operations write.	Number		100
IOPSMetadata	I/O operations metadata.	Number		100
IOCountRead	Count of read I/O operations.	Number		20
IOCountWrite	Count of write I/O operations.	Number		20
IOCountMetadata	Count of metadata I/O operations.	Number		20
IOMBRead	Amount of read I/O operation data volume.	Number	МВ	30
IOMBWrite	Amount of write I/O operation data volume.	Number	МВ	30
IOLatencyMsRead	Latency of read I/O operations.	Number	ms	5
IOLatencyMsWrite	Latency of write I/O operations.	Number	ms	5

Field	Description	Data type	Unit	Example	Where available
IOPSRW	IOPSRead+ IOPSWrite.	Number		200	Splunk data model
IOCountRW	IOCountRead + IOCountWrite			40	Splunk data model
IODurationRead	MIsOLatencyMs x IOCountRead	RNambber	ms	100	Splunk data model
IODurationWrite	M©LatencyMs x IOCountWrit		ms	100	Splunk data model
IODurationRWM	sIODurationR + IODurationW		ms	200	Splunk data model
IOMBRW	IOMBRead+ IOMBWrite.	Number	МВ	60	Splunk data model
IOMBPSRW	IOMBRW/ IOCountRWx IOPSRW.	Number	МВ	300	Splunk data model
IOLatencyMsRW	IOLatencyMs + IOLatencyMs		ms	10	Splunk data model

System Performance Summary

Details

- Source type: uberAgent:System:SystemPerformanceSummary2
- Used in dashboards: Machine Performance, SBC Sizing and Capacity Planning, Single Machine

Detail, Analyze data over time

- Enabled through configuration setting: SystemPerformanceSummary
- Related configuration settings: *n/a*

Field	Description	Data type	Unit	Platform	Example
CPUUsagePerce	en € PU usage.	Number	%	all	20.45
RAMUsagePerce	enRAM usage.	Number	%	all	12
RAMUsageGB	RAM usage.	Number	GB	all	50
IOPSRead	I/O operations read.	Number		all	200
IOPSWrite	I/O operations write.	Number		all	200
IOCountRead	Count of read I/O operations.	Number		all	100
IOCountWrite	Count of writel/O operations.	Number		all	100
IOMBRead	Amount of read I/O operation data volume.	Number	МВ	Windows	150
IOMBWrite	Amount of write I/O operation data volume.	Number	МВ	Windows	150
IOLatencyMsRe	ad atency of read I/O operations.	Number	ms	all	300
IOLatencyMsWr	iteatency of write I/O operations.	Number	ms	all	300
IOPercentDiskT	•	Number	%	Windows	20

Field	Description	Data type	Unit	Platform	Example
NetUtilizationPe	r tkentv ork utilization.	Number	%	Windows	15
KernelPagedMB		Number	МВ	all	100
KernelNonPaged	Mernel non-paged memory usage.	Number	МВ	all	300
HandleCount	On Windows: Handle count. On macOS: Number of open file descriptors.	Number		all	17
ThreadCount	Thread count.	Number		all	63
IdlenessPercent	Status of the idle timer expressed as a percentage. When this value reaches 100%, the system is considered completely idle, and the OS shows the screen saver or turns the display off (depending on the configuration).	Number	%	Windows	50

Field	Description	Data type	Unit	Platform	Example
CPURelative	Frequilwane cay green t	Number	%	Windows	21
	actual CPU				
	frequency as a				
	Percentage of				
	the base				
	frequency.				
PagefileTotal	lSize @B gefile total	Number	GB	all	8
	size.				
PagefileUsag	gePer Røge file	Number	%	all	60
	usage.				
PagefileIOPS	Rea d Pagefile I/O	Number		Windows	300
	operations				
	read.				
PagefileIOPS	SWrit e agefile I/O	Number		Windows	300
	operations				
	write.				

Field	Description	Data type	Unit	Example	Where available
TotalRamGb	Total RAM size.	Number	ms	24	Splunk data model
IOPS	IOPSRead+ IOPSWrite.	Number		400	Splunk data model
IOCount	<pre>IOCountRead + IOCountWrit</pre>			200	Splunk data model
		C			
IOMB	IOMBRead+ IOMBWrite.	Number	МВ	300	Splunk data model
IOMBPS	IOMB/ IOCountx IOPS.	Number		600	Splunk data model

Field	Description	Data type	Unit	Example	Where available
IOLatencyMs	IOLatencyMs + IOLatencyMs			600	Splunk data model
IODurationRead	MEOLatencyMs x IOCountRead		ms	30000	Splunk data model
IODurationWrit	eMsOLatencyMs x IOCountWri		ms	30000	Splunk data model
IODurationMs	IODuration + IODuration .		ms	60000	Splunk data model
User	User name. Always empty.	Number			Splunk data model

Computer Startup, Shutdown & Hibernation Metrics

September 7, 2025

Boot Processes Metrics

September 10, 2025

Boot Processes

uberAgent collects detailed information about each process running during the boot process like the command line and latency.

Note

This metric is only available on client operating systems.

Details

• Source type: uberAgent:OnOffTransition:BootProcesses

• Used in dashboards: Single Boot Duration

• Enabled through configuration setting: BootDetail

Related configuration settings: n/aSupported platform: Windows

Field	Description	Data type	Unit	Example
ProcName	Process name.	String		svchost.exe
ProcID	Process ID.	Number		456
ProcParentID	Parent process ID.	Number		789
ProcStartTimeRelat	ti ReWa tive process start time.	Number	ms	100
ProcLifetimeMs	Process lifetime.	Number	ms	50
ProcCmdline	Process commandline.	String		C:\WINDOWS\system32 -k DcomLaunch -p
ProcIOReadCount	Count of process I/O read operations.	Number		91
ProcIOWriteCount	Count of process I/O write operations.	Number		97
ProcIOReadMB	Amount of process I/O read operations data volume.	Number	МВ	50
ProcIOWriteMB	Amount of process I/O write operations data volume.	Number	МВ	50

Field	Description	Data type	Unit	Example
ProcIOLatencyRead	dNPsrocess I/O read operations latency.	Number	ms	30
ProcIOLatencyWrit	eMsocess I/O write operations latency.	Number	ms	30
SessionID	Unique identifier that is generated by the machine when the session is created. Will be reassigned to other sessions after logoff.	Number		3
TotalBootDuration	M¶otal boot duration.	Number	ms	500000
SortOrder2	Sort order number to sort the table Boot process performance on the Single Boot dashboard correctly.	Number		29
BootUID	Unique UID for a boot generated by uberAgent.	String		00000408-0049- 004b-0bb9- 8ed17e25d401

Field	Description	Data type	Unit	Where available	Example
SortOrder	Sort order number to sort the table Boot process performance on the Single Boot dashboard correctly.	Number		Splunk data model	1

Boot Process Detail

uberAgent collects detailed information about each process running during the boot process like the disk IO and latency.

Note

This metric is only available on client operating systems.

Details

- Source type: uberAgent:OnOffTransition:BootProcessDetail
- Used in dashboards: Single Boot Duration
- Enabled through configuration setting: BootDetail
- Related configuration settings: n/a
- Supported platform: Windows

Field	Description	Data type	Unit	Example
ProcessName	Process name.	String		svchost.exe
ProcessIOReadCou	In ℃ ount of process I/O read operations.	Number		91

Field	Description	Data type	Unit	Example
ProcessIOWriteCou	n€ount of process I/O write operations.	Number		97
ProcessIOReadMB	Amount of process I/O read operations data volume.	Number	МВ	50
ProcessIOWriteMB	Amount of process I/O write operations data volume.	Number	МВ	50
ProcessIOLatencyM		Number	ms	60
BootUID	Unique UID for a boot generated by uberAgent.	String		00000408-0049- 004b-0bb9- 8ed17e25d401

				Where	
Field	Description	Data type	Unit	available	Example
ProcessIOCour	nt ProcessIORead	Co Nunti+lPe ocessIC)WriteCount.	Splunk data model	188
ProcName	Process	String		Splunk data	chrome.exe
	name.			model	

Computer Startup (Machine Boot) Metrics

September 10, 2025

Boot Detail

uberAgent collects metrics about computer startup duration including Smss initialization as well as autostart services. The metrics in this section are based on the Microsoft documents Windows On/Off Transitions Solutions Guide and Post On/Off Duration.

Details

- Source type: uberAgent:OnOffTransition:BootDetail2
- Used in dashboards: Boot Duration, Single Boot Duration
- Enabled through configuration setting: BootDetail
- Related configuration settings: n/a
- Supported platform: Windows

Field	Description	Data type	Unit	Example
KernelInitTimeMs	Time from the beginning to the start of the first smss.exe process.	Number	ms	1683
SmssInitTimeMs	Time from the start of the first smss.exe process to the start of the second smss.exe process (in session 0).	Number	ms	4007
AutoCheckTimeMs	Auto check time. More information.	Number	ms	20

Field	Description	Data type	Unit	Example
Session0InitDuration	ßes sion 0	Number	ms	9572
	initialization			
	duration: from			
	the start of the			
:	second smss.exe			
	process to the			
:	start of			
,	wininit.exe.			
Session1InitDuration	ßes sion 1	Number	ms	71
	initialization			
1	duration: from			
	the start of the			
	third smss.exe			
	process (in			
:	session 1) to the			
!	start of			
,	winlogon.exe.			
WininitInitDurationM	Me/ininit	Number	ms	61
	initialization			
	duration: from			
	the start of			
,	wininit.exe to the			
:	start of			
:	services.exe.			
WinlogonInitDuratio	MWislogon	Number	ms	369
	initialization			
	duration: from			
	the start of			
,	winlogon.exe to			
	the start of			
	logonui.exe.			
AutostartServicesMs	Autostart	Number	ms	13269
	services: from the			
:	start of			
:	services.exe to			
	the start of the			
	first taskhost.exe.			

Field	Description	Data type	Unit	Example
ComputerStartupM	startup: from the beginning to the start of LogonUI.exe. The user is now able to log in to the computer.	Number	ms	15700
MainPathBootTime	Marain path boot time: from the beginning to the start of the shell (typically explorer.exe). The user has successfully logged in, and the shell is starting.	Number	ms	28361

Field	Description	Data type	Unit	Example
PostBootTimeMs*	Post boot time:	Number	ms	6882
	from shell start to			
	the system			
	reaching an 80%			
	idle state. This			
	time is			
	accumulated by			
	checking the CPU			
	and storage			
	utilization in			
	500ms time			
	windows. If the			
	cumulative time			
	of both CPU and			
	storage			
	utilization is			
	below 20%, the			
	idle time of this			
	window (500ms –			
	max [CPU time,			
	Disk time] in the			
	window) is added			
	to the total idle			
	time until 5			
	seconds is			
	reached. The			
	metric reports			
	this duration			
	minus the 5			
	seconds of			
	collected idle			
	time. The			
	desktop is now			
	ready to use.			

Field	Description	Data type	Unit	Example
TotalBootTimeMs	The time from Windows start to the desktop being shown and the system reaching an 80% idle state. This is the sum of MainPathBootT and PostBootTimeM . If TotalBootTime is empty, it means that Windows stopped collecting data too early, or	Number	ms	130765
	because the user			
	waited longer before logging in.			
BootUID	Unique UID for a boot created by uberAgent.	String		00000408-0049- 004b-0bb9- 8ed17e25d401
UserLogonWaitDur	rationeMs measurement starts with the welcome display screen, thus as soon as the user can perform a login. It stops with the successful login.	Number	ms	345696

Note

• This field is only available on client operating systems.

Computer Shutdown Metrics

September 10, 2025

Computer Shutdown

uberAgent collects the duration of the major phases as well as the total duration for each shutdown.

Note

This metric is only available on client operating systems.

Details

- Source type: uberAgent:OnOffTransition:ShutdownDetail
- Used in dashboards: Shutdown Duration
- Enabled through configuration setting: ShutdownDetail
- Related configuration settings: n/a
- Supported platform: Windows

Field	Description	Data type	Unit	Example
TotalShutdownTime	e Ms tal shutdown time.	ms		700
UserSessionTimeMs		ms		100
UserPolicyTimeMs	User policy time.	ms		100
UserProfilesTimeMs	s User profiles time.	ms		100
SystemSessionsTim	ne Mys tem sessions time.	ms		100

Field	Description	Data type	Unit	Example
PreShutdownNoti	fic DriambTibdaMea	mc		100
Presnutaowiinoti	notifications	ms		100
	time.			
ServicesTimeMs	Services time.	ms		100
KernelTimeMs	Kernel time.	ms		100

On/Off Transition Delay Metrics

September 10, 2025

Slow App Startup

uberAgent records which applications are responsible for delays during system boot. For each delay, uberAgent collects metrics like application name and version.

Note

This metric is only available on client operating systems.

Details

- Source type: uberAgent:OnOffTransition:SlowAppStartup
- Used in dashboards:
- Enabled through configuration setting: BootDetail
- Related configuration settings: n/a
- · Supported platform: Windows

Field	Description	Data type	Unit	Example
Name	Application name.	String		explorer.exe

Field	Description	Data type	Unit	Example
FriendlyName	Friendly application name.	String		Windows Explorer
Version	Application version.	String		6.2.9200.16384 (win8_rtm.120725- 1247)
TotalTimeMs	Total time.	Number	ms	100
DegradationTimeM	s Degradation (how much longer it took than normal).	Number	ms	20

Slow App Shutdown

uberAgent records which applications are responsible for delays during system shutdown. For each delay, uberAgent collects metrics like application name and version.

Note

This metric is only available on client operating systems.

Details

- Source type: uberAgent:OnOffTransition:SlowAppShutdown
- Used in dashboards:
- Enabled through configuration setting: ShutdownDetail
- Related configuration settings: *n/a*
- Supported platform: Windows

Field	Description	Data type	Unit	Example
Name	Application	String		explorer.exe
	name.			

Field	Description	Data type	Unit	Example
FriendlyName	Friendly application name.	String		Windows Explorer
Version	Application version.	String		6.2.9200.16384 (win8_rtm.120725- 1247)
TotalTimeMs	Total time.	Number	ms	100
DegradationTimeM	s Degradation (how much longer it took than normal).	Number	ms	20

Slow App Standby

uberAgent records which applications are responsible for delays during standby. For each delay, uber-Agent collects metrics like application name and version.

Note

This metric is only available on client operating systems.

Details

- Source type: uberAgent:OnOffTransition:SlowAppStandby
- Used in dashboards:
- Enabled through configuration setting: StandbyDetail
- Related configuration settings: *n/a*
- Supported platform: Windows

Field	Description	Data type	Unit	Example
Name	Application	String		stisvc
	name.			

Field	Description	Data type	Unit	Example
FriendlyName	Friendly application name.	String		Still Image Devices Service
Version	Application version.	String		6.2.9200.16384 (win8_rtm.120725- 1247)
TotalTimeMs	Total time.	Number	ms	100
DegradationTimeM	s Degradation (how much longer it took than normal).	Number	ms	20

Slow Service Startup

uberAgent records which services are responsible for delays during system boot. For each delay, uberAgent collects metrics like service name and version.

Note

This metric is only available on client operating systems.

Details

- Source type: uberAgent:OnOffTransition:SlowServiceStartup
- Used in dashboards:
- Enabled through configuration setting: BootDetail
- Related configuration settings: *n/a*
- Supported platform: Windows

Field	Description	Data type	Unit	Example
Name	Service name.	String		stisvc
FriendlyName	Friendly service name.	String		Still Image Devices Service

Field	Description	Data type	Unit	Example
Version	Service version.	String		6.2.9200.16384 (win8_rtm.120725- 1247)
TotalTimeMs	Total time.	Number	ms	100
DegradationTimeM	Is Degradation (how much longer it took than normal).	Number	ms	20

Slow Service Shutdown

uberAgent records which services are responsible for delays during system shutdown. For each delay, uberAgent collects metrics like service name and version.

Note

This metric is only available on client operating systems.

Details

- Source type: uberAgent:OnOffTransition:SlowServiceShutdown
- Used in dashboards:
- Enabled through configuration setting: ShutdownDetail
- Related configuration settings: n/a
- Supported platform: Windows

Field	Description	Data type	Unit	Example
Name	Service name.	String		stisvc
FriendlyName	Friendly service	String		Still Image
Version	name. Service version.	String		Devices Service 6.2.9200.16384
version	Service version.	ouring .		(win8_rtm.120725-
				1247)

Field	Description	Data type	Unit	Example
TotalTimeMs	Total time.	Number	ms	100
DegradationTimeM	s Degradation (how much longer it took than normal).	Number	ms	20

Slow Service Hybrid Standby

uberAgent records which services are responsible for delays during hybrid standby. For each delay, uberAgent collects metrics like service name and version.

Note

This metric is only available on client operating systems.

Details

- Source type: uberAgent:OnOffTransition:SlowServiceHybridStandby
- Used in dashboards:
- Enabled through configuration setting: StandbyDetail
- Related configuration settings: *n/a*
- Supported platform: Windows

Field	Description	Data type	Unit	Example
Name	Service name.	String		stisvc
FriendlyName	Friendly service name.	String		Still Image Devices Service
Version	Service version.	String		6.2.9200.16384 (win8_rtm.120725- 1247)
TotalTimeMs	Total time.	Number	ms	100

Field	Description	Data type	Unit	Example
DegradationTimeM	s Degradation (how much longer it took than normal).	Number	ms	20

Slow Driver Startup

uberAgent records which drivers are responsible for delays during system boot. For each delay, uber-Agent collects metrics like driver name and version.

Note

This metric is only available on client operating systems.

Details

- Source type: uberAgent:OnOffTransition:SlowDriverStartup
- Used in dashboards:
- Enabled through configuration setting: BootDetail
- Related configuration settings: n/a
- Supported platform: Windows

Field	Description	Data type	Unit	Example
Name	Driver name.	String		\Driver\pci
FriendlyName	Friendly driver name.	String		NT Plug and Play PCI Enumerator
Version	Driver version.	String		6.2.9200.16384 (win8_rtm.120725- 1247)
TotalTimeMs	Total time.	Number	ms	100
DegradationTimeMs	Degradation (how much longer it took than normal).	Number	ms	20

Slow Driver Shutdown

uberAgent records which drivers are responsible for delays during system shutdown. For each delay, uberAgent collects metrics like driver name and version.

Note

This metric is only available on client operating systems.

Details

- Source type: uberAgent:OnOffTransition:SlowDriverShutdown
- Used in dashboards:
- Enabled through configuration setting: ShutdownDetail
- Related configuration settings: n/a
- Supported platform: Windows

List of Fields in the Raw Agent Data

Field	Description	Data type	Unit	Example
Name	Driver name.	String		\Driver\pci
FriendlyName	Friendly driver name.	String		NT Plug and Play PCI Enumerator
Version	Driver version.	String		6.2.9200.16384 (win8_rtm.120725- 1247)
TotalTimeMs	Total time.	Number	ms	100
DegradationTimeM	s Degradation (how much longer it took than normal).	Number	ms	20

Slow Driver Standby

uberAgent records which drivers are responsible for delays during standby. For each delay, uberAgent collects metrics like driver name and version.

Note

This metric is only available on client operating systems.

Details

• Source type: uberAgent:OnOffTransition:SlowDriverStandby

• Used in dashboards:

• Enabled through configuration setting: StandbyDetail

Related configuration settings: n/a
Supported platform: Windows

List of Fields in the Raw Agent Data

Description	Data type	Unit	Example
Driver name.	String		\Driver\pci
Friendly driver name.	String		NT Plug and Play PCI Enumerator
Driver version.	String		6.2.9200.16384 (win8_rtm.120725- 1247)
Total time.	Number	ms	100
As Degradation (how much longer it took than normal).	Number	ms	20
neDevice friendly name.	String		Ricoh PCIe SDXC/MMC Host Controller
	Driver name. Friendly driver name. Driver version. Total time. As Degradation (how much longer it took than normal). meDevice friendly	Driver name. String Friendly driver String name. Driver version. String Total time. Number Ms Degradation (how Number much longer it took than normal). meDevice friendly String	Driver name. String Friendly driver String name. Driver version. String Total time. Number ms Ms Degradation (how Number ms much longer it took than normal). meDevice friendly String

Slow Driver Resume

uberAgent records which drivers are responsible for delays during resume. For each delay, uberAgent collects metrics like driver name and version.

Note

This metric is only available on client operating systems.

Details

• Source type: uberAgent:OnOffTransition:SlowDriverResume

• Used in dashboards:

• Enabled through configuration setting: StandbyDetail

• Related configuration settings: n/a

· Supported platform: Windows

List of Fields in the Raw Agent Data

Field D	Description	Data type	Unit	Example
Name D	Oriver name.	String		\Driver\pci
-	Oriver friendly name.	String		NT Plug and Play PCI Enumerator
Version D	Oriver version.	String		6.2.9200.16384 (win8_rtm.120725- 1247)
TotalTimeMs T	Total time.	Number	ms	100
t	Degradation (how much longer it book than normal).	Number	ms	20
DeviceFriendlyNameD	Device friendly	String		Ricoh PCIe
n	name.			SDXC/MMC Host
				Controller

Slow User Policy

DEPRECATED: this sourcetype is deprecated and will be removed in a future release.

uberAgent records which user policies are responsible for delays during system boot. For each delay, uberAgent collects metrics like name and total time.

Details

- Source type: uberAgent:OnOffTransition:SlowUserPolicy
- Used in dashboards:

• Enabled through configuration setting: BootDetail

• Related configuration settings: n/a

• Supported platform: Windows

List of Fields in the Raw Agent Data

Field	Description	Data type	Unit	Example
Name	User policy name.	String		PreShellInit
TotalTimeMs	Total time.	Number	ms	100
DegradationTimeM	Is Degradation (how much longer it took than normal).	Number	ms	20

Slow SMSS Initialization

DEPRECATED: this sourcetype is deprecated and will be removed in a future release.

uberAgent records SMSS initialization is responsible for delays during system boot. For each delay, uberAgent collects metrics like name and total time.

Details

• Source type: uberAgent:OnOffTransition:SlowSMSSInit

• Used in dashboards:

• Enabled through configuration setting: BootDetail

• Related configuration settings: n/a

• Supported platform: Windows

Field	Description	Data type	Unit	Example
Name	SMSSInit name.	String		SMSSInit
TotalTimeMs	Total time.	Number	ms	100

Field	Description	Data type	Unit	Example
DegradationTimeMs	s Degradation (how much longer it took than normal).	Number	ms	20

Standby/Resume Duration Metrics

September 10, 2025

Standby Detail

uberAgent collects information about each standby/resume like duration, the reason for waking up as well as pages written to the hibernation file.

Note

This metric is only available on client operating systems.

Details

- Source type: uberAgent:OnOffTransition:StandbyDetail2
- Used in dashboards: Standby/Resume Duration
- Enabled through configuration setting: StandbyDetail
- Related configuration settings: *n/a*
- Supported platform: Windows

Field	Description	Data type	Unit	Example
SleepTime	Time the sleep started.	String		2018-07-31 19:02:37.582
				+0200

Field	Description	Data type	Unit	Example
WakeTime	Time the wake	String		2018-07-32
	completed.			07:31:58.434
				+0200
EnterStandbyMs	Duration of the	Number	ms	5737
	standby process.			
ResumeFromStandbp Msation of the		Number	ms	1269
	resume process.			
DriverInitDuration	Duration of driver	Number	ms	897
	initialization at			
	resume.			
BiosInitDuration	Duration of BIOS	Number	ms	0
	initialization at			
	resume.			
HiberWriteDuration	Duration of write	Number	ms	8034
	to hibernation			
	file.			
HiberReadDuration		Number	ms	4419
	from hibernation			
	file.			
HiberPagesWritten	Memory pages	Number		738245
	written to the			
	hibernation file.			00574070
Attributes	n/a	Number		33571073
TargetState	Target sleep state.	Number		5
	Possible values:			
	0-7. For a string			
	representation			
	see the			
	calculated field			
	TargetStateDis	splavName		

Field	Description	Data type	Unit	Example
EffectiveState	Actual sleep state. Possible values: 0-7. For a string representation see the calculated field	Number		5
	EffectiveState	eDisplayName		
WakeSourceType	Source of a wake up (what woke the machine up?). Possible values: 0-6. For a string representation see the calculated field WakeSourceType	Number eDisplayName		1
WakeSourceTextLe	engNumber of characters in the field WakeSourceTex	Number		125
WakeSourceText	Description of the source of a wake up	String		Windows will execute 'NT TASK\Microsoft\Windows\Upo scheduled task that requested waking the computer.
WakeTimerOwnerl	LenNathmber of characters in the field WakeTimerOwne	Number		52

Field	Description	Data type	Unit	Example
WakeTimerContextL e⁄hgtH ber of		Number		18
	characters in the			
	field			
	WakeTimerCont	ext		
NoMultiStageResum e Ræason		Number		0
WakeTimerOwner	If a wake up was caused by a timer: owner of the timer.	String		\Device\HarddiskVolume4\Wi
WakeTimerContext		String		SystemEventsBroker

List of Calculated Fields

Field	Description	Data type	Unit	Example	Where available
TargetStateDis	sentation of the field TargetState . Possible values: undefined, S0/working ,S1,S2, S3/standby ,Hibernate, Shutdown, Maximum enumeration	String		Hibernate	Splunk data model, Splunk SPL

Field	Description	Data type	Unit	Example	Where available
EffectiveStateDis SlarinNgarep ro		String		Hibernate	Splunk data
	sentation of	_			model,
	the field				Splunk SPL
	EffectiveS	tate			
	. Possible				
	values:				
	undefined,				
	S0/working				
	, S1, S2,				
	S3/standby				
	,Hibernate	,			
	Shutdown,				
	Maximum				
	enumeratio	n			
	value.				
WakeSourc	ceType BtsiplgyNapre e	String		Timer	Splunk data
	sentation of				model,
	the field				Splunk SPL
	WakeSource	Туре			
	. Possible				
	values:				
	unknown,				
	Power				
	Button,				
	S4 Doze to				
	Hibernate				
	,Device,				
	Device or				
	Timer,				
	Timer.				

Network Metrics

December 11, 2025

Network Communication

uberAgent collects metrics like source process (process sending/receiving data on the machine uber-Agent is running on) as well as IP address and port per network target and sending/receiving process. A network target is a communication endpoint from the point of view of the machine uberAgent is running on. uberAgent distinguishes between different services on the target machine and can show latencies for, say, SMB and SQL Server independently. Of course, uberAgent supports both IPv4 and IPv6! uberAgent optionally only shows new ports and targets never seen before.

Notes:

• Field: AppVersion - uberAgent® has an internal filter to minimize data volume by suppressing version information for system processes and system services. As a result, the AppVersion field is typically empty for most system processes and services.

Details

- Source type: uberAgent:Process:NetworkTargetPerformance
- Used in dashboards: Application Network Issues, Citrix XA/XD Databases, Process Network Communication, Application Network Communication, Machine Network Communication, Single Application Performance, Single Machine Detail, Single User Detail
- Enabled through configuration setting: NetworkTargetPerformanceProcess
- Related configuration settings: [NetworkTargetPerformanceProcess_Config]
- Supported platform: all

Field	Description	Data type	Unit	Example
ProcName	Process name.	String		chrome.exe
ProcUser	Process user.	String		Domain\JohnDoe
NetTargetRemote/	Ad dhæsø ork target remote address.	String		138.201.31.60
NetTargetRemoteN	Na Me twork target remote name.	String		citrix.com
NetTargetRemoteF	Pol t letwork target remote port.	Number		443

ield	Description	Data type	Unit	Example
letTargetSendCou	n t Count of packets	Number		15
	to network target			
	containing			
	payload.			
letTargetReceiveCo	owww.nt of packets	Number		14
	from network			
	target containing			
	payload.			
VetTargetConnectC	CoCuonatint of	Number		1
	connects to			
	network target.			
letTargetSendKBP	SKilobytes per	Number	KB/s	1024
	second sent to			
	network target.			
letTargetReceiveKl	B KS lobytes per	Number	KB/s	1024
	second received			
	from network			
	target.			
letTargetSendMB	Amount of data	Number	MB	1
	volume send to			
	network target.			
	Payload only, no			
	protocol			
	overhead.			
letTargetReceiveM		Number	MB	1
	volume received			
	from network			
	target. Payload			
	only, no protocol			
lotTargotSandl ata	overhead.	Number	mc	100
letTargetSendLate	-	เหนเเเมษ์เ	ms	100
letTargetProtocols	network target.	String		ТСР
· ·		String		
letTargetSendLate	-	Number		2
	with latency.			

Field	Description	Data type	Unit	Example
Appld	Associated	String		GglChrm
	application ID.			
	Used by			
	uberAgent to			
	lookup			
	application			
	names and			
	populate field			
	AppName.			
NetTargetRecor	nnect Count of	Number		3
	reconnects to			
	network target.			
NetTargetRetransmitCowmttðf		Number		3
	retransmits to			
	network target.			
AppVersion	Application	String		67.0.3396.99
	version.			
NetTargetSend、	Jitter Vist er to network	Number	ms	5
	target.			
NetTargetSend	Jitter Coumt *of events	Number		1
	with jitter.			
NetTargetSourc	eAdd ixests work source	String		127.0.0.1
	IP.			
NetTargetSendl	_aten byilmällialaWs ňcy to	Number	ms	100
	network target			
	(TCP handshake).			
NetTargetSendLaten CylmittiadCexent ts		Number		1
	with initial			
	latency.			
NetTargetSourc	ePort∜etwork source	Number		43021
	port.			

List of Calculated Fields

Field	Description	Data type	Unit	Example	Where available
NetTargetRer	noteObanteeAtclofress	String		citrix.com	Splunk data
	NetTargetR	emoteName			model
	. If				
	NetTargetR	emoteName			
	is not filled,				
	_	emoteAddress			
	is used				
	instead.				
NetTargetRer	note Obama:Keddaktės al	Postring		citrix.com:443	Splunk data
	of				model
		emoteNameAddr	ess		
	and	. 5			
	NetTargetR	emotePort			
NetTargetSer	ndRekteitvēMBgetSo	enฟฟฟิber	МВ	2	Splunk data
	+				model
	NetTargetR	eceiveMB			
NetTargetSer	ndRe CeivnetCon funt	Number		29	Splunk data
	sends and				model
	receive events				
	combined.				
NetTargetSer	ndRe klei\TeKgaftS end	<i>KBR§</i> mber	KB/s	2048	Splunk data
	NetTargetRe-				model
	ceiveKBPS.				
NetTargetSer	ndDuNationaMsgetS	en Mumben cyMs	ms	200	Splunk data
	Х				model
	NetTargetS	endLatencyCou	ınt		
AppName	Associated	String		Google	Splunk data
причине	application	oag		Chrome	model,
	name.			-	Splunk SPL
ProcUser	Process user.	String		Domain\JohnD	-
	,			2	model,
					Splunk SPL

					Where
Field	Description	Data type	Unit	Example	available
User	User name.	String		Domain\JohnDo & plunk data	
					model
ProcessName	Process	String		chrome.exe	Splunk data
	name.				model

Network Connection Failures

uberAgent collects metrics like source application name as well as protocols used whenever a network connection attempt fails.

Details

- Source type: uberAgent:Application:NetworkConnectFailure
- Used in dashboards: Application Network Issues, Machine Network Issues, Process Network Issues
- Enabled through configuration setting: NetworkTargetPerformanceProcess
- Related configuration settings: [NetworkTargetPerformanceProcess_Config]
- Supported platform: all

Field	Description	Data type	Unit	Example
Appld	Associated application ID. Used by uberAgent to lookup application names and populate field AppName.	String		GglChrm
AppVersion	Application version.	String		67.0.3396.99
ProcessName	Process name.	String		chrome.exe
ProcessId	Process ID.	Number		456

Field	Description	Data type	Unit	Example
SessionGUID	Unique identifier	String		00000002-f295-
	that is generated			9109-e7c7-
	by uberAgent			c964011dd401
	when the session			
	is created. Valid			
	for this session			
	only.			
NetTargetRemoteAd dhets vork target		String		138.201.31.60
	remote address.			
NetTargetRemote	Na Me twork target	String		citrix.com
	remote name.			
NetTargetRemote	Po nt etwork target	Number		443
	remote port.			
NetTargetProtoco	ls Protocols used.	String		TCP
	The only protocol			
	supported is TCP.			
NetTargetSourceA	dd Næss work source	String		127.0.0.1
	IP.			
NetTargetSourceP	ortNetwork source	Number		43021
	port.			

List of Calculated Fields

					Where
Field	Description	Data type	Unit	Example	available
AppName	Associated	String		Google	Splunk data
	application			Chrome	model,
	name.				Splunk SPL
ProcName	Process	String		chrome.exe	Splunk data
	name.				model
User	User name.	String		Domain\John	Do é plunk data
					model,
					Splunk SPL

Field	Description	Data type	Unit	Example	Where available
NetTarget	Remote@bantaenAtcladiress	String		citrix.com	Splunk data
	NetTargetR	emoteName			model
	. If				
	NetTargetR	emoteName			
	is not filled,				
	NetTargetR	emoteAddres	S		
	is used				
	instead.				

^{*} Fields only available when NetworkDriverEnabled = true.

Microsoft Office Metrics

September 10, 2025

Outlook Plugin Load

uberAgent collects Outlook plugin load duration and related information like the ProgID and GUID.

Details

- Source type: uberAgent:Application:OutlookPluginLoad
- Used in dashboards: Outlook Plugin Load Performance
- Enabled through configuration setting: OutlookPerformanceEvents
- Related configuration settings: n/a
- Supported platform: Windows

^{**} In cases of high network activity combined with a large number of retransmissions, uberAgent may not detect all retransmissions. This design choice ensures minimal overhead and avoids any negative impact on system performance.

				Measurement	t
Field	Description	Data type	Unit	type	Example
Name	Plugin name	String		Snapshot	Egnyte
	(may change				Outlook
	with version and				Add-In
	language).				
ProgID	Unique plugin ID (language-	String		Snapshot	EgnyteAddin.Conne
CLUD	independent).	Chaire		Caranahat	CEDEFFCC
GUID	Plugin GUID	String		Snapshot	CEBEF5C6-
	(language-				2F24-4EC1-
	independent).				A005-
LoadBehavior	Plugin load	Number		Snapshot	A04E55EF0C52 3
Loaubellavioi	behavior ID. Possible values: 0, 1, 2, 3, 8, 9, 16.	Number		Shapshot	3
HKLM	Indicates if plugin is configured for all users. Possible values: 0, 1.	Number		Snapshot	0
BootTimeMs	Plugin load duration.	Number	ms	Sum	6000

List of Calculated Fields

				Measureme	nt Where	
Field	Description	Data type	Unit	type	available	Example
LoadBehavio	or DA supogiany Nozamole	String		Snapshot	Splunk data	Load at
	behavior				model	startup (3
	name.					
	Possible					
	values:					
	Do not					
	load					
	automatic	ally				
	(0),					
	Do not					
	load					
	automatic	ally				
	(1),					
	Load at					
	startup					
	(2),					
	Load at					
	startup					
	(3),					
	Load on					
	demand					
	(8),					
	Load on					
	demand					
	(9),					
	Load					
	first					
	time					
	then					
	load on					
	demand					
	(16).					
BootTimeS	Plugin load	Number	S	Sum	Splunk data	6.00
	duration.				model	

Session Metrics

December 11, 2025

Session Detail

uberAgent collects metrics like the session ID, connection state, protocol latency, and foreground application per user session.

Details

- Source type: uberAgent:Session:SessionDetail
- Used in dashboards: Application Usage, Machine Uptime, SBC Sizing and Capacity Planning, Session 0, Session Info: Citrix, Session Info: VMware, User Session Overview, User Sessions, Single Application Performance, Single Machine Performance, Single User Performance, Analyze data over time
- Enabled through configuration setting: SessionDetail
- Related configuration settings: n/a
- Please also review the metric dependencies.

Field	Description	Data type	Unit	Example	Platform
SessionID	Session ID	Number		3	all
	generated by				
	the OS.				
	Session IDs				
	are reused				
	and cannot be				
	used to				
	uniquely				
	identify a				
	session. Use				
	SessionGUID				
	for that				
	purpose				
	instead.				
SessionLogonTi		String		2018-07-23	all
	the user			10:06:02.123	
	logged on.			+0200	
SessionProtoco	l Remoting	String		ICA	all
	protocol used				
	to connect to				
	the session.,				
	Possible				
	values on				
	Windows:				
	Console,				
	ICA, RDP,				
	PCoIP,				
	Blast,				
	Frame,				
	Protocol [
	ID]., Possible				
	values on				
	macOS:				
	Console,				
	RFB, SSH,				
	Protocol [
	ID].				

Field	Description	Data type	Unit	Example	Platform
SessionCon	necti SieStäde	String		active	Win
	connection				
	state. Possible				
	values:				
	active,				
	connected,				
	connecting				
	,				
	shadowing				
	,disconnect	ed			
	,idle,				
	listening,				
	reset,down,				
	initializi	ng			
	,unknown,				
	Unsupporte	d			
	state: [
	ID].				
SessionPro	cessC olum bber of	Number		34	all
	processes that				
	are running in				
	the session.				
SessionCPL	JTime ⊠ BU usage	Number	ms	3000	all
	(absolute				
	usage in				
	milliseconds)				
	of all				
	processes in				
	the session				
	combined.				
SessionCPL	JUsag @Petroem ge	Number	%	29	all
	(relative				
	usage in				
	percent) of all				
	processes in				
	the session				
	combined.				

Field	Description	Data type	Unit	Example	Platform
SessionIOPS	I/O operations per second of all processes	Number		500	Win
	in the session				
· 100 1	combined.			200	147
SessionIOCount	count of all	Number		300	Win
	processes in the session				
	combined.				
SessionIOMB	I/O data	Number	МВ	20	all
	volume of all				
	processes in				
	the session				
	combined.				
SessionIOLatend	cylMatency of I/O	Number	ms	300	Win
	operations				
	per session of				
	all processes				
	in the session				
	combined.			450.0	
SessionWorking	_	Number	MB	450.2	all
	(working set) of all				
	processes in the session				
	combined.				
SessionNetKBPS		Number	КВ	21	Win
0000101111011101	network	. vabe.	110		••••
	traffic data				
	volume per				
	second of all				
	processes in				
	the session				
	combined.				
SessionUser	User name.	String		Domain\John[oæll

Field	Description	Data type	Unit	Example	Platform
SessionGUID	Unique	String		00000002-	all
	identifier for a			f295-9109-	
	session that is			e7c7-	
	generated by			c964011dd401	
	uberAgent.				
SessionRpLaten	c RMs2 oting	Number	ms	30	Win
	protocol				
	latency. This				
	field is filled				
	with the				
	latency in ms				
	at collection				
	time. If the				
	protocol is				
	ICA,				
	uberAgent				
	uses the				
	perfmon				
	counter				
	Latency -				
	Last				
	Recorded as				
	the source.				
	This metric is				
	different from				
	Citrix Round-				
	Trip-Time				
SessionClientMa		String		AC-ED-5C-02-	Win
	MAC address.			F0-30	
	Only collected				
	for VMware				
	sessions.				
SessionClientIp		String		192.168.178.40	all
Carata Oli III	IP address.	Chain		Climate	14 <i>1</i> °
SessionClientNa		String		Client1	Win
	name.				

Field Description Data type Unit Example SessionClientDorReimote client String citrix.com Active Directory domain. SessionClientUseRemote client String JohnDoe user name. SessionClientUseRemoteirclient String Domain user Active	Platform
Active Directory domain. SessionClientUseRemote client String JohnDoe user name. SessionClientUseRemoteirclient String Domain	
Directory domain. SessionClientUseRemote client String JohnDoe user name. SessionClientUseR@omoteirclient String Domain	Win
domain. SessionClientUseRemote client String JohnDoe user name. SessionClientUseR@moteirclient String Domain	
SessionClientUseRemote client String JohnDoe user name. SessionClientUseRemoteirclient String Domain	
user name. SessionClientUse RBorroteirc lient String Domain	
SessionClientUse Remotei rclient String Domain	Win
3	Win
	VVIII
Directory	
domain.	
SessionHRes Horizontal String 1920	Win
resolution.	
SessionVRes Vertical String 1080	Win
resolution.	
SessionColorDeptholor depth. String 32	Win
SessionClientPla ttermo te client String Windows	Win
platform.	
SessionClientVerstemote client String 13.0.0.25673	5 Win
version.	
SessionClientOsL Beigrotg client String en-us	Win
operating	
system	
language.	
SessionPublished String Google	Win
resource Chrome	
name. This	
resource was	
used to start	
or connect to	
the session.	
SessionPublished Astposicitized String Word Excel	Win
Citrix	
published	
apps in the	
session.	

Field [Description	Data type	Unit	Example	Platform
S V 3 - 1	Dixrix application state. Possible values: n/a, active, pre -launched, lingering, app not running, unsupported	String		lingering	Win
F V V V V V V V V V V V V V V V V V V V	remoting protocol encryption. Possible values: unknown, pasic, logon, 40 bit, 56 bit, 128 bit, SecureICA, unsupported	String		SecureICA	Win
V	ettix client cype. Possible values: WI, ICA Client	String		WI	Win
	Mmære proker DNS name.	String		HorizonCS.citrix	.dvim
SessionBrokerUrN	////hw are proker URL.	String		https://192.168.	8 Wi4 43

Field	Description	Data type	Unit	Example	Platform
SessionBrok	cerTuld Mededd mw	String		true	Win
	indicates if				
	session is				
	tunneled.				
	Possible				
	values: true ,				
	false.				
SessionBrok	kerTu ldMel/ldrle /rlb/ R /L	String		https://Horizor	nC SVċit rix.com:443
	of the View				
	Connection				
	Server tunnel				
	connection.				
SessionBrok	kerRel iflottvælp e/mw	String		192.168.178.40	Win
	broker remote				
	IP address.				
SessionBrok	kerUs ⊌fWww.w e	String		John	Win
	broker user				
	name.				
SessionBrok	kerDo VilMaivra/he nw	String		Doe	Win
	broker user				
	domain				
	name.				
SessionClier	ntTim Vel⊻lovnærVenol vient	String		Europe/Italy	Win
	timezone.				
SessionClier	ntIdV M ware client	String		c47c60cf41ec4	48 ଅଖର୍ମ 91e1822b24ddଃ
	ID.				
SessionType	eVmwVMware	String		application	Win
	session type.				
	Possible				
	values:				
	application	1			
	,desktop.				

Field	Description	Data type	Unit	Example	Platform
SessionBrokerT	ypRemoting	String		Citrix	Win
	broker type.				
	Possible				
	values:				
	Citrix,				
	Microsoft,				
	VMware,				
	Nutanix				
	Frame, none,				
	unknown,				
	Unsupported				
	broker: [
	number].				
SessionFgApplo	l Foreground	String		GglChrm	all
	application ID.				
	Used by				
	uberAgent to				
	look up				
	application				
	names and				
	populate the				
	field				
	SessionFgAp	pName			
	•				
SessionFgAppV	er ≣ione ground	String		67.0.3396.99	all
	application				
	version.				
SessionFgProce	es sīvaege ound	String		chrome.exe	all
	process name.				
	- 1	Niconala au		4=0	- 11
SessionFgProce	ssH d reground	Number		456	all

Field	Description	Data type	Unit	Example	Platform
SessionFgBrows	selifTtynpee	Number		1	all
	foreground				
	window is a				
	browser:				
	browser type.				
	Possible				
	values: 1, 2, 3,				
	4, 5. Also see				
	the field				
	SessionFgBr	owserDispl	ayName		
SessionFgBrows	selfAtateveTabHost	String		uberagent.com	all
	foreground				
	window is a				
	browser: the				
	URL of active				
	tab. See this				
	KB article for				
	troubleshoot-				
	ing empty				
	values.				
SessionFgWindo	ow hieltitle of the	String		Search	all
	active			Splunk 7.2.1 -	
	foreground			Google	
	window.			Chrome	
SessionClientH		Number		409D39C2	Win
	hardware ID.				
SessionRoundT	-	Number	ms	50	Win
	round trip				
	time.				

Field	Description	Data type	Unit	Example	Platform
SessionFps	Remoting	Number		20	Win
	protocol				
	frames per				
	second at				
	collection				
	time. Only				
	available for				
	Citrix and				
	Nutanix				
	Frame				
	sessions.				
SessionTransp	ort Phretporcoths col	String		UDP-CGP-ICA	Win
	chain used for				
	this				
	connection.				
	Only available				
	for Citrix				
	sessions.				
SessionInputD)ela yla kaixiMum	Number	ms	15	all
	input delay				
	per timer				
	interval and				
	session.				
SessionInputD	oela SysiomonMis nput	Number	ms	500	all
	delay per				
	timer interval				
	and session.				
SessionInputD	-	Number		50	all
	event count				
	per timer				
	interval and				
	session.				

Field	Description	Data type	Unit	Example	Where available
AppName	Application name. Source is the field SessionFgAp	String		Google Chrome	Splunk data model, Splunk SPL
		pra			
SessionCPUTim	usage (absolute usage in seconds).	Number	S	3	Splunk data model
SessionIODurat	i oâMs sionIOLa x SessionIOCo		ms	90000	Splunk data model
SessionRAMUsa	the machine's RAM used by the session.	Number	%	34	Splunk data model
User	Alias for SessionUser	String		Domain\JohnD	o&plunk data model
SessionUserLov	vdøser name converted to lower case.	String		domain\johndo	eSplunk data model
SessionDisplay	SpeessionHRes +"x"+ SessionVRes +"x"+ SessionColo	-		1920x1080x32	Splunk data model
SessionPublish	edAppsGtx6Plitbl split by semicolon.	i String AppsCt:	×	Word;Excel	Splunk data model
SessionPublish	edAppsGtx6月littlb converted to lower case.	vi&tning AppsCt:	xSplit	word;excel	Splunk data model

Field	Description	Data type	Unit	Example	Where available
SessionFg <i>F</i>	AppNammereground	String		Google	Splunk data
	application			Chrome	model,
	name.				Splunk SPL
SessionFgE	Browse FDrieghayuMad me	String		Chrome	Splunk data
	browser				model,
	name.				Splunk SPL
	Possible				
	values:				
	Chrome,				
	Internet				
	Explorer,				
	Firefox,				
	Edge,				
	Citrix				
	Enterprise				
	Browser.				
SessionClie	entHwld ©b sionClie	n NtUmbe Ctx2		409D39C2	Splunk data
or					model
	SessionClie	entHwIdCtx			
	, whichever is				
	present.				

Performance Counter Metrics

September 12, 2025

uberAgent can be configured to collect the values of Windows performance counters. Please see this document for more information.

Details

- Source type: uberAgent:System:PerformanceCounter
- Used in dashboards: Windows Performance Counters
- Enabled through configuration setting: Perf counter

• Related configuration settings: n/a

• Supported platform: Windows

List of Fields in the Raw Agent Data

Field	Description	Data type	Unit	Example
PerformanceCounter	የ ሙjec tance counter object.	String		Process
PerformanceCounter	,	String		conhost
PerformanceCounter	Perfoe nance	String		Handle Count
PerformanceCounter	counter name. Wadkoe mance	Number		100
	counter value.			

uberAgent® Licensing Metrics

September 7, 2025

uberAgent Licensing

Information on uberAgent licenses.

Details

- Source type: uberAgent:License:LicenseInfo
- Used in dashboards: Licensing Status, uberAgent Versions
- Enabled through configuration setting: n/a
- Related configuration settings: n/a
- Supported platform: all

Field	Description	Data type	Unit	Example
LicensingState	Licensing state. Possible values: licensed,	String		licensed
Licenseld	unlicensed. License ID.	String		407d288f-02f7- 4375-ae44- ea36654772fa
LicenseCountTotal	Total number of licenses.	Number		2000
LicensingModel	Licensing model. Possible values: device, user, site.	String		device
LicensingModelDet	aiContains more detailed information about the licensing model like if server or client licenses are in use.	String		server
LicensingType	Licensing type. Possible values: eval, NFR, full.	String		full
MaintenanceEnd	Maintenance end. Only for perpetual licenses.	String		2018-07-07 01:59:59.000 +0200
Expiration	Expiration date. Only for one-year term, eval, and community licenses.	String		2018-07-07 01:59:59.000 +0200
LicensedComponer		String		unrestricted
ProductVersion	Product version.	String		5.0.1.1609

User & Host Metrics

September 12, 2025

User & Host Tags

uberAgent can collect custom tags for users and machines (more information).

Details

• Source type: uberAgent:Tags:UserHost

• Used in dashboards: All except Citrix XA/XD and ADC dashboards

Related configuration settings: [UserHostTagging]

• Supported platform: Windows

Field	Description	Data type	Unit	Example
User	The name of the user (in the case of a user tag).	String		domain\User1
TagType	The type of tag (User or Host).	String		User
TagName	The user-defined name of the tag.	String		Department
TagSource	The source of the tag (AD, Environment or Registry).	String		Registry

Field	Description	Data type	Unit	Example
TagValue	Defines the	String		HKCU/Software/vas
	complete path of			limits/Depart-
	the tag. This can			ment
	be an AD			
	attribute, an			
	environment			
	variable or the			
	full path to a			
	registry value.			
	The latter must			
	include the			
	registry hive, key,			
	and value.			
TagData	The determined	String		Development
	value for the			
	current tag.			

User Logoff Metrics

December 11, 2025

Logoff Detail

uberAgent collects various details about logoffs like profile unload time, Group Policy logoff script time as well as process performance.

Notes:

• Field: AppVersion - uberAgent® has an internal filter to minimize data volume by suppressing version information for system processes and system services. As a result, the AppVersion field is typically empty for most system processes and services.

Details

• Source type: uberAgent:Logoff:LogoffDetail

- Used in dashboards: User Logoff Duration, Single Logoff
- Enabled through configuration setting: LogonDetail
- Related configuration settings: *n/a*
- Supported platform: Windows

				Measuremen ⁻	t
Field	Description	Data type	Unit	type	Example
SessionGUID	Unique	String		Snapshot	00000002-
	identifier that				f295-9109-
	is generated				e7c7-
	by uberAgent				c964011dd401
	when the				
	session is				
	created. Valid				
	for this				
	session only.				
SessionID	Unique	Number		Snapshot	3
	identifier that				
	is generated				
	by the				
	machine				
	when the				
	session is				
	created. Will				
	be reassigned				
	to other				
	sessions after				
	logoff.				
Jser	User name.	String		Snapshot	Domain\JohnDo
SessionLogoff ⁻	Tim Tė me when	String		Snapshot	2018-07-23
	the user				10:06:02
	logged off.				
SessionEndTin	ne Time when	String		Snapshot	2018-07-23
	the session				10:08:02
	ended.				

				Measuremen	t
Field	Description	Data type	Unit	type	Example
SessionDuratio	n %£ ssion	Number	ms	Sum	25000
	duration.				
ProfileUnloadTi	im les\es 2profile	Number	ms	Sum	300
	unloading				
	time.				
GroupPolicyLo ₈	go 6f & owipp PTo hicey Ms	Number	ms	Sum	358
	logoff script				
	processing				
	time.				
TotalLogoffTim	_	Number	ms	Sum	40000
	duration				
	combined for				
	all phases.				
ProcessStartCo	untumber of	Number		Count	8
	processes				
	started.				
IOCountRead	Count of read	Number		Count	100
	I/O				
	operations.				
IOCountWrite	Count of write	Number		Count	100
	I/O				
	operations.				
IOMBRead	Amount of	Number	MB	Sum	50
	read data				
	volume.				
IOMBWrite	Amount of	Number	MB	Sum	50
	write data				
	volume.				
IOLatencyRead		Number	ms	Average	358
	operation				
	duration				
	divided by				
	count of read				
	I/O				
	operations.				

				Measurement	
Field	Description	Data type	Unit	type	Example
IOLatencyWrit	eMI/O write operation duration divided by count of write I/O operations.	Number	ms	Average	358

Logoff processes

Detailed performance data about all processes active during user logoff like process start time and lifetime duration, commandline, executable path, and CPU footprint.

Details

- Source type: uberAgent:Process:LogoffProcesses
- Used in dashboards: Single Logoff
- Enabled through configuration setting: LogonProcesses
- Related configuration settings: n/a
- Supported platform: Windows

				Measurement	
Field	Description	Data type	Unit	type	Example
ProcName	Process	String		Snapshot	chrome.exe
	name.				
ProcID	Process ID.	Number		Snapshot	456
ProcParentNam	eParent	String		Snapshot	PowerShell.exe
	process name.				
ProcParentID	Parent	Number		Snapshot	789
	process ID.				
ProcUser	User who ran	String		Snapshot	Domain\JohnDoe
	the process.				

				Measurement	:
Field	Description	Data type	Unit	type	Example
Appld	Associated application ID. Used by uberAgent to lookup application names and populate field AppName.	String		Snapshot	GglChrm
AppVersion	Associated application version.	String		Snapshot	67.0.3396.99
LogoffProcType		String		Snapshot	Other
ProcStartTimeRe	e Partionelyss relative start time.	Number	ms	Snapshot	16764
ProcLifetimeMs		Number	ms	Sum	73615
ProcCmdline	Process command line.	String		Snapshot	C:\Program Files (x86)\Google\Chrome\A –url http://citrix.com

				Measuremen	t
Field	Description	Data type	Unit	type	Example
ProcPath	Process path.	String		Snapshot	C:\Program Files (x86)\Google\Chrome\Ap
ProcIOReadCou	operation	Number		Count	2000
ProcIOWriteCou	operation	Number		Count	990
ProcIOReadMB	write count. Process I/O operation	Number	МВ	Sum	100.05
ProcIOWriteMB	read data volume. Process I/O operation write data	Number	МВ	Sum	16.06
ProcIOLatencyR	operation	Number	ms	Average	300
ProcIOLatencyW	operation	Number	ms	Average	300
ProcNetKBPS	write latency. Process generated network	Number	КВ	Sum	19.18
SessionGUID	traffic. Unique identifier that is generated by uberAgent when the session is created. Valid for this session only.	String		Snapshot	00000002- f295-9109- e7c7- c964011dd401

				Measuremen	t
Field	Description	Data type	Unit	type	Example
SessionID	Unique	Number		Snapshot	3
	identifier that				
	is generated				
	by the				
	machine				
	when the				
	session is				
	created. Will				
	be reassigned				
	to other				
	sessions after				
	logoff.				
TotalLogoffDu	rati TortM Islogoff	Number	ms	Sum	40000
	duration.				
SortOrder2	Sort order	Number		Snapshot	29
	number to				
	sort the table				
	Boot process				
	performance				
	on the Single				
	Boot				
	dashboard				
	correctly.				

				Measuremen	t Where	
Field	Description	Data type	Unit	type	available	Example
AppName	Associated application name.	String		Snapshot	Splunk data model, Splunk SPL	Google Chrome

				Measureme	nt Where	
Field	Description	Data type	Unit	type	available	Example
SortOrder	Sort order number to sort the table Boot process performance on the Single Boot dashboard correctly.	Number		Snapshot	Splunk data model	29

User Logon Metrics

December 11, 2025

Logon Detail

uberAgent collects various details about logons like profile load time, Group Policy processing time as well as process performance.

Notes:

• Field: AppVersion - uberAgent® has an internal filter to minimize data volume by suppressing version information for system processes and system services. As a result, the AppVersion field is typically empty for most system processes and services.

Details

- Source type: uberAgent:Logon:LogonDetail
- Used in dashboards: Session Info: Citrix, Session Info: VMware, User Logon Duration, User Logon Duration Group Policy, User Session Overview, User Sessions, Single Machine Detail, Single Logon, Single User Detail
- Enabled through configuration setting: LogonDetail
- Related configuration settings: n/a
- Supported platform: Windows

				Measurement	
Field	Description	Data type	Unit	type	Example
SessionGUID	Unique identifier that is generated by uberAgent when the session is created. Valid for this session only.	String		Snapshot	00000002- f295-9109- e7c7- c964011dd401
SessionID	Unique identifier that is generated by the machine when the session is created. Will be reassigned to other sessions after logoff.	Number		Snapshot	3
User	User name.	String		Snapshot	Domain\JohnDo
SessionLogonT	imeme when the user logon started.	String		Snapshot	2018-07-23 08:50:14
SiteName	Active Directory site name.	String		Snapshot	Default-First- Site-Name
LogonServer	Authenticating Active Directory domain controller.	String		Snapshot	DC1

				Measurement	
Field	Description	Data type	Unit	type	Example
ProfileLoadTime	e Ws er profile	Number	ms	Sum	40000
	loading time -				
	Microsoft user				
	profile				
	service.				
CitrixPMLoadTir		Number	ms	Sum	40000
	loading time -				
	Citrix Profile				
	Management.				
GroupPolicyTota	al PotadeGsing Time	:M s umber	ms	Sum	250
	Policy				
	processing				
	time.				
DcDiscoveryTim		Number	ms	Sum	10
	controller				
	discovery				
	time	.			
_oopbackMode		String		Snapshot	replace
	loopback				
	mode.				
	Possible				
	values:				
	replace,				
	merge, no				
	loopback.			_	
\DLogonScriptT		Number	ms	Sum	358
	Directory				
	logon script				
	processing				
Group Policyl og	time.	Number	mc	Sum	250
nouprolicyLog	go 68 ouipp FTölince Ms	number	ms	Sum	358
	logon script				
	processing				
	time.				

- ield	Description	Data type	Unit	Measuremen	t Example
Telu	Description	рата туре	UIIIL	type	Ехапіріе
ResWmProcess	in g Eisr@M s	Number	ms	Sum	358
	Workspace				
	shell startup				
	time.				
ShellStartupTir	ne \$/h æll startup	Number	ms	Sum	358
	time.				
	Typically				
	Windows				
	Explorer.				
TotalLogonTim	eMotal logon	Number	ms	Sum	40000
	duration is				
	defined as the				
	time from the				
	actual logon				
	until the shell				
	is fully				
	initialized.				
ProcessStartCo	untumber of	Number		Count	8
	processes				
	started.				
OCountRead	Count of read	Number		Count	100
	I/O				
	operations.				
OCountWrite	Count of write	Number		Count	100
	I/O				
	operations.				
OMBRead	Amount of	Number	MB	Sum	50
	read I/O				
	operation				
	data volume.				
OMBWrite	Amount of	Number	MB	Sum	50
	write I/O				
	operation				
	data volume.				

				Measuremen	
Field	Description	Data type	Unit	type	Example
IOLatencyR	eadM\$/O read operation duration divided by count of read I/O	Number	ms	Average	358
AppXFileAss	operations. socStanpX file association phase start time as epoch timestamp. It belongs to the shell phase, but doesn't extend its duration. AppX data is typically evaluated on the first logon per user only.	Number	ms	Snapshot	173676243058
AppXFileAss	association phase end time as epoch timestamp. It belongs to the shell phase, but doesn't extend its duration. AppX data is typically evaluated on the first logon per user only.	Number	ms	Snapshot	173676245012

				Measurement	:
Field	Description	Data type	Unit	type	Example
AppXLoadPa	nckag &p\$t art	Number	ms	Snapshot	173676243058
	packages load				
	phase start				
	time as epoch				
	timestamp. It				
	belongs to the				
	shell phase,				
	but doesn't				
	extend its				
	duration.				
	AppX data is				
	typically				
	evaluated on				
	the first logon				
	per user only.				
AppXLoadPa	ıckag ApF oXd	Number	ms	Snapshot	173676245012
	packages load				
	phase end				
	time as epoch				
	timestamp. It				
	belongs to the				
	shell phase,				
	but doesn't				
	extend its				
	duration.				
	AppX data is				
	typically				
	evaluated on				
	the first logon				
	per user only.				

				Measurement	t
Field	Description	Data type	Unit	type	Example
AppXPackages	The loaded	String		Snapshot	[{"EndTime"
	АррХ				:1736762511156,"
	packages with				Name":"Mi-
	start and end				crosoft.BioEnrollment_cw
	time				,"StartTime"
	represented				:1736762496705}]
	as JSON				
	object.				

				Measureme	nt Where	
Field	Description	Data type	Unit	type	available	Example
AppXFile <i>A</i>	Assoc ®ppatifole Ms	Number	ms	Snapshot	SPL, Splunk	5000
	association				data model	
	phase					
	duration.					
	Calculation:					
	AppXFileA	ssocEnd				
	-					
	AppXFileA	ssocStart				
AppXLoad	dPack age XDuration	n Ms umber	ms	Snapshot	SPL, Splunk	6000
	packages				data model	
	load phase					
	duration.					
	Calculation:					
	AppXLoadP	ackagesEnd	l			
	-					
	AppXLoadP	ackagesSta	art			

Group Policy CSE Detail

uberAgent collects detailed information about Client-Side-Extensions (CSEs) like name, duration, and return code.

Details

- Source type: uberAgent:Logon:GroupPolicyCSEDetail2
- Used in dashboards: Session Info: Citrix, Session Info: VMware, User Logon Duration, User Logon Duration Group Policy, User Session Overview, User Sessions, Single Machine Detail, Single Logon, Single User Detail
- Enabled through configuration setting: LogonDetail
- Related configuration settings: n/a
- Supported platform: Windows

				Measurement	
Field	Description	Data type	Unit	type	Example
SessionGUID	Unique identifier that is generated by uberAgent when the session is created. Valid for this	String		Snapshot	00000002- f295-9109- e7c7- c964011dd401

				Measurement	
Field	Description	Data type	Unit	type	Example
SessionID	Unique identifier that is generated by the machine when the session is created. Will be reassigned to other sessions after logoff.	Number		Snapshot	3
User	User name.	String		Snapshot	Domain\JohnDo
CseName	Client-side extension name.	String		Snapshot	Citrix Group Policy
CseDurationS	Client-side extension processing time.	Number	S	Sum	5.40
CseGPONames	Group Policy where client-side extension is configured.	String		Snapshot	Default Domain Policy
CseReturnCode	_	Number		Snapshot	0

Logon Processes

Detailed performance data about all processes active during user logon like process start time and lifetime duration, commandline, executable path, and CPU footprint.

Details

• Source type: uberAgent:Process:LogonProcesses

Used in dashboards: Single Logon
Related configuration settings: n/a
Supported platform: Windows

				Measurement	t
Field	Description	Data type	Unit	type	Example
ProcName	Process name.	String		Snapshot	chrome.exe
ProcID	Process ID.	Number		Snapshot	456
ProcParentNar	neParent process name.	String		Snapshot	PowerShell.exe
ProcParentID	Parent process ID.	Number		Snapshot	789
ProcUser	User who ran the process.	String		Snapshot	Domain\JohnDo
Appld	Associated application ID. Used by uberAgent to lookup application names and populate field AppName.	String		Snapshot	GglChrm
AppVersion	Associated application version.	String		Snapshot	67.0.3396.99

				Measuremen	t
Field	Description	Data type	Unit	type	Example
LogonProcType	uberAgent	String		Snapshot	GP logon
	groups				script
	processes				
	running				
	during logon				
	into types.				
	Possible				
	values:				
	Other				
	,Userinit				
	,AppSetup				
	,Active				
	Setup,AD				
	logon				
	script,GP				
	logon				
	script				
	,Shell,RES				
	Workspace				
	Manager				
	shell,RES				
	Workspace				
	Manager				
	shell				
	child,GP				
	software				
	installatio	n			
	Run once				
	,Initial				
	program,				
	User				
	profile				
	,Group				
	Policy				
	Session,				
	setup				
	,First				
	logon				
	animation.				

				Measuremen	t
Field	Description	Data type	Unit	type	Example
ProcStartTimeR	e Partivoæls/ss	Number	ms	Snapshot	16764
	relative start time.				
ProcLifetimeMs	Process lifetime.	Number	ms	Sum	73615
ProcCmdline	Process command line.	String		Snapshot	C:\Program Files (x86)\Google\Chrome\A –url http://citrix.com
ProcPath	Process path.	String		Snapshot	C:\Program Files (x86)\Google\Chrome\A
ProcCPUTimeMs	s Process consumed CPU time.	Number	ms	Sum	11859
ProcIOReadCou		Number		Count	2000
ProcIOWriteCou		Number		Count	990
ProcIOReadMB	Process I/O operation read data volume.	Number	МВ	Sum	100.05
ProcIOWriteMB	Process I/O operation write data volume.	Number	МВ	Sum	16.06
ProcIOLatencyR		Number	ms	Average	300
ProcIOLatencyW	/rithetMe2s I/O operation write latency.	Number	ms	Average	300

				Measurement	
Field	Description	Data type	Unit	type	Example
ProcWorkingSe	etMBocess consumed RAM.	Number	МВ	Snapshot	500.06
ProcNetKBPS	Process generated network traffic.	Number	КВ	Sum	19.18
SessionGUID	Unique identifier that is generated by uberAgent when the session is created. Valid for this session only.	String		Snapshot	0000002- f295-9109- e7c7- c964011dd401
SessionID	Unique identifier that is generated by the machine when the session is created. Will be reassigned to other sessions after logoff.	Number		Snapshot	3
TotalLogonDura	_	Number	ms	Sum	40000

				Measurement	t
Field	Description	Data type	Unit	type	Example
SortOrder2	Sort order number to sort the table Logon process performance on the Single Logon dashboard correctly.	Number		Snapshot	29

				Measureme	nt Where	
Field	Description	Data type	Unit	type	available	Example
AppName	Associated application name.	String		Snapshot	Splunk data model, Splunk SPL	Google Chrome
SortOrder	Sort order number to sort the table Boot process performance on the Single Boot dashboard correctly.	Number		Snapshot	Splunk data model	1

uberAgent® Configuration Metrics

September 7, 2025

uberAgent Configuration Metrics

Information about the configuration uberAgent is using, i.e., where uberAgent is getting its configuration from and which configuration version it is using.

Details

• Source type: uberAgent:Config:ConfigInfo

• Used in dashboards: *uberAgent Versions*

• Enabled through configuration setting: n/a

• Related configuration settings: *n/a*

• Supported platform: all

Field	Description	Data type	Example
ConfigOption	The configuration variant uberAgent is using. Valid values on Windows: CCFM, Local (installation directory), Group Policy, Local (ProgramData). Valid values on macOS: CCFM, Local (installation directory)	String	CCFM

Field	Description	Data type	Example
ConfigSource	Source of the configuration values. Can be a file, the registry (Windows), or a configuration archive.	String	Example 1: \\Server1\Share \\Software\\ uberAgent\\ Configuration \\7.1.0.5327\\ Example 2: /Library /Application Support/ uberAgent.conf
ConfigTimeStamp	The version of the configuration, i.e., the timestamp (Unix epoch) of the last modification.	Number	1678092747

ESA Metrics

September 7, 2025

uberAgent ESA collects many different metrics, logically grouped into sourcetypes. All metrics are explained in detail in this chapter, including:

- Name and description
- Supported platform
- Unit and example
- Related source type and where to find it in the dashboards
- Calculated fields and and their availability in Splunk's data model and/or "Search Processing Language" (SPL)
- The uberAgent template configuration files can be found at our Github uberAgent-config repository.

Threat Detection Metrics

September 12, 2025

Process Tagging

uberAgent processes a rule set and applies tags accordingly.

Notes:

• Field: AppVersion - uberAgent® has an internal filter to minimize data volume by suppressing version information for system processes and system services. As a result, the AppVersion field is typically empty for most system processes and services.

Details

- Source type: uberAgentESA: ActivityMonitoring: ProcessTagging
- Used in dashboards: Threat Detection Events
- Enabled through configuration setting: ActivityMonitoring
- Related configuration settings: [ActivityMonitoringRule]
- Supported platform: Windows

Field	Description	Data type	Unit	Example
EventType	Event type. Can	Number		4
	be 1, 2, 3, 4, 5, 6,	,		
	7, 8, 9, 10, 11,			
	12, 13, 14, 15,			
	16, 17, 18, 19,			
	20, 21, 22, 23,			
	24,			
	25 or 26. See also)		
	EventTypeNam	е		
ProcName	Process name.	String		svchost.exe

Field	Description	Data type	Unit	Example
ProcParentName	Parent process	String		services.exe
ProcUser	Process user.	String		domain\JohnDoe
ProcLifetimeMs	Process lifetime.	Number	ms	500
ProcId	Process ID.	Number		12345
ProcParentId	Parent process ID.	Number		67890
ProcGUID	Process GUID.	String		4b3e3686-7854- 4d98-0023- 1e0e617bf2e4
ProcParentGUID	Parent process GUID.	String		d72ceb7e-7851- 02ec-005d- 139741c4afd6
ProcPath	Process path	String		C:\WINDOWS\System32\svch
ProcCmdline	Process commandline.	String		C:\WINDOWS\System32\svch -k LocalSystemNet- workRestricted
ProcTag1	Rule tag: the tag assigned to events originating from the matching rule.	String		net-connect- suspicious- sources
ProcRiskScore1	Rule risk score: the risk score assigned to events originating from the matching rule.	Number		75
IsElevated	Indicates if the process was started elevated (admin rights).	String		1
SessionId	Session ID.	Number		2

Field	Description	Data type	Unit	Example
SessionGUID	Session GUID.	String		00000000-b242- d759-7a63- d686b0ffd501
Appld	Application ID.	String		Svc:WdiSystemHos
AppVersion	Application version.	String		1.0
IsProtected	Indicates if the process was started protected.	String		1
EventCount	The number of identical events that occurred during the interval period.	Number		42
RuleAnnotation	JSON of rule annotations like security frameworks.	String		{"mitre_attack": ["T1086", "T1059.001"]}

Additionally, one can enhance the information sent to the back-end by defining a number of generic properties that will be sent along with the fields above. Any field listed under Common Event Properties, Network Event Properties, Image Load Event Properties, or Registry Event Properties can be used as a generic property.

Field	Description	Data type	Unit	Example	Where available
Field	Description	Data type	Unit	Example	Where available
EventTypeName	e Names for event types based on the lookup	String		Process.Start	Splunk data model, Splunk SPL
	lookup_prod . Can be Process. Start, Process. Stop, Image.Load	cess_taggin	g_eventtype		
	Net. Connect, Net. Receive, Net. Reconnect, Net. Retransmit ,Net.Send, Reg.Key. Create, Reg.Value. Write, Reg.Delete				
	Reg.Key. Delete, Reg.Value. Delete, Reg.Key. SecurityCha	ange			

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Reg.Key.Load,

Field	Description	Data type	Unit	Example	Where available
ProcUser	<pre>coalesce (ProcUserExp , ProcUser).</pre>	o		Domain\JohnD	o&plunk data model
User	ProcUser.	String		Domain\JohnDo&plunk data model	
TimestampMs	_time * 1000.	Number	ms	1585913547467	Splunk data model
RuleAnnotation	.noineoattaoleid MITRE ATT&CK® IDs for the event. The source is the field RuleAnnota- tion.	String		T1086, T1059.001	Splunk data model, Splunk SPL

Generic Properties

September 12, 2025

Sometimes, when a Threat Detection rule matches an event, one would like to have more information than what the fields of the source type uberAgentESA:ActivityMonitoring: ProcessTagging provide. In such a case, one can define up to 10 generic properties per rule that can access the event information the query has access to. Any event property listed under Common Event Properties, Network Event Properties, Image Load Event Properties, or Registry Event Properties can be used as a generic property. Note that certain properties are only defined for specific event types. For instance, Net.Target.Port and Reg.Key.Path are only available for network and registry event types, respectively. Please refer to Event Types for a list of available event types, as well as the individual event properties documentation pages mentioned above.

Generic properties can be defined using one of the two syntaxes, long form:

```
1 GenericProperty1Name = ProcHash
2 GenericProperty1Data = Process.Hash.MD5
```

or short form:

1 GenericProperty1 = Process.Hash.MD5

in which case, the fields GenericProperty1Name and GenericProperty1Data, containing Process.Hash.MD5 and the process's MD5 hash respectively, will be sent to uberAgentESA: ActivityMonitoring:ProcessTagging.

DNS Query Monitoring Metrics

September 12, 2025

DNS Query Monitoring

uberAgent collects detailed information about DNS queries: the request, all responses, and the process from which the query originated.

Details

- Source type: uberAgentESA: Process: DnsQuery
- Used in dashboards: Process DNS
- Enabled through configuration setting: DnsMonitoring
- Related configuration settings: n/a
- Supported platform: all

Field	Description	Data type	Unit	Example
ProcName	Process name.	String		svchost.exe
ProcGUID	Process GUID.	String		4b3e3686-7854- 4d98-0023- 1e0e617bf2e4
DnsRequest	DNS query name.	String		www.example.com
DnsResponse	DNS query response.	String		10.1.3.12

Field	Description	Data type	Unit	Example
DnsResponseType	DNS query	String		А
	response type			
	(e.g.: A, AAAA,			
	CNAME).			
DnsEventCount	Number of	Number		1
	requests in the			
	last interval.			
DnsRisk52Chars	Tests whether the	Number		1
	DNS host name			
	contains more			
	than 52 chars.			
DnsRisk27UniqueC	hāests whether the	Number		1
	DNS host name			
	contains more			
	than 27 unique			
	chars.			
DnsRiskEmptyResp	o hss ts whether the	Number		1
	response is either			
	not available or			
	empty (e.g., SOA).			
DnsRiskTXTRecord	Tests for the	Number		1
	uncommon			
	response type			
	TXT.			
DnsRiskHighEntrop	-	Number		1
	request for high			
	entropy based on			
	Shannon			
	entropy.			
DnsResponseStatus	·	Number		9501
	status. Empty if			
	the query was			
	successful. Any			
	other value			
	indicates an			
	error.			

The fields DnsRequest, DnsResponse, and DnsResponseType may contain multiple values, separated by a semicolon;

List of Calculated Fields

Field	Description	Data type	Unit	Example	Where available
TimestampMs	_time * 1000.	Number	ms	1585913547467	Splunk data model

Event Log Forwarding Metrics

September 12, 2025

Event Log Forwarding

uberAgent can collect Windows system logs from the Eventlog: Application, Security, etc, with advanced filtering capabilities aimed to reduce the data volume processed by the agent.

Details

- Source type: uberAgentESA:System:WinEvtLogForwarding
- Used in dashboards: Windows Eventlogs
- Enabled through configuration setting: EventLog
- Related configuration settings: *Timer*
- Supported platform: Windows

Field	Description	Data type	Unit	Example
ProviderName	Eventlog provider	String		Microsoft-
	name			Windows-
				Security-Auditing

Field	Description	Data type	Unit	Example
EventID	Event ID	Number		1001
Level	Event level	Number		3
ProcessID	Process ID	Number		53646
Channel	Eventlog channel name	String		Security
User	User, under which the process is executing	String		NT AUTHOR- ITY\SYSTEM
EventData	The content of the -tag in JSON format	String		{"SubjectUserSid" :"S-1-5-18", "SubjectUserName":" SYSTEM", "SubjectDomain-Name":"NT AUTHORITY", "SubjectLogonId" :"0x3e7", "PrivilegeList":" SeAssignPrimary-TokenPrivilege SeTcbPrivilege SeSecurityPrivilege"}

Process Stop Metrics

September 7, 2025

Process Stop

uberAgent collects detailed process stop information like the process name, the process lifetime as well as the parent process.

Notes:

• Field: AppVersion - uberAgent® has an internal filter to minimize data volume by suppressing version information for system processes and system services. As a result, the AppVersion field is typically empty for most system processes and services.

Details

• Source type: uberAgentESA: Process: ProcessStop

• Used in dashboards: Process Tree

• Enabled through configuration setting: ProcessStop

• Related configuration settings: *n/a*

Field	Description	Data type	Unit	Platform	Example
ProcName	Process name.	String		all	svchost.exe
ProcUser	Process user.	String		all	domain\JohnDoe
ProcLifetimeMs	Process lifetime.	Number	Ms	all	500
Appld	Application ID.	String		all	Svc:WdiSystemHos
Procld	Process ID.	Number		all	12345
ProcParentId	Parent process ID.	Number		all	67890
SessionId	Session ID.	Number		all	2
ProcGUID	Process GUID.	String		all	4b3e3686- 7854-4d98- 0023- 1e0e617bf2e4
SessionGUID	Session GUID.	String		all	00000000- b242-d759- 7a63- d686b0ffd501
ProcParentNam	eParent process name.	String		all	services.exe
ProcPath	Process path.	String		all	C:\WINDOWS\Syste

Field	Description	Data type	Unit	Platform	Example
ProcCmdline	Process com- mandline.	String		all	C:\WINDOWS\System32\svo -k LocalSystem- NetworkRe- stricted
IsElevated	Indicates if the process was started elevated (admin rights).	String		all	1
AppVersion	Application version.	String		all	1.0
ProcParentGUID	Parent process GUID.	String		all	d72ceb7e- 7851-02ec- 005d- 139741c4afd6
IsProtected	Indicates if the process was started protected.	String		Win	1
HashMD5	Process hash value in MD5. Configurable via settings EnableCalcu and HashAlgorit			Win	7FFE122B109F1B586DEA2E
HashSHA1	Process hash value in SHA1. Configurable via settings EnableCalcu and HashAlgorit			Win	26DBC241A37881072689CE

Field	Description	Data type	Unit	Platform	Example
HashSHA256	Process hash value in SHA256.	String		Win	95F0FBBAEF289992385985
	Configurable				
	via settings				
	EnableCalcu	ulateHash			
	and				
	HashAlgorit	chm			
	•				
HashIMP	Import-table	String		Win	188392D5FBCC485811BB54
	hash.				
	Configurable				
	via settings				
	EnableCalcu and	ılateHash			
	HashAlgorit	thm			
CdHash	Hash of the code directory	String		macOS	24e4b80198b220e4a0ea87
	of a signed				
	executable.				
	Configurable				
	via setting				
	EnableCdHas	sh			
	•				

					Where
Field	Description	Data type	Unit	Example	available
ProcUser	coalesce (String		Domain\Joh	nDo&plunk data
	ProcUserEx	panded			model
	, ProcUser				
).				

					Where
Field	Description	Data type	Unit	Example	available
User	ProcUser.	String		Domain∖JohnD	o&plunk data
TimestampMs	_time * 1000.	Number	Ms	1585913547467	model Splunk data
					model

Scheduled Task Metrics

September 7, 2025

Scheduled Tasks

uberAgent collects detailed scheduled task information like the task name, the author as well as if it has actions.

Details

- Source type: uberAgentESA:System:ScheduledTasks
- Used in dashboards: Scheduled Tasks
- Enabled through configuration setting: ScheduledTaskMonitoring
- Related configuration settings: n/a
- Supported platform: Windows

Field	Description	Data type	Unit	Example
TaskEventType	Scheduled task event type. Possible values: 0, 1, 2. See also TaskEventDis	Number olayName		2

Field	Description	Data type	Unit	Example
TaskFolder	Folder where the scheduled task is stored.	String		\Microsoft\Windows\Flighting
TaskName	Scheduled task name.	String		RefreshCache
TaskUserName	Account that created, changed, or deleted the task. Possible values: sys, lvc, nvc or any other user. The first three will be expanded in the field TaskPrincipal through the lookup [systemusers] from the uberAgent UXM Splunk app.	String		AD\JohnDoe
TaskPrincipal	Account that is used when running the task. Possible values: sys, lvc, nvc or any other user. The first three will be expanded in the field UserNameExpanthrough the lookup [systemusers] from the uberAgent UXM Splunk app.	String		sys

Field	Description	Data type	Unit	Example
LogonType	The logon type for the account configured in the field TaskPrincipal . Possible values: 0, 1, 2, 3, 4, 5, 6. See also LogonTypeDisp	Number		5
		,		
Elevated	Indicates whether the task is running elevated or not. Possible values: 0, 1.	Number		0
TaskAuthor	Author that created the task. Can be any string and will often be empty.	String		Microsoft Corporation
TaskHidden	Indicates if the task is hidden in the UI or not. Possible values: 0, 1.	String		0
WakeToRun	Indicates if the Task Scheduler will wake the computer when it is time to run the task. Possible values: 0, 1.	String		0

Field	Description	Data type	Unit	Example		
HasActions	Indicates if the task has actions. Actions are send	String		1		
	separately in the source type uberAgentESA					
	:System: ScheduledTaskActions					
	. Possible values: 0, 1.					

					Where
Field	Description	Data type U	Init	Example	available
TaskPath	TaskFolder +TaskName.	String		\Microsoft\Wi	ndo Sips\\Filightitz g\OneSettings\ model
time	_time.	Number		2020-04-	Splunk data
				06T14:48:01.3	394 +1012ade l
UserNameExp	oan ded lesce(UserN	ar SiterEnxp anded,Taskl	JserName).	SYSTEM	Splunk data
					model

Field	Description	Data type	Unit	Example	Where available
LogonType	Displa ⊡x¦æme ion for	String		ServiceAccount	Splunk data
	the field				model,
	LogonType				Splunk SPL
	based on the				
	lookup				
	scheduledt	asks_logont	ypes		
	. Possible				
	values:				
	Unspecifie	d			
	: used for				
	non-NT				
	creden-				
	tials.UsePass	word			
	: use a				
	password for				
	logging on the				
	user.Service	ForUser			
	: the service				
	will log the				
	user on using				
	Service For				
	User (S4U),				
	and the task				
	will run in a				
	non-				
	interactive				
	desk-				
	top.LogonIn	teractive			
	: user must				
	already be				
	logged on.				
	The task will				
	be run only in				
	an existing				
	interactive				
	ses-				
	sion.LogonGr	oup			
	: group				
	activation.				

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field specifies

the

group.ServiceAccount

Field	Description	Data type	Unit	Example	Where available
TaskEvent[DisplayExamesion for the field TaskEventTy	String		Updated	Splunk data model, Splunk SPL
	based on the	/pe			Splulik SPL
	lookup scheduledta	asks_eventt	ypes		
	. Possible				
	values:				
	Created,				
	Updated,				
	Deleted.				

Scheduled Task Actions

uberAgent collects details about configured actions of scheduled tasks like the action type, the path to the exe as well as mail settings.

Details

- Source type: uberAgentESA:System:ScheduledTaskActions
- Used in dashboards: Scheduled Tasks
- Enabled through configuration setting: ScheduledTaskMonitoring
- Related configuration settings: *n/a*
- Supported platform: Windows

Field	Description	Data type	Unit	Example
TaskPath	Task path.	String		\Microsoft\Windows\Windows\
		_		Start
IsDeprecated	Indicates if the task is	String		0
	deprecated or			
	not. Possible			
	values: 0, 1.			

Field	Description	Data type	Unit	Example
ActionType	The configured action. Possible values: 0, 1, 2, 3.	Number		2
	ActionTypeDis	playName		
ActionListIndex	Represents the position in the list of configured actions. 1 means	Number		1
	that the action is at the top of the list, 2 represents the second position, and so			
ExePath	on. Path to the executable which is run. Only filled if	String		C:\WINDOWS\system32\so
	ActionTypeDis is ExecutableAct			
ExeArguments	Arguments of the executable which is run. Only filled if	String		start wuauserv
	ActionTypeDis is ExecutableAct			
	•			

Field	Description	Data type	Unit	Example
ExeWorkingDir	Working dir of the executable which is run. Only filled if	String		C:\WINDOWS\system32
	ActionTypeDis is ExecutableAct			
ComClsid	COM action ID. Only filled if ActionTypeDis	String		b1aebb5d-ead9- 4476-b375- 9c3ed9f32afc
	is ComAction.	p cay Name		363643132416
ComData	COM action data. Only filled if	String		timer
	ActionTypeDis is ComAction.	playName		
ComBinary	COM action binary. Only filled if	String		%SystemRoot%\System32\sp
	ActionTypeDis is ComAction.	playName		
ComHandlerDescr	rip បែលM action handler description. Only filled if	String		SppSvcRestartTaskHandler Class>
	ActionTypeDis is ComAction.	playName		
ComRemoteComp	out © OM action	String		
	remote computer. Only filled if	n] avNama		
	ActionTypeDis is ComAction.	p cayname		

Field	Description	Data type	Unit	Example
ComServiceName	COM action service name. Only filled if	String		wuauserv
	ActionTypeDis is ComAction.	playName		
AutoElevated	Indicates if the COM action runs auto-elevated. Only filled if	String		0
	ActionTypeDis is ComAction. Possible values: 0, 1.	playName		
EmailBcc	Email Bcc value. Only filled if	String		johndoe@company.
	ActionTypeDis is EmailAction.	playName		
EmailCc	Email Cc value. Only filled if ActionTypeDis is	String playName		johndoe@company.
EmailFrom	EmailAction. Email sender. Only filled if	String		Alerting@company.o
	ActionTypeDis is EmailAction.	playName		
EmailServer	Email server. Only filled if ActionTypeDis	String playName		mail.company.com
EmailSubiast	is EmailAction.			None was at alter
EmailSubject	Email subject. Only filled if ActionTypeDis	String playName		Very urgent altert

Field	Description	Data type	Unit	Example
EmailTo	Email recipient. Only filled if	String		alerts@company.com
	ActionTypeDi	splayName		
	is EmailAction.			
MsgTitle	Message title. Only filled if	String		Some title
	ActionTypeDi	splayName		
	is MessageActio	n		
MsgContent	Message content. Only filled if	String		Some content
	ActionTypeDi	splayName		
	is			
	MessageActio	n		

Field	Description	Data type	Unit	Example	Where available
ActionType	Displa l s/ pams ion of	String		ExecutableAd	ctionSplunk data
	the field				model,
	ActionType				Splunk SPL
	based on the				
	lookup				
	scheduledt	asks_action	types		
	. Possible				
	values:				
	Executable	Action			
	,ComAction,	,			
	EmailActio	n			
	,				
	MessageAct	ion			
time	_time.	Number		2020-04-	Splunk data
	_			06T14:48:01.	•

Scheduled Task Triggers

uberAgent collects details about configured triggers of scheduled tasks like the trigger type as well as the repetition.

Details

- Source type: uberAgentESA:System:ScheduledTaskTriggers
- Used in dashboards: Scheduled Tasks
- Enabled through configuration setting: ScheduledTaskMonitoring
- Related configuration settings: n/a
- Supported platform: Windows

Field	Description	Data type	Unit	Example
TaskPath	Task path.	String		\Microsoft\Windows\Device Informa- tion\Device
Triggerld	Identifier for the trigger. Is often empty.	String		NightlyTrigger
TriggerType	Trigger type. Possible values: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12. See also TriggerTypeDi .	Number splayName		1
EventTriggerSub	scri ptique ry string that identifies the event that fires the trigger.	String		<pre><query id="1 "><select path="System ">*[System/ Level=2]</select></query></pre> select>
EventTriggerNun	nVal The number of queries specified on the matching event.	Number		2
TriggerUserId	The ID of the user that fires the trigger (only in State-change trigger and logon trigger).	String		AD\JohnDoe

Field	Description	Data type	Unit	Example
LogonTriggerPoss	sibl y@col@p displayed	String		1
	in the field			
	TriggerUserId			
	is possibly the ID			
	of user-group,			
	instead of an			
	individual user.			
	Possible values:			
	0, 1.			
TriggerEnabled	Indicates if the	String		1
	trigger is enabled			
	or not. Possible			
values: 0, 1.				
riggerStartBoundar y he start date		String		2020-04-09
	when the trigger			15:41:27.000
Tida a suffer ID a see of	is active.	Chaire		+0200
TriggerEndBound	aryi ne end date after which the	String		2020-04-11
				15:41:27.000
	trigger is not			+0200
T.:D.: -1:1: - :	active anymore.	Chuin -		DTOOLEOM
rriggerkepetition	Duration on the	String		PT23H59M
	repetition pattern			
	(repetition interval) is			
	repeated, see			
	ISO8601			
	Durations.			
TriggerRepetition		String		PT2H
magemependon	pattern (e.g.	Julia		1 1211
	daily,monthly,			
	etc.), see ISO8601			
	Durations.			
	2 41 4 1 0 1 1 3 1			

Field	Description	Data type	Unit	Example
TriggerRepetitionSt	:olpvAtiDartestivoh Ethoer	String		0
	a running task is			
	stopped when			
	the repetition			
	pattern duration			
	expires. Possible			
	values: 0, 1.			
TriggerListIndex	Represents the	Number		1
	position in the list			
	of configured			
	triggers. 1 means			
	that the trigger is			
	at the top of the			
	list, 2 represents			
	the second			
	position, and so			
	on.			
DayDisplayName	Indicates on	String		Sunday
	which days the			
	trigger runs.			
WeekDisplayName	Indicates on	String		First;Second;Third;Fourth
	which weeks the			
	trigger runs.			
MonthDisplayName	Indicates in	String		Jan;Feb;Mar;Apr;May;Jun;J
	which months			
	the trigger runs.			
DayOfMonthDisplay	/Nladineates on	String		1;15;30
	which days of a			
	month the trigger			
	runs.			
DailyTriggerDaysInt		Number		2
	days between the			
	subsequent firing			
	of the daily			
	trigger.			

Field	Description	Data type	Unit	Example
WeeklyTriggerWe	eks Tritterva itnber of	Number		3
	weeks between			
	the subsequent			
	firing of the			
	weekly trigger.			
MonthlyTriggerRu	ınOlmldisbDesyOftMenth	String		1
	monthly trigger is			
	fired on the last			
	day of the month.			
	Possible values:			
	0, 1.			
MonthlyDowTrigg	ger Rud@atæstf/tbe kOfM	lo§ttfing		1
	monthly			
	day-of-week			
	trigger is fired on			
	the last week of			
	the month.			
	Possible values:			
	0, 1.			
StateChangeId	User session state	String		1
	change ID. Only			
	filled if			
	TriggerTypeDis	splayName		
	is			
	SessionStateCl	hangeTrigger		
	. Possible values:			
	0, 1, 2, 3, 4, 7, 8.			
	See also			
	StateChangeDi	splayName		
WnfTriggerStateN	am\vartetindows	String		1192063AA3BC0875
00	Notification	Ü		
	Facility (WNF)			
	state name. Also			
	see			
	WnfIdDisplayNa	amo		

					Where			
Field	Description	Data type	Unit	Example	available			
StateChange[Disp ExydMansie n of the field	String		ConsoleConne	ct Splunk data model,			
	StateChang	e			Splunk SPL			
	based on the				•			
	lookup							
	. Possible	scheduledtasks_sessionstatechanges						
	values:	values:						
	UndefinedS	UndefinedStateChange0						
	, ConsoleCon	nect						
	, ConsoleDis	connect						
	, RemoteConn	ect						
	, RemoteDisc	, RemoteDisconnect						
	, UndefinedS	tateChange1						
	, UndefinedS	tateChange2						
	, SessionLoc	k						
	, SessionUnl	ock						

Field	Description	Data type	Unit	Example	Where available
TriggerTypo	eDispl æxþanse on of the field TriggerTyp based on the lookup	String		SessionState	Char Sgetūrig gle rta model, Splunk SPL
	· ·	asks_trigge er			
	, TimeTrigge	r			
	, DailyTrigg , WeeklyTrig ,				
	MonthlyTri	gger			
	MonthlyDow	Trigger			
	IdleTrigge	r			
	, Registrati	onTrigger			
	, BootTrigge	r			
	, LogonTrigg	er			
	, UndefinedT	rigger			
	, SessionSta	teChangeTri	gger		
	, CustomTrig . Further explanations on these	ger01			
	triggers are available in the lookup				

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					Where
Field	Description	Data type	Unit	Example	available
time	_time.	Number		2020-04-	Splunk data
				06T14:48:01.	.394+ 0 02 :de l
WnfldDisp!	layNamExpansion of	String		WNF_RTDS_	NAM Sp<u>l</u>ufik Edat&IGGER_CHA
	the field				model,
	WnfTrigger	-StateName			Splunk SPL
	based on the				
	lookup				
	wnf_ids.				
	Further				
	explanations				
	on the				
	collected WNF	<i>:</i>			
	IDs are				
	available in				
	the lookup				
	wnf_ids.				

Security & Compliance Inventory Metrics

September 12, 2025

Security Inventory

uberAgent periodically runs security inventory tests that check the configuration of operating systems and applications.

Details

- Source type: uberAgentESA:System:SecurityInventory
- Used in dashboard: Security Score
- Enabled through configuration setting: SecurityInventory
- Related configuration settings: SecurityInventoryTest
- Supported platform: Windows, macOS

Field	Description	Data type	Unit	Example
SecurityInvent	oryNa Time name of the	String		Daily antivirus
6	test.	C 1 :		check
SecurityInvent	oryCa Tergony ame of the	String		Antivirus
	test category.			_
SecurityInvent	orySc ōˈhe e resulting test	Number		7
	score on a scale			
	from 0 (very bad)			
	to 10 (excellent).			
SecurityInvent	oryRe SudhDigte ration	String		"AntivirusEn-
	information			abled"=true
	determined by			"AntivirusName"
	the test.			="Windows
				Defender'*'An-
				tivirusUpToDate"
Casusitudayaat	ow.Diatlementowity.of	Numahaw		=true
Securityinvent	oryRis MScoe verity of	Number		50
	the test (how risky is the tested			
	thing) on a scale			
	from 0 (low risk)			
	to 100 (high risk).			
Socuritylpyont	oryErnAmn Geordeer code	Number		0
Securitymvent	returned by the	Number		U
	test. 0 is			
	interpreted as			
	success.			
SecurityInvent	oryErm opMes nædeærror	String		PowerShell
22341107	message	8		commandlet not
	returned by the			found.
	test.			

Field	Description	Data type	Unit	Example
SecurityInventoryS	Sco he scope of the script. Possible values: 1, 2. Also see the field	Number		1
	SecurityInven	toryScopeDispl	ayName	
	•			
SecurityInventoryS	Sc ōþeEnsteit yname if	String		Domain\JohnDoe
	the test was run			
	in the user scope.			

Field	Description	Data type	Unit	Example	Where available
SecurityInvento	ry IDis plis plka me name of the test to improve readability.	String		Protected root certificates	Splunk data model, Splunk SPL
SecurityInvento	r Jikla meDescripti description of a test.	o 6 tring		Checks if root certificates can be installed by users.	Splunk data model, Splunk SPL
SecurityInvento	name. Possible values: Machine, User.	la 6te ing		Machine	Splunk data model, Splunk SPL

Advanced Topics

September 7, 2025

This section contains information about advanced topics like multi-tenancy or data volume optimization.

Multi-Tenancy in Splunk With Different Access Roles

September 12, 2025

Introduction

Service providers servicing many different customers typically have the need to provide access to each tenant's data independently. Similarly, other types of customers may need to provide access to subsets of their data to users from individual departments or geo locations.

For such use cases where granular data access and visibility need to be granted, Splunk provides appropriate RBAC controls, fully supporting multi-tenancy. The same applies, by extension, to uberAgent.

This practice guide describes the muli-tenancy uberAgent scenario with Splunk Cloud in more detail.

Let's think about the following use case. There is one IT infrastructure that serves multiple departments (which we're going to call "customers"). Additionally, there is an admin team that oversees all departments. Now, the requirement is that all customer environments are monitored with uber-Agent. All uber-Agent instances on all customer devices should send data to a single Splunk instance. However, each customer should be able to use the uber-Agent Splunk apps but only see *their* data. Additionally, the admin team should see all customers'data.

Concept

Splunk stores data in indexes. This makes it necessary to work with different indexes, and permissions that are assigned to those indexes. As mentioned earlier, the administrators should be able to analyze all customer specific indexes. This means that the administrator team needs permissions for *all* indexes.

Setting up a multi-tenant Splunk and uberAgent installation is simple. We're going to follow the concept outlined in this Splunk blog post.

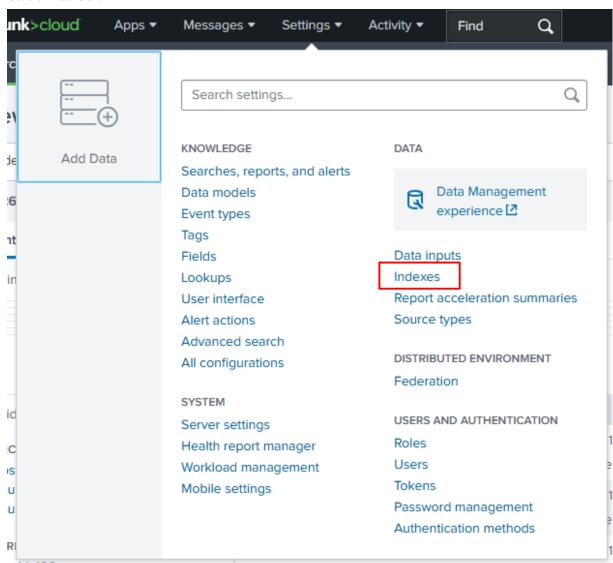
Implementation

This guide shows the necessary steps in Splunk Cloud. The steps performed can also be applied to Splunk Enterprise. Please note that menus can look slightly different in Splunk Enterprise.

Index Creation

We need indexes for each of the *customers* in Splunk. Therefore, as a first step, one needs to create the customer specific indexes. An index is where Splunk stores processed, searchable events.

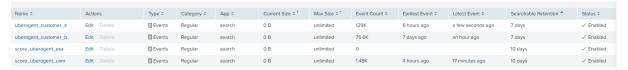
This can be done by clicking **Settings** and then selecting **Indexes** under the **Data** menu in the Splunk Cloud Web GUI.



In the following screen, the uberAgent indexes need to be created. While the "main index" name can be customized (it must still start with uberagent* to avoid additional configuration changes), the

default score index names have to be kept.

In this scenario, we're working with two customer indexes: **uberagent_customer_a** and **uberagent_customer_b** for the uberAgent event data. As you can see below, both score indexes are kept as is (see more details here).



Max size, retention times, and any other individual configuration options can be configured based on infrastructure requirements.

Note: On Splunk Enterprise, the required default indexes are created automatically when installing the uberAgent indexer app. You'd only need to create the customer-specific indexes. To avoid confusion, please delete or modify the index called "uberagent" as it is not needed when you follow the multi-tenancy approach.

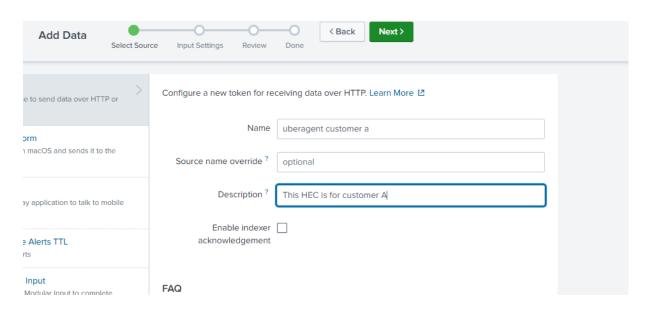
Creating HTTP Event Collector Tokens

Now that the indexes have been created, we need to create individual HTTP Event Collector (HEC) inputs. A HEC is a high-performance REST API that accepts data via HTTP or HTTPS (Splunk Cloud only supports HTTPS). Clients must authenticate with a token in order to be able to send data to a HEC input. Therefore, we're generating the HEC tokens through **Settings-> Data Inputs**.

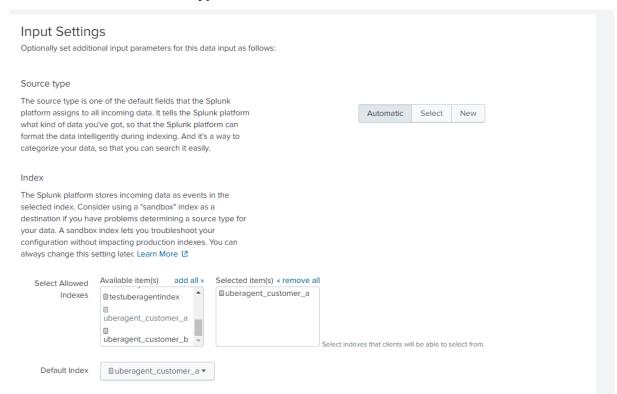
From here, add new HTTP Event Collector Inputs.



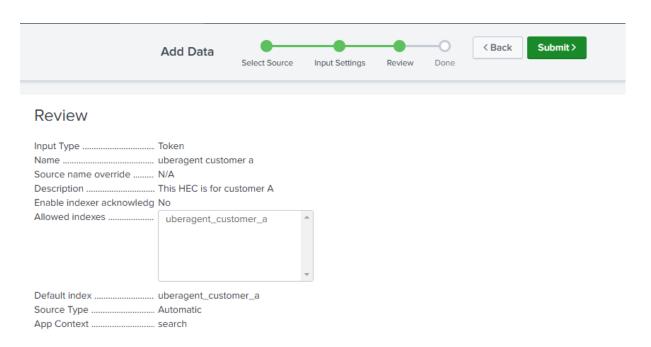
Configure the HEC input as shown in the screenshot below. Give it a meaningful name and description. Click **Next**.



In the next step, assign the corresponding index to this HEC input by selecting one of the customer specific indexes. As you can see in the screenshot below, we're assigning the index for customer A. Please make sure that **Source type** is set to **automatic**.



Click **Review** to see a summary of all settings. If everything is correct, click **Submit** to create the HEC input.



Please take a note of the HEC token that is shown after HEC input creation, and save it for the next step. If you want your customers to use individual HEC inputs, repeat the steps above for *all* customer indexes. A benefit of this approach would be that your customers are not able to accidentally send data to another customer's index as they have different HEC tokens to authenticate with.

If all customers should use the same HEC token, feel free to assign multiple indexes to that HEC input. However, make sure that the indexes are specified in the uberAgent configuration. In all cases, the uberAgent configuration must match the indexes as configured in Splunk.

Configuring uberAgent® To Send to Custom Indexes

Now that we have the HEC input(s) created, we need to update the uberAgent receiver configuration on the endpoint with the HEC token.

Example for *customer A*:

```
1 [Receiver]
2 Name = Splunk Cloud
3 Type = Splunk
4 Protocol = http
5 Servers = https://<instance-name>.splunkcloud.com:433
6 RESTToken=99201b14-4d48-49bf-8580-e856e80939f3
7 Index=uberagent_customer_a
```

Note that although HTTP Event Collector to Splunk Cloud always uses an encrypted connection through HTTPS, the **protocol** has to be set to HTTP. uberAgent uses a secured connection based on the connection target listed in the **Servers** setting.

Replace the RESTToken value with the token that you've seen after creating the HEC input. Finally, enter the custom index name that was created in the first step of this guide. uberAgent sends its data to the index specified in the **index** setting. If you don't configure this option, uberAgent attempts to send its data to the default index called "uberagent". Please note that the send attempt may fail if you assigned a custom index to the HEC input.

Creating Roles

Customer Roles With the previous step, we've enabled uberAgent to send data to a custom index. In this step, we're going to build roles that determine a user's permissions.

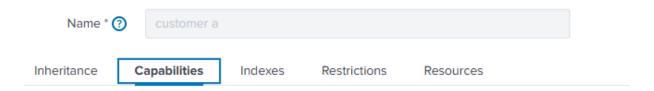
Navigate to **Settings** -> **Users and Authentication** -> **Roles**.

USERS AND AUTHENTICATION
Roles
Users
Tokens
Password management
Authentication methods

Add a new role for each customer-specific index. New roles can be set up by inheriting permission-s/privileges from different roles. In this guide, we're focusing on the basics. Hence, we're not inheriting any permissions for the customer-specific roles.

Attention: Please consult your Splunk team for the specific permissions to assign.

Next is the **Capabilities** tab. In this section, we need to select the "**search**" capability. You may need additional capabilities.



In the next tab, we're selecting the indexes which this role should be allowed to access.



Be sure to select (at least) three uberAgent indexes:

- The customer-specific index (specified in the uberAgent receiver config above)
- score_uberagent_uxm
- score_uberagent_esa

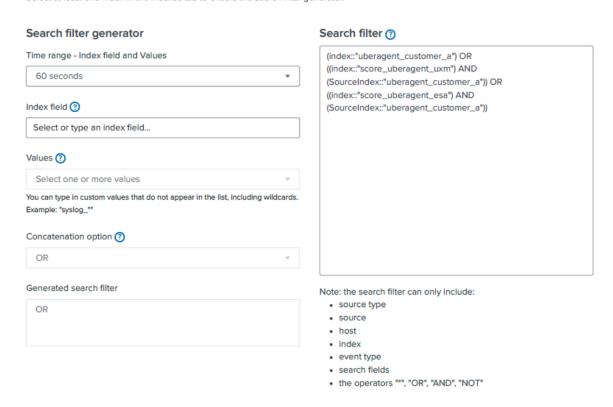
Select the customer specific index as the default index. Make sure you don't select an index that is for a **different customer**.

score_uberagent_esa	\checkmark	
score_uberagent_uxm	\checkmark	
summary		
testuberagentindex		
uberagent_customer_a	\checkmark	~
uberagent_customer_b		

On the next tab, we need to configure **restrictions**. This setting determines which events this role is allowed to search. As the score indexes are used for all customer indexes, we need to limit access to only customer specific data. When scores are written into the score index, they're referenced where they came from. Therefore, we need to combine this in the restrictions as well.

Restrict searches

Create a search filter to set search restrictions for this role. You can enter a valid search filter or use the search filter generator to add queries. Select at least one index in the Indexes tab to enable the search filter generator.



Search filter:

To break it down:

• The role is allowed to search in the customer specific index **uberagent_customer_a**.

and

• In index **score_uberagent_uxm** but only if the source index is equal to the customer specific index, in this case **uberagent_customer_a**.

and

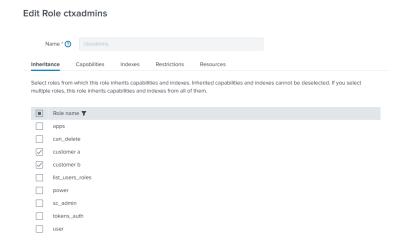
• In index **score_uberagent_esa** but only if the source index is equal to the customer specific index, in this case **uberagent_customer_a**.

Repeat the above steps for the second index, **uberagent_customer_b** by exchanging the index specific variables.

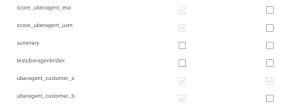
Note: Restricting the search access in **score_uberagent_esa** with a SourceIndex requires uberAgent's Splunk apps in version 7.4.1 or above.

Administrator Role Finally, we need to create a group for the administrators that is available to search in all uberAgent indexes.

In this case, we can simply inherit the permissions from our customer specific roles unless you want to add capabilities.

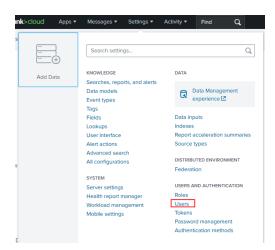


When selecting the "Indexes" tab, you see the corresponding indexes being automatically selected:



Assign Roles to Users

As a last step, we need to assign user accounts to these new roles. This can be done through the menu **Settings** -> **Users and Authentication** -> **Users**.



When editing the user of interest, be sure to select the checkbox for the specific group and the little arrow sign to "assign" the membership.



After adding the group, make sure to save the user account.

Conclusion

Let's review what we've configured. We created two separated indexes for our customer-specific requirements. uberAgent was configured to send the collected data to a customer-specific index. As Splunk users should be able to view only "their" data in the Splunk dashboards, we've configured roles that grant the access. Additionally, we've created an administrator group that has access to both indexes. This way, they can support both customers while the data itself is separated.

Automatic Application of Configuration Changes

September 12, 2025

uberAgent monitors its configuration source for changes and applies updated configurations automatically. This is called Automatic Application of Configuration Changes (AACC).

Configuring AACC

Enabling or Disabling AACC

In the default configuration, Automatic Application of Configuration Changes (AACC) is **enabled**. To **disable** AACC, set the value of both configuration settings **Configuration_Settings > ConfigCacheP-ollInterval** and **Configuration_Settings > ConfigChangeRestartTimeoutSec** to 0.

Refresh Interval

Applies to configuration sources: central config file management (CCFM).

uberAgent regularly checks the CCFM file share for updated configurations. The refresh interval is configurable via the setting **Configuration_Settings** > **ConfigCachePollInterval**. To evenly distribute the load on the CCFM file share, each agent adds a randomized offset to the refresh interval (between 0 and 50% of ConfigCachePollInterval).

Setting **Configuration_Settings** > **ConfigCachePollInterval** to 0 disables monitoring of remote configuration sources for changes.

Agent Restart Wait Time

Applies to configuration sources: local config files, Group Policy.

uberAgent waits for a specified time before applying an updated configuration. This wait time is configurable via the setting **Configuration_Settings** > **ConfigChangeRestartTimeoutSec**.

Setting **Configuration_Settings** > **ConfigChangeRestartTimeoutSec** to 0 disables monitoring of local configuration sources for changes.

How AACC Works

Configuration Sources

This section lists the locations uberAgent monitors for configuration updates. Please note that new configurations are applied **only** if a meaningful change is detected (see below).

Central Config File Management (CCFM) If uberAgent uses a configuration from a file share via central config file management, it monitors the entire CCFM directory structure for new or modified configurations. uberAgent updates its configuration in the following two cases:

- 1. **Current location is modified:** uberAgent finds a configuration archive with a changed time-stamp in the currently used subdirectory of the CCFM file share. Please note that the timestamp doesn't have to be newer, just different. This makes it possible to roll back a configuration update simply by replacing the newer configuration archive with the previous version.
- 2. **Better-matching location is available:** uberAgent finds a better-matching configuration in another subdirectory of the CCFM base path. In this case, the archive's timestamp is ignored. See this document for details on what constitutes a better match.

Local Config Files If uberAgent uses local config files, it monitors the local configuration files for changes.

Group Policy If uberAgent is configured via Group Policy, it registers for Group Policy refresh notifications.

Switching the Configuration Source

The configuration source can be switched dynamically between all supported configuration options.

Meaningful Change Detection

When uberAgent detects an updated configuration (see above), it doesn't immediately apply the updated configuration. Instead, it performs two types of checks:

- 1. It loads the updated configuration in test mode and checks it for **validity**.
- 2. It then compares the updated with the current configuration for **meaningful changes**.

A meaningful change is an actual change to a configuration setting. Modifying a comment, for example, does not constitute a meaningful change.

Forcing change detection uberAgent monitors for changes only its configuration sources (e.g. configuration files, Group Policy), but not the scripts that are mentioned therein. Should such scripts have changed, one can force a configuration change detection by setting the value of **Configuration_Settings** > **Version** to a random string or changing it from its previous value.

AACC Application Matrix

The following matrix helps to understand in which cases Automatic Application of Configuration Changes applies a configuration update.

Config source	Change event?	Better-matching subdir found?	Meaningful change detected?	uberAgent behavior
Local	yes	n/a	yes	Configuration is applied, the uberAgent service/daemon restarts automatically.
Local	yes	n/a	no	Unchanged.
CCFM	yes	no	yes	Configuration is applied, the uberAgent service/daemon restarts automatically.
CCFM	yes	no	no	Unchanged.
CCFM	no	yes	yes	Configuration is applied, the uberAgent service/daemon restarts automatically.
CCFM	no	yes	no	Unchanged.
Group Policy	yes	n/a	yes	Configuration is applied, the uberAgent service/daemon restarts automatically.
Group Policy	yes	n/a	no	Unchanged.

Depending on the config source, **Change event** means different things:

• Local: a file change notification was received from the OS.

- **CCFM:** the timestamp of the configuration archive in the current configuration's directory changed (to a newer or older value).
- **Group Policy:** a Group Policy refresh notification was received.

Reducing the Data Volume

September 12, 2025

Since Splunk is licensed by daily indexed data volume, it is in every customer's interest to keep the data volume generated by uberAgent as small as possible. uberAgent comes prepared for that by offering two default configurations and many ways for fine-tuning.

Choose Between Detail and Data Volume

Start by choosing either the default configuration, which provides **full detail** and high resolution or the configuration optimized for data volume, which differs from the default in the following ways:

- Process & application performance: information is collected only on the 10-15 most active
 processes in terms of CPU, RAM, disk, and network utilization. The processes included in the
 data collection are determined dynamically for every collection interval. One could say uberAgent "follows" the active processes.
- Collection interval of 120 s instead of 30 s.

See this document for instructions on how to switch between the two configurations.

Take Stock

Before modifying the configuration, find out how much data is generated per endpoint by the default settings. The easiest way to do that is to have uberAgent tell you in the Data Volume dashboard.

Reduce the Data Volume per Endpoint

Once you know the currently generated data volume, you should have an idea by how much it needs to be reduced. Start with the endpoint configuration.

Through uberAgent's configuration you can do three things to reduce the data volume:

Reduce the Frequency

By default, uberAgent collects performance data every 30 seconds. You can cut the volume nearly in half by changing the frequency to one minute (any other value is possible, too, of course).

You can fine-tune the data collection by adding additional timers. The data collection frequency can be set per timer. Move each metric to the timer with the desired frequency to optimally balance accuracy and data volume. While optimizing, focus on those metrics that generate the highest data volume (the *Data Volume* dashboard shows you which those are).

Remove Metrics

By default, all metrics are enabled. If you do not need the information collected by some of them, turn them off by removing them from the configuration.

Special Treatment for ProcessDetail

As you can see in the *Data Volume* dashboard, the ProcessDetail metric generates by far the highest data volume. Consider replacing ProcessDetailFull with ProcessDetailTop5. Once you do that, uberAgent only collects performance data for processes with the highest activity. This may lead to a dramatic reduction in data volume.

ProcessDetailTop5 By configuring ProcessDetailTop5, only the top 5 ProcessDetail metrics are collected based on each of the following criteria:

- · Process CPU usage
- Count of process I/O read/write operations
- Amount of process I/O read/write operations data volume
- · Process consumed RAM
- Process generated network traffic

Event Data Filtering Event Data Filtering is a powerful feature that replaces the previous allowlist and denylist options. This feature allows defining rules with conditions that are evaluated for every event before it is sent to the backend. With each matching rule, a pre-defined action is executed that controls whether the event is sent to the backend or not. Additionally, certain fields can be cleared before sending the event.

For detailed guidance, refer to the Event Data Filtering documentation.

Reduce the Number of Endpoints

If the data volume is still too high after optimizing the configuration as recommended above you need to reduce the number of endpoints that send data to Splunk. You can simply do that by stopping and disabling the uber Agent system service on select endpoints.

Demoing uberAgent® With the Event Generator for Splunk

September 12, 2025

Demonstrating uberAgent can be a bit difficult if you do not have a few dozen machines with live users available. To simplify demos, we offer an event generator that simulates an active environment with various hosts and users.

Architecture

Starting with uberAgent version 6, the Splunk event generator dependency was removed and uberAgent event generator is a single Splunk app. When Splunk is started, a .NET program generates sample data. By default sample data for two hours is generated. If you want to generate additional sample data, you can either restart the Splunk service after 2 hours, or modify the uAEventGen.conf.json file (see section "Advanced configuration").

The Splunk app can be used on Windows, Linux, and on macOS-based Splunk installations. Single server setups and distributed deployments are fully supported. The standard installation sends the data to a local Splunk instance using the TCP port 19500.

Installation

.NET 7

As of uberAgent version 7.1, .NET 7.0 is a prerequisite that must be installed on the same server where Splunk is installed. In the case of a distributed environment, .NET 7 must be installed on the same Splunk indexers where you want to install the uberAgent event generator Splunk app.

You can download .NET 7.0 here.

uberAgent Event Generator

Install the uberAgent event generator on one of the indexers. If you have a single Splunk server, install the event generator on that server.

- Download the uberAgent event generator (find out what's new in the changelog)
- On the Splunk server navigate to Manage apps
- Click Install app from file
- · Select the archive you downloaded earlier and click Upload
- Restart Splunk

That's it. The event generator starts generating events right after Splunk has been restarted. It will continue to do so for approx. 2 hours and then stop on its own. Just what you need for a demo. To re-enable restart Splunk again.

Configuration

Enabling or Disabling the Event Generator

To enable or disable the uberAgent event generator:

- 1. On the Splunk server where the uberAgent event generator app is installed navigate to **Manage** apps
- 2. Locate the *uberAgent event generator* app and click on **enable** or **disable**
- 3. Restart Splunk

Advanced Configuration

The default configuration should work for a single instance Splunk environment. If you have a distributed Splunk environment or you want to generate different generated sample data, you can modify the configuration file uAEventGen.conf.json which is located %Splunkhome %/etc/apps/uberAgent_eventgenerator/bin/uAEventGenBinaries/your platform. On a Linux system, for example, this would be: /opt/splunk/etc/apps/uberAgent_eventgenerator/bin/uAEventGenBinaries/Linux

The file contains full documentation of all possible configuration options.

Running Event Generator on macOS ARM

The Eventgen binaries are currently not signed with any certificate. MacOS on an ARM CPU requires a valid certificate otherwise the executable is terminated/killed directly after process startup. In order to start the event generator on a macOS run the following command:

codesign -s "-"/opt/splunk/etc/apps/uberAgent_eventgenerator/bin/ uAEventGenBinaries/macOS/uAEventGen

The command adds an ad-hoc certificate to the executed binary.

Recommendations for Custom Dashboards (Splunk)

September 7, 2025

Why Create Custom Dashboards

uberAgent ships with more than 60 dashboards that visualize every metric uberAgent collects. So why create custom dashboards?

uberAgent's dashboards need to work for all customers. They must be generic and cannot have dependencies on other apps.

The needs of our customers are as diverse as their networks. Custom dashboards meet the most specific requirements. They provide KPIs and views tailored to a customer's needs. And custom dashboards can bring data from multiple sources together: uberAgent + X + Y. That is what Splunk calls operational intelligence.

Where to Create Custom Dashboards

Dashboards need to "live" somewhere. In Splunk, a dashboard's natural habitat is an app. Apps are containers for dashboards and files. Apps allow you to:

- Keep related items in one place
- Add a corporate logo
- Assign permissions
- Publish to Splunkbase

Dashboard Authoring Recommendations

Create Your Own App

At first, people are often tempted to store their custom dashboard files in the uberAgent app directory. That seems to be the easiest way, but it breaks easily when the uberAgent Splunk apps are updated. **We recommend hosting custom dashboards in your own app**, independent of uberAgent.

Do Not Hard-Code Things

Networks are dynamic, as is uberAgent. New versions may bring new sourcetypes, data models, and fields.

uberAgent provides macros to simplify future upgrades. uberAgent's macros can be used globally (e.g., in other apps, too). The use of the following macros is highly recommended:

- uberAgent_index: stores the name of the uberAgent® Splunk index
- uA_DM_dataset: stores the name of the data model that contains a given dataset

All macros are defined in the file macros.conf of the uberAgent Splunk dashboard app.

Copy From Us

The best way to get to know the data collected and visualized by uberAgent is to look at the source code of the dashboards that ship with the product. We understand that practical examples can be very helpful and we explicitly recommend to reuse parts of the product's default dashboards in your custom dashboards.

Custom Scripts

September 12, 2025

uberAgent can collect data for arbitrary custom metrics through a generic script execution engine. It runs any type of script at any desired interval, either per machine or per user session.

How to Configure Custom Script Execution

The execution of custom scripts is handled by uberAgent's endpoint agent. Scripts are configured as part of Timer stanzas in uberAgent's configuration. The following lists the relevant configuration options:

```
1 #
      Setting name: Name
      Description: Arbitrary name for the timer.
2 #
3 #
     Valid values: any string
     Default: empty
4 #
5 #
      Required: yes
6 #
7 #
      Setting name: Interval
8 # Description: How long to wait before collecting data again. Unit:
      milliseconds.
9 #
     Valid values: any number
10 #
     Default: [none]
11 #
      Required: yes
12 #
13 # Setting name: Script
```

```
14 # Description: Run a script once or periodically, depending on the
      configured Interval (0 = run only once). The script's output to
      stdout is sent to the backend, each line as a new event. Can be
      specified more than once per timer.
15 #
     Valid values: Any valid command line, optionally including command
      line parameters.
16 #
      Default: empty
      Required: no
17 #
18 #
19 #
      Setting name: ScriptContext
20 #
       Description: The user context to run a script in.
21 # Valid values:
                     SessionOAsSystem | UserSessionAsSystem |
22 #
          Windows:
      UserSessionAsUser
23 #
          macOS:
                     Root | User
24 #
       Default: Windows: SessionOAsSystem, macOS: Root
25 #
       Required: no
26 #
27 #
       Setting name: ScriptTimeout
28 #
       Description: Time in ms until a running script is stopped.
29 #
       Valid values: any number
30 #
       Default: 0 (no timeout)
31 #
       Required: no
```

Please note that uberAgent on the endpoint is running in the context of LocalSystem (Windows)/root (macOS), so the referenced script must be accessible by these accounts. This is particularly relevant when running scripts stored on a network file share.

Script

You can use any script written in your preferred scripting language, e. g., PowerShell, Python, VB-Script... On macOS the value of Script is passed as argument to /bin/zsh -c.

uberAgent captures all script output sent to standard output (stdout), i. e., printed to the console. If your script writes output to stderr, then the script execution is considered failed and the script's output is discarded. Every line of output is sent to the backend as one event. Script output must be formatted as **key-value** pairs (e. g., key1=value1 key2=value2).

The key name may contain characters that are invalid for field names on some backends. Such characters are automatically replaced with underscores (_). If field names do not start with a letter, they are prepended with uA_. This is done for every type of receiver to ensure that field names are identical on every backend.

Please keep in mind that any data collected in addition to our default dataset has an impact on the generated data volume. Running custom scripts generates additional load on the endpoint the amount of which depends on the executed process (e. g., powershell.exe or cscript.exe) and the underlying data source. Especially Windows Management Instrumentation (WMI) can cause a significant load.

Additionally, please choose an appropriate timer interval for your script. Data that does not change often, like inventory information, probably only need to be collected once a day whereas volatile metrics like network throughput might have to be collected once per minute.

Deployment uberAgent does not manage the deployment process of custom scripts to the endpoints. Please feel free to use either your existing software distribution system or Splunk's Deployment Server.

An alternative for PowerShell scripts is to encode the script in Base64 and reference the result as parameter.

Add the result as parameter to PowerShell in a timer:

macOS command escaping

Example timer

Note that on macOS the script command is internally executed via /bin/zsh -c and special care must be taken when paths contain spaces. The following examples are correct ways to refer to scripts:

```
# correct strings for the script fields
/Library/Application\ Support/uberAgent/script/myscript.sh
sch /Library/Application\ Support/uberAgent/script/myscript.sh
zsh "/Library/Application Support/uberAgent/script/myscript.sh"
```

While these commands fail:

```
# incorrect strings for the script fields
| "/Library/Application\ Support/uberAgent/script/myscript.sh"
| "zsh /Library/Application\ Support/uberAgent/script/myscript.sh"
```

When you test your command on your local machine in a shell, keep in mind that that outer shell interprets your quotes, which is not the case for the command/script path you put in the config.

Script Context

Custom scripts can be executed in different contexts, depending on the operating system.

Windows

- **Session0AsSystem:** the script runs in session 0 as LocalSystem.
- **UserSessionAsSystem:** the script runs in every interactive user session as LocalSystem.
- **UserSessionAsUser:** the script runs in every interactive user session as the user logged on to the session.

macOS

- **User:** specifies the user as which the script is executed. The script is executed once as every logged-in user at the time of the timer interval. This does include users logged in via SSH.
- **Root:** either explicitly set or if no script context is specified, the script is executed once as the root user.

The script context is configured per timer. Of course, you can configure multiple timers for independent execution of different scripts.

Session GUIDs on Windows

To uniquely identify RDS sessions, uberAgent creates its own session GUIDs. These GUIDs are part of all sourcetypes containing data related to user sessions (e. g., logon and logoff).

If the data from a custom script needs to be associated with a specific session, the script should make use of the session's GUID.

Scripts can read session GUIDs from the registry key HKLM\SOFTWARE\vast limits\uberAgent\SessionGuids. Each value *name* is the ID of a Windows session. The associated value *data* contains uberAgent's session GUID.

Sourcetype

The **sourcetype** used for the script's output is a concatenation of uberAgent:Script: and the timer name specified in uberAgent's configuration.

Examples

For examples that make use of the custom script functionality please see the practice guide section.

Data Distribution and Separation (Routing to Multiple Backends)

September 12, 2025

In some scenarios, it is necessary to distribute the data collected by uberAgent to different backend systems. Do you need to build an even more complex backend infrastructure for that? No, this can be achieved in an easy and straightforward way just by modifying the agent's configuration.

Concept

uberAgent supports multiple data receivers per endpoint by default. Every timer and metric can be bound to one or multiple receivers. That architectural option gives you amazing flexibility out of the box.

The index name can be configured per receiver stanza as well. This makes it possible to configure the data retention per uberAgent metric based on the resulting index in the backend infrastructure.

Implementation

You can make use of this configuration as follows:

- Create a second (, third, ...) [Receiver] stanza.
- Bind all [Timer] stanzas to the correct receiver based on your requirements.
- · Restart the uberAgent service.

Configuration Example

In this example, we are separating uberAgent's inventory data by routing it to an additional Splunk environment.

Configure two [Receiver] stanzas like this:

```
1 [Receiver]
2 Name = uberAgent
3 Type = Splunk
4 Protocol = TCP
5 Index = uberAgent
6 Servers = Server_A:19500
7
8 [Receiver]
9 Name = uberAgent_Inventory
10 Type = Splunk
11 Protocol = TCP
12 Index = uberAgent_Inventory
13 Servers = Server_B:19500
```

Bind all [Timer] stanzas and the [OnDemand] stanza to the default receiver **uberAgent** like this:

```
2 # On-demand metrics
4 [OnDemand]
16 # Timer 1
18 [Timer]
19 Receivers
           = uberAgent
20 Name
            = Default timer
21 Comment = Metrics are placed here unless there is a reason to
   have them run at different frequencies or to isolate them
22 Interval = 30000
23 UA metric = ProcessDetailFull
23 UA metric - Indeeds 24 UA metric = ApplicationUsage 25 UA metric = SessionCount
           = SessionDetail
26 UA metric
           = SystemPerformanceSummary
27 UA metric
           = SMBClientSharePerformance
28 UA metric
```

Configure only the inventory [Timer] stanza (default: Timer 6) to use the uber Agent_Inventory receiver:

```
4 [Timer]
5 Receivers
                   = uberAgent_Inventory
                 = Inventory
6 Name
                 = Perform an inventory at a very low frequency
7 Comment
8 Interval
                  = 86400000
9 Start delay = 6000
10 Persist interval = true
                   = background
11 Thread priority
12 UA metric
                   = ApplicationInventory
                  = SoftwareUpdateInventory
13 UA metric
14 UA metric
                  = MachineInventory
15 UA metric
                  = CitrixADCInventory
```

Result

As described in this example, you have the ability to granularly route uberAgent's data on a per-metric level to different backend systems. That can be very handy to separate and distribute a subset of data to a specific group or to implement a per-metric data retention policy.

User & Host Tags

September 12, 2025

uberAgent collects an extensive list of metrics. Pre-built Splunk dashboards allow you to filter the data by computer name, hardware manufacturer, IP address, or user, to name just a few of the available filtering options.

Businesses often store data about a machine's build in the device's registry. User information, on the other hand, is typically managed in Active Directory (e.g., the user's department).

uberAgent's user & host tags feature allows you to integrate custom identifiers in such a way that dashboards can be filtered by their values.

Here is an **example:** your organization stores the version of a machine's OS image in a registry value on each machine. If you configure uberAgent to pick up that image build version through a host tag, you can filter the uberAgent dashboards by the version of your OS images. This allows you to determine if a new issue you are analyzing was introduced with a recent OS image, for example.

Tag Sources

Supported sources for tags are:

Active Directory attributes

- Environment variables
- Registry values

These sources can be queried either per user or per computer.

Requirements

- uberAgent version 5.3 or later
- Host tags are determined with the *HostTags* metric.
- User tags are determined with the *UserTags* metric.

Configuration

To configure the tags feature you can either use the configuration file or group policy. In this article, we are using the configuration file.

The stanza of interest in the configuration file is [UserHostTagging]. You can have multiple of these, one for each tag you want to set. The configurable settings are:

Tag name

- A user-defined unique name of the tag. Spaces are permitted.
- This is the tag you can search for later in the dashboards.
- Example: Department

Tag type

- Defines if the tag is a host or a user tag
- Valid values: Host, User
- · Example: User

Tag source

- Defines the source where the tag data is read from. Registry values of type REG_EXPAND_SZ are automatically expanded.
- Valid values: Registry, Environment, Ad
- Example: Registry

Tag value

- The source element/path to read the tag's data from.
- Registry format: any registry path, e.g., HKCU\Software\vast limits\Department (supported hives: HKLM and HKCU)

- Environment variable format: the variable name enclosed in percent signs, e.g., % DEPARTMENT%
- AD format: just the attribute name, e.g., Department

Additionally, the metric *UserTags* and/or *HostTags* need to be configured in at least one timer.

With the examples from above, you would get the following stanza:

```
1 [Timer]
2 Name = User tags
3 Comment = Collect configured user tags
4 Interval = 60000
5 UA metric = UserTags
6
7 [UserHostTagging]
8 Tag name = Department
9 Tag type = User
10 Tag source = Registry
11 Tag value = HKCU\Software\vast limits\Department
```

Additionally, an event trigger can be defined to collect the user tag for a single user after logon.

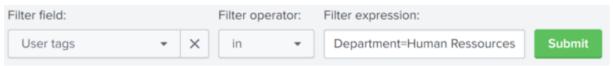
Another example: group machines by roles like notebook, graphics workstation, desktop PC, virtual machine, or executive machine with an environment variable.

You can find more examples in our practice guide on the subject.

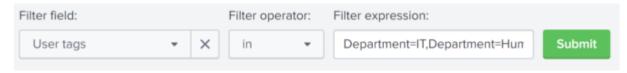
Usage in Splunk

The capability to filter for tags is built into the dashboards since version 5.3. To filter for host tags choose the Host tags filter field and to filter for user tags choose the User tags filter field.

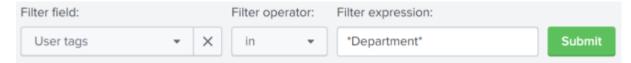
When using our user tag Department from above a search for all users from human resources would look like this:



You can also search for users from two or more departments by listing them comma-separated.



Interested in all users where Department has a value (is not null)?



Note the asterisks around the tag's name. This is needed by design when searching for the tag's name only.

uAQL - uberAgent Query Language

September 12, 2025

Overview

The **uberAgent Query Language (uAQL)** is the language for uberAgent's powerful Threat Detection and Event Data Filtering queries. Take a look at this blog post for an quick **introduction**.

uAQL query strings evaluate to either **true** or **false**. A simple example: the query Process.Name == "explorer.exe" tests if the current process name is equal to explorer.exe.

- 1. If yes, the query yields true
- 2. If no, the query yields **false**

Data Types

uAQL is a type-safe language supporting the following data types:

- Integer (a number)
- Boolean (true or false)
- String (a UTF-8 string literal, in other words: text)

Integer

A uAQL integer is a 64-bit signed number. Valid values are in the range between -9223372036854775808 and 9223372036854775807.

Boolean

A uAQL boolean is either **true** or **false**. Strings are implicitly converted to **false**. Integers with the value 1 are implicitly converted to **true**. All other integers are implicitly converted to **false**.

String

A uAQL string represents a sequence of characters that are wrapped in double quotes (") or single quotes ('), e.g., "string 1" or 'string 2'. Mixing different types of quotes (e.g., "uberAgent") is not allowed and results in a syntax error.

Character Escaping Special characters can be specified by escaping them with a prepended backslash (\). This makes it possible to use newlines (\n), tabs (\tau), and many other special characters in queries.

As a result, backslashes in paths, etc. need to be escaped, too. A Windows path such as C:\Windows is written in uAQL as "C:\\Windows".

Important: Regular expressions require a second round of escaping. To use the path C:\Windows in a regex, specify it as "C:\\\\Windows".

Raw Strings To avoid having to write so many backslashes, consider using raw string literals, in other words, strings with character escaping disabled. Raw string literals start with a leading r before the opening quote. The path C:\Windows would be specified as a raw string like this: r"C:\Windows".

Important: regular expressions and the operators like as well as glob still require escaping, even with raw strings. To use the path C: \Windows in a regex or with like or glob, specify it as a raw string literal as r"C: \\Windows".

Character Escaping Examples The following uAQL queries demonstrate different ways of matching files in uberAgent's Config cache directory.

Using the icontains operator and a regular string:

```
1 Query = icontains(File.Path, "\\vast limits\\uberAgent\\Config cache\\"
)
```

Using the like operator and a raw string:

```
1 Query = File.Path like r"%\\vast limits\\uberAgent\\Config cache\\%"
```

Using the like operator and a regular string:

```
1 Query = File.Path like "%\\\vast limits\\\\uberAgent\\\\Config cache
\\\\%"
```

Array

Arrays are special datatypes in uAQL that can hold one or multiple integers, booleans, and strings. An array is defined through square brackets: [Element 1, Element 2, Element n].

Arrays can be used in queries with the in operator. The following example tests if the current process name is equal to one of the elements in the array:

```
1 Process.Name in ["uberAgent.exe", "explorer.exe", "cmd.exe"]
```

Keywords

uAQL comes with keywords for all sorts of logical and binary comparisons.

Operator	Description
and, AND	Logical AND

Operator	Description
or,OR	Logical OR
not, NOT	Logical NOT
==	Equality. Case-insensitive for strings.
===	Equality. Case-sensitive for strings.
!=	Inequality. Case-insensitive for strings.
!==	Inequality. Case-sensitive for strings.
<	Less than.
<=	Less than or equal.
>	Greater than.
>=	Greater than or equal.
in, IN	Tests if the value on the left-hand side is equal to any element of the array on the right-hand side.
	Case-sensitive for strings.
like,LIKE	Pattern matching comparison as in SQL. The
	following wildcards can be used: The percent
	sign (%) matches zero, one, or many characters, including spaces. The underscore (_) matches a
	single character.
glob,GLOB	Uses the Unix file globbing syntax for wildcards.
iregex	Case-sensitive. Matches the event property against a regular
	expression. Case-insensitive.
regex	Matches the event property against a regular
	expression. Case-sensitive.
iregex_envvars	Unlike the default regex this version evaluates
	paths first. See PATH_REGEX for more details.
	Case-insensitive. Windows only.
regex_envvars	Unlike the default regex this version evaluates
	paths first. See PATH_REGEX for more details.
	Case-sensitive. Windows only.

Functions

The following functions can be used in uAQL queries:

Function	Description
strlen(string)	Returns the length of a string in characters as an integer.
<pre>concat(string, string)</pre>	Concatenates two strings and returns the result.
lower(string)	Transforms a string to lowercase and returns the result.
upper(string)	Transforms a string to uppercase and returns the result.
startswith(string, string)	Returns true if the first string starts with the second string, otherwise false . Case-sensitive.
istartswith(string, string)	Returns true if the first string starts with the second string, otherwise false . Case-insensitive.
endswith(string, string)	Returns true if the first string ends with the second string, otherwise false . Case-sensitive.
<pre>iendswith(string, string)</pre>	Returns true if the first string ends with the second string, otherwise false . Case-insensitive.
contains(string, string)	Returns true if the first string contains the second string, otherwise false . Case-sensitive.
icontains(string, string)	Returns true if the first string contains the second string, otherwise false . Case-insensitive.
join(string array, seperator)	Returns a concatenated list of all elements from the string array. The separator can contain 0 to n characters. This function is useful when querying results returned by the registry_read_stringmulti function.
<pre>registry_read_binary(hive, key, value)</pre>	Reads a binary value from the registry and returns the data as a hexadecimal string (e.g. 0102FCFF). The hive, key and value parameters are strings.
<pre>registry_read_number(hive, key, value)</pre>	Reads a number from the registry. The hive, key and value parameters are strings.
<pre>registry_read_string(hive, key, value)</pre>	Reads a string from the registry. The hive, key and value parameters are strings.

Function	Description
<pre>registry_read_stringmulti(hive, key, value)</pre>	Reads a multi line string from the registry. The hive, key and value parameters are strings.
<pre>get_env(environment variable name)</pre>	Reads and returns the string value of a given environment variable name.
set(variable name, value)	Changes the string value of a given variable. Returns true on success, otherwise false.
seti(variable name, value)	Changes the integer value of a given variable. Returns true on success, otherwise false.
setb(variable name, value)	Changes the boolean value of a given variable. Returns true on success, otherwise false.
isnull(variable name)	Returns true if the given variable name has a null (undefined) value.
<pre>isnull_or_empty(variable name)</pre>	Returns true if the given variable name has a null (undefined) value or if it is an empty string.
r"string"	Evaluates a string as raw string, i.e., with character escaping turned off (see above).
<pre>jsonp(variable name, path)</pre>	Accesses values directly from JSON data using a JSON pointer path. Returns the value at the specified path. If the path doesn't exist, returns null.

jsonp Function

The <code>jsonp</code> function is a powerful addition to uAQL that allows you to access values directly from JSON data. It uses a JSON pointer path to navigate through the JSON structure and retrieve specific values. This function is particularly useful when working with complex JSON data structures in your queries.

Syntax

```
1 jsonp(variable name, path)
```

- variable name: A variable that contains the JSON data.
- string path: The JSON pointer path to the desired value.

Examples Let's consider the following JSON structure:

```
1 {
```

```
3
    "user": {
4
5
      "name": "John Doe",
6
      "age": 30,
7
      "active": true
8
9
    "preferences": {
10
      "theme": "dark",
      "notifications": ["email", "sms"]
13
14
     }
16
    }
```

Here are some examples of how to use the j sonp function with this JSON structure:

1. Access a simple property:

```
jsonp(CEB.EventPayload, "/user/name") == "John Doe"
```

1. Check a boolean value:

```
jsonp(CEB.EventPayload, "/user/active") == true
```

1. Compare a numeric value:

```
jsonp(CEB.EventPayload, "/user/age") > 25
```

1. Check if a value exists in an array:

```
"email" in jsonp(CEB.EventPayload, "/preferences/notifications")
```

1. Combine with other uAQL functions:

```
lower(jsonp(CEB.EventPayload, "/preferences/theme")) == "dark"
```

These examples demonstrate how the <code>j</code> sonp function can be used to navigate and extract data from JSON structures in your uAQL queries. Remember that if the specified path doesn't exist in the JSON data, the function will return null.

Limitations While the j sonp function is powerful, it does have some limitations:

1. **Nested Objects in Arrays**: The function cannot directly query nested objects within arrays. For example, if you have an array of user objects, you can't directly query for a specific user's property.

2. **Complex Queries**: The function is designed for straightforward JSON navigation. It may not be suitable for complex queries that require filtering or searching within arrays.

Reserved Keywords

All event property names are reserved. Also, operator names including the following keywords are reserved:

Keyword	Description
true , TRUE, True	Boolean true constant.
false, FALSE, False	Boolean false constant.
null, NULL, Null	Null (undefined) value. E.g. returned by any registry_read_ function which reads data that does not match the expected registry value type.

Multiline Queries

To improve the readability of complex and lengthy queries, consider breaking them down into multiple lines. Use QueryStart to indicate the start of the query and QueryEnd to indicate its end. Inline comments are valid within the multi-line block of the query, but you should keep them to a single line for clarity and ease of maintenance.

Illustrative example:

```
1 [ThreatDetectionRule]
2 RuleId = 881834a4-6659-4773-821e-1c151789d873
3 RuleName = Browser-Starts
4 EventType = Process.Start
5 Tag = Browser-Starts-By-Users
6 QueryStart
     # Comment about the first line
7
    Process.Name in ["chrome.exe", "firefox.exe"] and
     # Comment about the second line
    Process.IsSigned == true and
10
    Process.User == "John Doe"
11
12 QueryEnd
13 GenericProperty1 = Process.Name
14 GenericProperty2 = Process.CommandLine
15 GenericProperty3 = Process.Path
16 GenericProperty4 = Process.User
```

Note:

To format an array correctly, ensure that the opening bracket is not the first character of a line. It can be placed at any subsequent position within the same line. For instance:

```
1 [ThreatDetectionRule]
2 RuleId = 881834a4-6659-4773-821e-1c151789d873
3 RuleName = Browser-Starts
4 EventType = Process.Start
5 Tag = Browser-Starts-By-Users
6 QueryStart
7 Process.Name in [
8 "chrome.exe", "firefox.exe"
9 ] and
10 Process.IsSigned == true and
11 Process.User == "John Doe"
12 QueryEnd
13 GenericProperty1 = Process.Name
```

The following is an example of invalid array formatting:

```
1 [ThreatDetectionRule]
2 RuleId = 881834a4-6659-4773-821e-1c151789d873
3 RuleName = Browser-Starts
4 EventType = Process.Start
5 Tag = Browser-Starts-By-Users
6 QueryStart
7 Process.Name in
8 ["chrome.exe", "firefox.exe"] and
9 Process.IsSigned == true and
10 Process.User == "John Doe"
11 QueryEnd
12 GenericProperty1 = Process.Name
```

Persistent Output Queue With Intelligent Disk Buffering

September 7, 2025

Persistent Output Queue with Intelligent Disk Buffering is uberAgent's sophisticated technology that ensures no outgoing events are lost while maintaining a minimal footprint and generating no disk IO at all during normal (online) operations.

How Does the Persistent Output Queue Work

Case A: Backend is Reachable

uberAgent constantly monitors network connectivity to its backend. As long as the backend is reachable and processes new events correctly, the endpoint agent does not store events on disk but sends them to the backend directly, thus avoiding any disk IO on the endpoint.

Case B: Backend is Unreachable

If the backend becomes unreachable, either because network connectivity is lost or because the backend has issues accepting data, the agent writes new events to the Persistent Output Queue's local database. uberAgent periodically checks if connectivity is back up. Once that is the case, it sends all events that were buffered to disk and reverts to the efficient direct sending (see case A).

Persistent Output Queue and Splunk Universal Forwarder

On mobile devices, uberAgent was traditionally coupled with Splunk's Universal Forwarder (UF) due to the UF's persistent queue functionality. With uberAgent's built-in POQ, it's not necessary anymore to deploy the UF just for its disk buffering feature.

Disk Space Requirements

The maximum disk space to be used by the POQ can be limited in uberAgent's configuration (see below). The following table is intended as a rough indicator of disk space requirements (PC with average usage, 10 hours uptime, default uberAgent configuration):

Backend	Disk space per day
Elastic	200 MB
Kafka	410 MB
Microsoft OMS	220 MB
Splunk via HTTP	120 MB
Splunk via TCP	70 MB

Configuration Settings

Persistent Output Queue is configured per receiver. Please note that receivers with a POQ must have a unique name.

Enabling or Disabling the POQ

PersistentOutputQueue Enables or disables the Persistent Output Queue for the current receiver.

If the Persistent Output Queue is disabled, uberAgent reverts to simple memory buffering (see the configuration setting MaxQueueSizeRamMb).

• Setting name: PersistentOutputQueue

• Valid values: Off, SQLite

Default: SQLiteRequired: no

Limiting POQ Disk Space Usage

PersistentOutputQueueMaxAgeDays Configures the maximum retention time for POQ entries. Entries older than the specified number of days are removed.

• Setting name: PersistentOutputQueueMaxAgeDays

• Valid values: positive numbers (0 = unlimited)

Default: 120Required: no

PersistentOutputQueueMaxSizeMb Configures the maximum disk space in MB for the Persistent Output Queue. The file size is checked after events are stored. It is therefore possible that the configured limit is slightly exceeded.

• Setting name: PersistentOutputQueueMaxSizeMb

• Valid values: positive numbers (0 = unlimited)

Default: 500Required: no

POQ events are stored in the format expected by the receiver's backend. Some backends expect the data in a JSON format, while others accept raw data. Especially the JSON format bloats events considerably, which means that the required disk space can be much larger than the raw event data as indexed by Splunk.

POQ Location on Disk

PersistentOutputQueuePathWindows Specifies the POQ storage location on Windows machines. Environment variables are supported.

• Setting name: PersistentOutputQueuePathWindows

· Valid values: any valid path

• Default: %PROGRAMDATA%\vast limits\uberAgent\Output Queue

Required: no

When the default path is used, uberAgent sets the permissions on the directory so that only members of the local group Administrators and the local system have read/write access. When a custom path is specified, uberAgent does not set permissions on the POQ directory. We highly recommend securing the directory.

PersistentOutputQueuePathMacOS The setting PersistentOutputQueuePathMacOS specifies the POQ storage location on macOS machines. Environment variables are *not* supported.

• Setting name: PersistentOutputQueuePathMacOS

· Valid values: any valid path

• Default: /Library/Application Support/uberAgent/Output Queue

• Required: no

When the default path is used, uberAgent sets the permissions on the directory so that only the root user has read/write access. When a custom path is specified, uberAgent does not set permissions on the POQ directory. We highly recommend securing the directory.

Miscellaneous Settings

PersistentOutputQueueErrorHandling Configures how errors during POQ event processing are handled.

Setting name: PersistentOutputQueueErrorHandling

• Valid values: IgnoreFile, StopReceiver, Shutdown

• Default: IgnoreFile

· Required: no

In case of an error (e.g., out of disk space), uberAgent may either stop the current receiver (StopReceiver), shut down the agent entirely (Shutdown), or ignore the current POQ file (IgnoreFile). In case all receivers have stopped, uberAgent shuts itself down.

Advanced Settings

PersistentOutputQueueNextSendAttemptSeconds Configures when to perform a next send attempt in case the backend is not reachable.

• Setting name: PersistentOutputQueueNextSendAttemptSeconds

• Valid values: positive numbers (0 = no wait delay)

Default: 25Required: no

PersistentOutputQueueMaxInMemoryBulkOperations Configures how many bulk send operations are kept in memory before storing them in the Persistent Output Queue. A single bulk send operation consists of all events within a run that are generated for an uberAgent metric (e.g., process detail).

A value of 0 (zero) disables the in-memory cache. In this case, all events are stored in the Persistent Output Queue before sending them to the backend. This provides maximum preservation of data at the expense of I/O.

• Setting name: PersistentOutputQueueMaxInMemoryBulkOperations

• Valid values: positive numbers (0 = disables in-memory cache)

Default: 10Required: no

Advanced Topics

Data Collection Without Network Connectivity

Receivers with a POQ can be used without a configured backed. In other words: the Servers setting can be left empty. This is useful to collect data on a machine without network connectivity, such as in a DMZ. The collected data can then be transferred to a machine with network connectivity simply by copying the POQ files.

Recommendations DMZ machine:

- Configure the receiver's settings Name, Type, and Protocol to match the settings on the machine you later plan to transfer the POQ files to.
- Once sufficient data has been collected, stop uberAgent and copy the POQ files off the machine.

Machine with network connectivity:

- Stop uberAgent.
- Copy the POQ files from the DMZ machine to the local POQ path.
- Start uberAgent. The agent sends the DMZ machine's data off to its backend.

POQ File Data Format

The internal format of the Persistent Output Queue is an SQLite database that is not protected and can be read by SQLite browsers like DB Browser for SQLite.

Event Triggers for Timers

December 11, 2025

uberAgent timers are configuration items that specify when and how often metrics are collected. Classic uberAgent timers operate on a fixed schedule, collecting data at static time intervals. Event triggers extend classic timers by enabling uberAgent to collect data when a specified event occurs on the endpoint, independent of the time.

Classic timers and event triggers are compatible and can be used together. You can, for example, configure a timer to run a script once when a user has logged on to a new session and continue to run the script periodically for every session on the endpoint. This ensures that information about new sessions is collected quickly after the logon and that information about older sessions is refreshed regularly. This is but one use case for event triggers. Please see below for full-featured examples.

Configuration

Event Trigger Stanza

The stanza [EventTrigger] starts a new event trigger configuration block. Please note that every event trigger must be linked to a [Timer] stanza (see the examples below).

Event triggers are configured using the following configuration settings:

Setting	Description	Valid Values	Required
Name	Specifies the name of an event trigger. This name must be linked in the [Timer] configuration.	Any	Yes
Type	The type of event that triggers the timer. This configuration option may be used more than once per [EventTrigger] stanza if the timer should be triggered by multiple different events.	Any event type from the list below. Example: UserLogon.	Yes

Setting	Description	Valid Values	Required
Query	The query rule to limit trigger evaluation using uAQL.	Please refer to the uAQL documentation.	No

Event Types

The following table lists the event types that can be used with the Type field of the [EventTrigger] stanza:

Event Type	Description	Platform
UserLogon	This event type is triggered	Windows
	shortly after a user logs on to	
	the endpoint (on average, after	
	half the duration of the	
	SessionDetailtimer	
	interval).	
${\tt Session Connection State Change}$	This event type is triggered	Windows
	each time a user's session state	
	changes.	
SessionRoaming	This event type is triggered	Windows
	each time a session is roamed	
	to another endpoint.	

Supported Metrics

Event Triggers for timers support the following metrics:

- UserTags
- CitrixSessionConfig
- Script

Examples

Example 1: Configuration With Metric UserTags

In this example, the metric UserTags is collected through a standard timer run at a specific interval. Using the standard timer configuration, uberAgent collects the metric UserTags for all users logged on to the endpoint at the execution time. Since this metric supports the usage of event triggers, uberAgent can collect this metric upon the occurrence of a specified event for a single user instead of all logged-in users. This example shows that the metric UserTags is collected every 10000 ms and when a UserLogon event occurs.

Please find more examples of configuring User & Host Tags here.

Example 2: Configuration With Metric CitrixSessionConfig

This example shows a standard timer to collect the metric CitrixSessionConfig. To collect data for a single user that logs on, disconnects, or continues the session on another endpoint, all event types need to be configured within the [EventTrigger] stanza. The event trigger in this example is limited to Citrix sessions only by using the uAQL query BrokerType == "Citrix". Using this limitation ensures that the data collection is only started for Citrix remoting sessions.

```
1 [Timer platform=Windows]
           = Citrix session configuration details
2 Name
3 Comment
                 = Collect Citrix HDX metrics
                 = 900000
4 Interval
5 UA metric
                  = CitrixSessionConfig
6 EventTrigger = TriggerCitrixSessionConfig
7
8 [EventTrigger platform=Windows]
9 Name = TriggerCitrixSessionConfig
                 = UserLogon
10 Type
11 Type
                 = SessionConnectionStateChange
12 Type
                 = SessionRoaming
             = BrokerType == "Citrix"
13 Query
```

Example 3: Configuration With a Custom Script

This example describes a standard timer that executes a custom script at a defined interval. This timer can also be enriched with an event trigger so that the script is started on the occurrence of a particular event. In this configuration example, the script is executed in the script context UserSessionAsUser. Therefore, uberAgent executes this script additionally for a user that logs on and collects data only for this user.

```
1 [Timer platform=Windows]
          = CustomScriptTrigger
2 Name
                 = Executes a custom script
3 Comment
             = 10000
4 Interval
5 Script
                  = powershell.exe -executionpolicy bypass -file "C:\
      Program Files\Citrix\uberAgent\scripts\test-script.ps1"
6 ScriptContext = UserSessionAsUser
7 EventTrigger = TriggerCustomScript
8
9 [EventTrigger platform=Windows]
                   = TriggerCustomScript
11 Type
                   = UserLogon
```

uAQL Properties for Event Triggers

Event Triggers can be limited in evaluation using uAQL. The following table shows the options that are available for a query.

UserLogon, SessionConnectionStateChange and SessionRoaming

The following properties are available if one of the listed events is triggered.

Property name	uAQL Data Type	Description
SessionId	Integer	The session id of the associated user.
BrokerType	String	The broker type. (Citrix or Microsoft or VMware or NutanixFrame or Unknown or None)
Current. ConnectionStateId	Integer	The system's connection state id. This value is from WTS_CONNECTSTATE_CLASS.
Current.ClientName	String	Computername of the remoting client.

Property name	uAQL Data Type	Description
Current.ClientIp	String	IP address of the remoting client.
Previous. ConnectionStateId	Integer	Previous system's connection state id. This value is from WTS CONNECTSTATE CLASS.
Previous.ClientName	String	Previous computer name of the remoting client.
Previous.ClientIp	String	Previous IP address of the remoting client.

Troubleshooting

September 7, 2025

The information in this section helps you troubleshoot uberAgent deployments.

Creating an uberAgent® Support Bundle

December 11, 2025

It may happen that the uberAgent support team asks you to create an uberAgent support bundle. A support bundle is a collection of log files and registry items which helps the support team troubleshoot your case. The *uberAgent Config & Support tool* collects all necessary logs and information for you, and conveniently creates a zip archive on your desktop.

Requirements

Windows

- Windows 10 version 1607 or later
- Windows Server 2016 or later

macOS

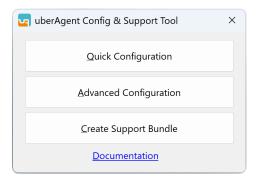
macOS Ventura or newer

Download & Installation

Simply download the *uberAgent Config & Support tool* from the Citrix Observability download section to the machine from which you want to create the support bundle. Please note that uberAgent has to be installed on this machine.

Usage

To create a support bundle, launch the *uberAgent Config & Support tool* and click on **Create Support Bundle**.



Once complete, the tool displays a notification and saves the bundle to your desktop. Upload this bundle to your Citrix case or forward it to the requestor.

More details

You may also see the uberAgent Config & Support tool documentation for more details.

Log Files

December 11, 2025

Things do not always work the way they should. When that happens, uberAgent does not keep you in the dark. Its log files show you exactly what is going on.

Agent Log

Explanation

This is the log file of uberAgent's main component, the system service/daemon.

Location

Windows The agent log file uberAgent.log is stored by default in the SYSTEM account's Temp directory, which typically resolves to C:\Windows\Temp.

Note: Starting with uberAgent version 7.3 it is possible to change the path via the Windows Registry or Group Policy.

macOS The default location for the uberAgent.log file is /Library/Logs/uberAgent.

Note: Starting with uberAgent version 6.2 this directory will be owned by root with permissions 700. As a consequence Console.app won't be able to access the log files if it runs as a normal user. If you need to use Console.app to view uberAgent logs in this directory you can either change the permissions or start the app as root from terminal with this command: sudo /System/Applications /Utilities/Console.app/Contents/MacOS/Console.

Agent Configuration Log

Explanation

This is the log file of the system service/daemon's configuration.

Location

Windows The configuration log file uberAgentConfiguration.log is stored by default in the SYSTEM account's Temp directory, which typically resolves to C:\Windows\Temp.

macOS The default location for the uberAgentConfiguration.log file is /Library/Logs /uberAgent.

In-Session Helper Log

Explanation

This is the log file of uberAgent's in-session helper component which is used for collecting information from within user sessions.

Location

Windows The in-session helper log file uAInSessionHelper.log is stored by default in the SYSTEM account's Temp directory, which typically resolves to C:\Windows\Temp.

macOS The default location for the uAInSessionHelper.log file is ~/Library/Logs/uberAgent.

Chrome/Edge/Firefox Browser Extension In-Session Helper Log

Explanation

This is the log file of uberAgent's in-session helper instances that are acting as communication gateways between the agent and the Chrome and Firefox browser extensions.

Location

Windows The Chrome/Firefox extension in-session helper log file uAInSessionHelper.log is stored by default in the user account's Temp directory, which typically resolves to C:\Users\USERNAME\AppData\Local\Temp.

macOS The default location for the uAInSessionHelper.log file is ~/Library/Logs/uberAgent.

IE Browser Add-on Log

Explanation

This is the log file of uberAgent's Internet Explorer add-on.

Location

The IE add-on's log file uberAgentIEExtension.log is stored by default in the user account's low-integrity Temp directory, which typically resolves to C:\Users\USERNAME\AppData\Local\Temp\Low.

If Enhanced Protection Mode is enabled and OS is Windows 8 (or newer), the IE add-on's log file is stored in C:\Users\USERNAME\AppData\Local\Packages\windows_ie_ac_001\AC \Temp. For Windows 7 the log files'location is the same as described in the previous paragraph.

Sandbox Log

Explanation

This is the log file of uberAgent's XPC Service that wraps potentially unsafe API calls.

Location

macOS The default location for the uberAgentSandbox.log file is /Library/Logs/uberAgent.

uAGuardian Log

Explanation

This is the log file for uberAgent's helper process, which is started when the agent service is restarted due to a configuration change to apply the new configuration.

Location

Windows The helper's process log file uAGuardian.log is stored by default in the SYSTEM account's Temp directory, which typically resolves to C:\Windows\Temp.

More Information

Configuring a custom path for log file storage

Windows On Windows systems, you can configure a custom directory for storing uberAgent log files either through Group Policy (GPO) or by modifying the Windows Registry. To achieve this, you need

to set a value for the LogPath key within the registry path HKEY_LOCAL_MACHINE\SOFTWARE\ vast limits\uberAgent\LogConfig. The LogPath key should be of type REG_SZ and contain the desired directory path.

Example:

```
1 HKEY_LOCAL_MACHINE\SOFTWARE\vast limits\uberAgent\LogConfig
2 LogPath = C:\Logs\uberAgent\%COMPUTERNAME%
```

If a custom path is specified, all log files will be stored in the designated location.

Priority Order The priority for determining the log file storage location is as follows:

- 1. **Group Policy (GPO)**: If configured, this takes the highest priority.
- 2. **Registry Software Path**: The path specified in HKEY_LOCAL_MACHINE\SOFTWARE\vast limits\uberAgent\LogConfig.
- 3. **Default Path**: If no GPO or registry path is configured or accessible, the Temp directory of the SYSTEM account is used.

Handling Not Accessible Paths If e.g. a network path is configured for log file storage and it becomes not accessible, uberAgent will process the configured paths in order of priority. The logging will then rotate to the next accessible path.

When rotation occurs, a message will be written at the beginning of the log file indicating that the original log file was not accessible and that rotation has taken place. Note that this message may have a later timestamp than subsequent log entries, as the log queue might not have been fully processed at the time of the rotation.

This ensures that logging continues seamlessly even if the initially configured path is not accessible, maintaining the integrity of the log data.

macOS On macOS, you can designate a custom directory for log file storage by modifying the uberAgent-meta-config.conf file.

To achieve this, assign a value to the LogFilePath key located within the [Meta:Logging] section.

Example:

```
1 [Meta:Logging]
2 LogFilePath = /tmp/uberAgentLogFiles
```

If a custom path is specified, all aforementioned log files will be stored in the designated location. The files uberAgent.log, uberAgentConfiguration.log, uberAgentSandbox.log and uberAgentScriptHelper.log will have the hostname

appended to their names. Additionally, the remaining log files will include both the hostname and a session ID in their filenames.

Example:

```
uberAgent_WORKSTATION1.log
uberAgentConfiguration_WORKSTATION1.log
uberAgentSandbox_WORKSTATION1.log
uberAgentScriptHelper_WORKSTATION1.log
uberAgentBrowserHelper_WORKSTATION1_123456.log
uberAgentSessionHelper_WORKSTATION1_123456.log
```

Enabling Debug Mode

Unless debug mode is enabled uberAgent logs only important events like errors. To enable debug mode make sure the following settings are present in the configuration:

```
1 [Miscellaneous]
2 debugMode = true
```

Activating Trace Logging

Trace logging is a very detailed log level that can be enabled to facilitate troubleshooting of specific agent components. We recommend only enabling trace logging temporarily.

To enable trace logging for an agent component, add the component's name to the TraceLogFilterExpressing regex of the ConfigFlags setting, e.g.:

```
1 ConfigFlags = TraceLogFilterExpression:REGEX
```

The following table lists examples for REGEX:

TraceLogFilterExpression regex	Description
.Dns.	Logs additional information for DNS queries.
.POQ create new file.	Logs additional information if a new persistent output queue file was created.
.Event POQ/queue send.	Logs additional information if data was sent to the backend.
.Event POQ increase error count.	Logs additional information if illformed data was sent to the backend and the error count was increased.
.Event POQ remove.	Logs additional information if events were removed from the persistent output queue.

TraceLogFilterExpression regex	Description
.Event POQ store.	Logs additional information if events were
	stored in the persistent output queue.
.Event queue store.	Logs additional information if events were
	stored in an in-memory queue.
.Event POQ read.	Logs additional information if events were read
	from the persistent output queue.
.Performance counter.	Logs additional information for mapping
	performance counter names (english to localized
	and vice versa) and determination times.
.Locking.	Logs additional information if internal locking
	mechanism for lists took too long.
.StartProcess.	Logs the stdout/stderr content of started scripts.
.SendEventMulti.	Logs additional information if a single send
	operation was split into multiple.
.Citrix.	Logs additional information for Citrix DC/ADC
	queries.
.Time-change.	Logs additional information if system time
	change was detected.
.SessionTrace.	Logs additional information if a user profile
	event cannot be mapped to an active session.
.Find.	Logs additional information if a process cannot
	be found in uberAgent's internal process list.

File Size and Log Rotation

When the size of the log file grows to 10 MB uberAgent archives it. This is done by appending the current timestamp to the filename and starting a new empty log file. uberAgent keeps the four newest archive files. When four archive files are present and a fifth file is archived the oldest archive file is deleted. This log rotation mechanism guarantees that the total log file size never exceeds 50 MB.

The number of log files to keep around can be changed via the configuration parameter LogFileCount.

Log Format

Log file entries always have the same structure, explained in the following table:

			Thread			
Timestamp	Severity	Domain	Owner	Thread ID	Source	Message
Timestamp	Possible	The	Windows:	The ID of	Message	Actual
in the	entries:	computer's	the <i>name</i> of	the thread	source. For	message to
machine's	DEBUG,	Active	the	that logged	example Li-	be logged
time zone	INFO,	Directory	computer	the	censeCheck	
	WARN,	domain	account	message	or Receiver-	
	ERROR		macOS: the		Statistics	
			user root			

Here is an example:

Notepad++ Syntax Highlighter

Even though we take great care to optimize the log for readability it is sometimes hard to find the needle in the haystack. That is why we created an uberAgent log syntax highlighter for Notepad++. It highlights the key information, making it easier to find what you are searching for.

Splunk It

As text-based log files, uberAgent's logs are ideal candidates for processing by Splunk. We have built the uberAgent Log Collector specifically for that purpose.

uberAgent® Log Collector Splunk App

September 12, 2025

The endpoint agent's log files are the primary source for agent health and status information. The log files are kept locally on the endpoint, but they can easily be forwarded to the backend with the uberAgent Log Collector Splunk App.

Please refer to the log collector's documentation for details.

uberAgent® Browser Extensions

December 11, 2025

uberAgent's browser web app performance functionality requires a browser extension to be installed. This article lists possible troubleshooting steps.

Dashboards That Do Not Require Browser Extensions

uberAgent monitors Chrome and Internet Explorer performance on a process level. The collected data is available in the dashboards *Browser Performance: Chrome* and *Browser Performance: Internet Explorer*, respectively. You do not need any extensions for this to work.

However, if you want data about websites, like page load time, extensions are needed. Website data is visualized in the dashboards *Browser Web App Performance* and *Browser Web App Usage* for all supported browsers. Grouping and filtering by browser type or browser version are possible, of course.

Troubleshooting the Chrome Extension

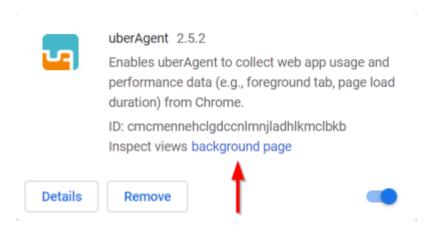
- 1. Reread the Chrome extension installation guide carefully. Take notice of the relevant configuration settings section.
- 2. Check the uberAgent service log as well as the Chrome extension logs for any errors.
- 3. uberAgent is using native messaging for communication with the extension. Make sure that the extension is not on the native messaging denylist.
 - a) If the denylist is enforced in the company, adding com.vastlimits.uainsessionhelper to the allowlist overrides the denylist.
- 4. Check if the native messaging host is configured correctly:
 - a) On an x86 machine running Windows, the following registry item is created by the uberAgent service and must be present.
 - Key: HKEY_LOCAL_MACHINE\SOFTWARE\Google\Chrome\NativeMessagingHosts
 \com.vastlimits.uainsessionhelper

Value: (Default)
Data: C:\Program Files\Citrix\uberAgent\uAInSessionHelperChrome
.json

b) On an x64 machine running Windows, the following registry item is created by the uberAgent service and must be present.

Key: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Google\Chrome\
NativeMessagingHosts\com.vastlimits.uainsessionhelper
Value: (Default)
Data: C:\Program Files\Citrix\uberAgent\uAInSessionHelperChrome
.json

- c) On macOS, a file called com.vastlimits.uainsessionhelper.json is created and must be present in the directory /Library/Google/Chrome/ NativeMessagingHosts/.
- 5. Enable console logging
 - a) Navigate to: chrome://extensions/
 - b) Enable developer mode
 - c) Click the extension's background page link



- a) The developer tools appear
- b) In the dev tools console enter:

```
1 logSeverity = LogSeverities.Info
2 logContext = LogContexts.All
```

6. The extension now logs events to the dev tools console

Troubleshooting the Firefox Extension

1. Reread the Firefox extension installation guide carefully.

- 2. Check the uberAgent service log as well as the Firefox extension logs for any errors.
- 3. Check if the native messaging host is configured correctly:
 - a) On an x86 machine running Windows, the following registry item is created by the uberAgent service and must be present.

```
Key: HKEY_LOCAL_MACHINE\SOFTWARE\Mozilla\NativeMessagingHosts\
com.vastlimits.uainsessionhelper
Value: (Default)
Data: C:\Program Files\Citrix\uberAgent\uAInSessionHelperFirefox
.json
```

- b) On an x64 machine running Windows, the following registry items are created by the uber-Agent service and must be present.
- c) Key: HKEY_LOCAL_MACHINE\SOFTWARE\Mozilla\NativeMessagingHosts\
 com.vastlimits.uainsessionhelper
 Value: (Default)
 Data: C:\Program Files\Citrix\uberAgent\uAInSessionHelperFirefox
 .ison
- d) Key: HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Mozilla\NativeMessagingHost \com.vastlimits.uainsessionhelper Value: (Default) Data: C:\Program Files\Citrix\uberAgent\uAInSessionHelperFirefox .json
- e) On macOS, a file called com.vastlimits.uainsessionhelper.json is created and must be present in the directory /Library/Application Support/Mozilla /NativeMessagingHosts/.
- 4. Enable console logging
 - a) Navigate to: about:debugging#/runtime/this-firefox
 - b) Identify the uberAgent extension and click **Inspect**
 - c) The developer tools appear
 - d) In the dev tools console enter:

```
logSeverity = LogSeverities.Info
logContext = LogContexts.All
```

5. The extension now logs events to the dev tools console

Troubleshooting the Internet Explorer Extension

- 1. Reread the Internet Explorer installation guide carefully. Take notice of the relevant configuration settings section.
- 2. Check the uberAgent service log as well as the IE add-on logs for any errors.
- 3. Check if the IE add-on is registered correctly
 - a) On an x86 machine, the following registry items must be present.

```
b) Key: HKEY_CLASSES_ROOT\CLSID\\{ 82004312-5B53-46F1-B179-4
FCE28048E6F } \InProcServer32
Value: (Default)
Data: C:\Program Files\Citrix\uberAgent\uaIEExtension32.dll
c) Key:HKEY_CLASSES_ROOT\CLSID\\{ 82004312-5B53-46F1-B179-4FCE28048E6F
```

} \InProcServer32
Value: ThreadingModel

Data: Apartment

- d) On an x64 machine, the following registry items must be present.
- e) Key: HKEY_CLASSES_ROOT\CLSID\\{ 82004312-5B53-46F1-B179-4
 FCE28048E6F } \InProcServer32
 Value: (Default)
 Data: C:\Program Files\Citrix\uberAgent\uaIEExtension64.dll
- f) Key: HKEY_CLASSES_ROOT\CLSID\\{ 82004312-5B53-46F1-B179-4 FCE28048E6F } \InProcServer32

Value: ThreadingModel

Data: Apartment

g) Key: HKEY_CLASSES_ROOT\WOW6432Node\CLSID\\{ 82004312-5B53-46F1-B179-4FCE28048E6F } \InProcServer32

Value: (Default)

Data: C:\Program Files\Citrix\uberAgent\uaIEExtension32.dll

h) Key: HKEY_CLASSES_ROOT\WOW6432Node\CLSID\\{ 82004312-5B53-46F1-B179-4FCE28048E6F } \InProcServer32

Value: ThreadingModel

Data: Apartment

4. Check if the IE add-on is enabled in Settings > Manage add-ons



- 5. uberAgent identifies IE processes by the full path to the EXE file. For this, the path must correspond to one of the following paths entered in the registry.
 - a) Key: HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion \App Paths\IEXPLORE.EXE

Value: (Default)

Data (example): C:\Program Files\Internet Explorer\IEXPLORE.EXE

b) Key: HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Internet Explorer\ Main

Value: x86AppPath

Data (example for a x86 machine): C:\Program Files\Internet Explorer\

IEXPLORE.EXE

Data (example for a x64 machine): C:\Program Files (x86)\Internet

Explorer\IEXPLORE.EXE

Troubleshooting Specific Fields

Please see the following articles for additional information on specific fields:

Reasons For Empty SessionFgBrowserActiveTabHost Field

Creating an uberAgent® Performance Recording

September 7, 2025

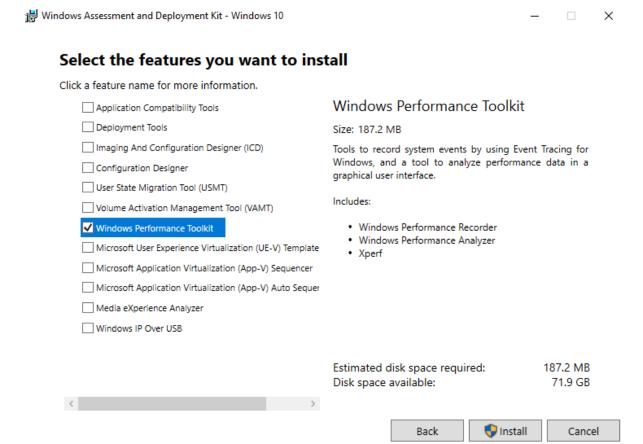
It may happen that the uberAgent support team asks you to create an uberAgent performance recording. A performance recording is a detailed analysis of the processes running on a machine. The recording is created with the Windows Performance Recorder.

Downloading and Installing the Windows Performance Recorder

The Windows Performance Recorder is part of the Windows Assessment and Deployment Kit (Windows ADK).

Download the appropriate version of the ADK for your Windows operating system from Microsoft.

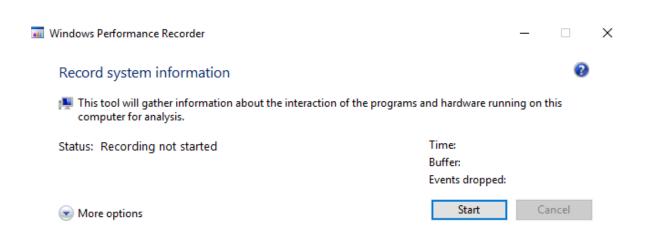
Run the setup. When asked for features to install, select **Windows Performance Toolkit**. The other features may be deselected.



Creating The Recording

After the installation has finished, start the **Windows Performance Recorder** from the start menu.

Click on **Start** to start the recording and let the recording run for five minutes, if not told otherwise by uberAgent support.



When the recording has finished, save the recording on disk and send the generated ETL file to the uberAgent support.

uberAgent's Driver Safety Net Feature

September 7, 2025

To collect high-quality network and process metrics, uberAgent relies on kernel-mode drivers that are started when the computer boots. While we invested a lot of time and energy to make our drivers as reliable as humanly possible, a driver is just a piece of software, and even software developed to the highest standards cannot be tested in all of the millions of possible combinations of hardware and software. One of the worst possible situations is a driver that crashes during the machine startup phase, more specifically during *every* machine startup. In such a bluescreen loop situation it can be difficult to restore the operating system to working order.

uberAgent's drivers come with **Driver Safety Net**, a unique feature that prevents bluescreen loops: in the unlikely event of a crash in one of uberAgent's drivers, the driver disables itself.

How Driver Safety Net Detects Crashes

In a nutshell, Driver Safety Net works as follows: uberAgent's drivers write their current states to a location in the registry. The information from these registry values is used during the driver initialization phase. When a driver determines that its last start was unsuccessful it increments a failure count value. Once that count reaches a threshold of 3 (three), the driver disables itself.

False Positives

There are events that "look and feel" like a blue screen but have very different root causes, for example, power outages or hardware failures. If multiple such events occur in a short timeframe, uberAgent's Driver Safety Net may be triggered, even though no driver crashed.

How to Re-Enable uberAgent's Drivers After Driver Safety Net Triggered

Once Driver Safety Net triggers, uberAgent's drivers remain disabled until re-enabled with the simple procedure outlined below. This is to ensure maximum system stability and reliability.

To re-enable uberAgent's drivers remove the following registry values and restart the uberAgent service:

- DrvFailureCount
- DrvStartupFinished
- DrvShutdownFinished
- DrvLastStart

Depending on the driver that triggered Driver Safety Net, the above registry values are located in one of the following two registry paths:

- Process driver: HKLM\SYSTEM\CurrentControlSet\Services\UberAgentDrv
- **Network** driver: HKLM\SYSTEM\CurrentControlSet\Services\uberAgentNetMon

Knowledge Base

September 7, 2025

Welcome to the uberAgent knowledge base. Here you'll find best practices, explanations as well as tips & tricks.

Architecture

September 7, 2025

This section contains knowledge base articles about the architecture.

Description of the uAInSessionHelper/uberAgentHelper Process

September 12, 2025

Some information is only available to processes running in a user's session, not to services running in session 0 respectively in the context of the system. In order to be able to collect such data, too, uberAgent makes use of the helper process uAInSessionHelper.exe on Windows and uberAgentHelper on macOS.

The helper is a lightweight process that collects specific data and sends it to the main service.

The Helper Process

Windows

There is one uAInSessionHelper.exe process running permanently for every user session in the local SYSTEM context, e.g. to collect GPU usage information. When collecting web app metrics from Chrome, Edge, or Firefox, a dedicated uAInSessionHelper.exe instance is started (with user privileges) by each browser that has uberAgent's extension installed.

macOS

There is one uberAgentHelper process running permanently for every user session with user privileges. When collecting web app metrics from Chrome, Edge, or Firefox, a dedicated uberAgentHelper instance is started (with user privileges) by each browser that has uberAgent's extension installed.

Helper Metrics

The helper process is utilized to collect the following metrics:

Windows

• Information about a UWP app

• Internet Explorer performance data

Metric: BrowserPerformanceIE

• UX metrics for SaaS and web apps in Internet Explorer

Metric: BrowserPerformanceIE

UX metrics for SaaS and web apps in Chrome
 Metric: BrowserPerformanceChrome

UX metrics for SaaS and web apps in Firefox
 Metric: BrowserPerformanceFirefox

UX metrics for SaaS and web apps in Edge
 Metric: BrowserPerformanceEdge

GPU performance data

Metric: GpuUsage

macOS

• Session Detail data

Metric: SessionDetail

UX metrics for SaaS and web apps in Chrome
 Metric: BrowserPerformanceChrome

UX metrics for SaaS and web apps in Firefox
 Metric: BrowserPerformanceFirefox

 UX metrics for SaaS and web apps in Edge Metric: BrowserPerformanceEdge

Troubleshooting the Helper

Helper log locations are documented here.

Please review the contents of these log files when you suspect things are not working correctly.

Common Errors

Class Not Registered (Windows)

You may see messages like the following in uAInSessionHelper's log file:

The root cause for these errors is that uberAgent can only determine IE performance per website if IE is run in desktop mode, i.e. not as a Citrix XenApp published application. If IE is run as a published application certain classes required by uAInSessionHelper are not available, thus the messages.

Name or Version may be Inconsistent Between App Inventory & Usage

September 7, 2025

uberAgent® collects information about applications on multiple levels:

- Which applications are installed (app **inventory**)
- Which applications are running (app usage)
- Which applications are being worked with (foreground app)

Not all of that information is available in one data source. In fact, uberAgent has to query quite disparate sources to collect its extensive application information. That can lead to inconsistencies, specifically between the app inventory and all the other application source types.

Root Cause

The root of the problem is that Windows has no generic concept of applications. Windows knows and cares about processes, threads and a good number of other things, but APIs for applications? Nonexistent.

As a consequence, there are no application naming and versioning standards for software vendors. This may lead to the situation that vendors use one name/version in one place and a different name/version in another - for the same application.

uberAgent

uberAgent has sophisticated algorithms to deal with the situation and determine the best possible application names and versions. However, there may be inconsistencies between the source types ApplicationInventory and other application source types, e.g., ApplicationUsage or ProcessDetail.

The reason for these inconsistencies lies in the fact that the data for the ApplicationInventory sourcetype is based on the Uninstall registry key so that it matches what Windows displays in Apps & features.

All other source types'application info, on the other hand, is based on an algorithm that determines application properties depending on the application type (Win32, UWP, App-V, Java, ...). Naturally, this algorithm cannot use the Uninstall registry key.

For that reason, inconsistencies may exist and mapping between the ApplicationInventory and other application source types is not recommended.

Using uberAgent® With a Proxy

September 7, 2025

uberAgent uses libcurl to send data when using HTTP or HTTPS as protocol. libcurl ignores common per-system or per-user proxy settings. Customers who want to use uberAgent with a proxy, must configure the following two system environment variables:

- http_proxy
- https_proxy

Customers who have a proxy configured but don't want to route the traffic from uberAgent to Splunk through it, must set the environment variable no_proxy to the Splunk server name.

More information is available in the libcurl documentation.

uberAgent vs. Splunk Template for XenDesktop 7

September 12, 2025

Both uberAgent and the Splunk Template for XenDesktop 7 can be used to monitor a Citrix XenDesktop/XenApp environment. This article highlights the key differences between both products.

Scope

The Splunk Template for XenDesktop 7 monitors part of the XenDesktop infrastructure (e.g. license server) and collects performance data per session and per machine on the XenApp session hosts.

uberAgent monitors user experience and application performance of Windows machines.

Support and Maintenance

Splunk does not provide support for its App for Citrix XenDesktop. New versions with bugfixes and additional features are rare.

uberAgent is fully supported. New versions are being released every 2-3 months. Fixes for critical bugs are made available immediately.

Footprint

The Splunk Template for XenDesktop 7 collects data via PowerShell scripts and WMI.

uberAgent, on the other hand, is written in C++ and accesses native APIs (no WMI). Therefore uberAgent has a much smaller footprint and consumes fewer resources on the monitored system.

Data volume

The Splunk Template for XenDesktop 7 generates a higher data volume per XenApp server than uber-Agent.

Data collection

The Splunk Template for XenDesktop® 7 collects the following data:

- High-level overviews supporting multiple farms
- Alerting
- ICA® latency reporting
- · User experience investigation
- User logon time details
- · Performance visualization and monitoring
- Application usage
- · Critical service monitoring

uberAgent® collects the data about the following:

- Logon duration
- · Computer startup duration
- · Machine performance
- · Session performance
- Process performance
- Application performance
- Application usage
- · Application versions
- Process startup duration
- GPU usage
- Browser performance per website

Here is the full list of metrics collected by uberAgent.

Configuration

September 7, 2025

This section contains knowledge base articles about the configuration.

Metric Dependencies

September 7, 2025

Use one process detail metric only

You can either use ProcessDetailFull OR ProcessDetailTop5, not both. If you have accidentally configured both, uberAgent® uses ProcessDetailTop5.

There is no entry in the log for this case.

Use a process detail metric in one timer only

ProcessDetailTop5 or ProcessDetailFull can be configured in one timer only.

If you have it configured in two or more timers, you get the following warning in the uber Agent Configuration .log:

```
1 CheckForUnconfiguredMetrics, Metric(s) ProcessDetailFull can only be configured once.
```

Use session and process detail metrics in the same timer only

SessionDetail and ProcessDetailTop5 OR ProcessDetailFull must be configured in the same timer. If you have accidentally configured these metrics in different timers, you get the following warning in the uberAgentConfiguration.log:

```
1 CheckSessionAndProcessInSameTimer,Metric(s) SessionDetail and (
ProcessDetailFull or ProcessDetailTop5) should only be configured in
the same timer.
```

Session details require logon details

If you enable SessionDetail, you must also enable the metric LogonDetail.

Custom Queries

September 7, 2025

This section contains knowledge base articles about custom queries.

Walkthrough: Building a Splunk Search

September 12, 2025

The following walkthroughs illustrate how to build a Splunk search from scratch.

Scenario: we want to identify users who launch a specific executable more often than n times in a given time range.

Splunk SPL Search

Let's build the Splunk SPL search step by step.

Step 1

We start with all events from uberAgent's index.

Note: to facilitate changing the index name used by uberAgent, all our dashboards make use of the uberAgent_index macro which contains the actual index name. The macro is defined in macros.conf of the uberAgent searchhead app.

```
1 index=`uberAgent_index`
```

Step 2

We filter for the process startup sourcetype which contains one event per started process.

Note: The documentation of uberAgent's sourcetypes and fields can be found here.

```
1 index=`uberAgent_index` sourcetype=uberAgent:Process:ProcessStartup
```

Step 3

We ignore processes started by SYSTEM, LOCAL SERVICE and NETWORK SERVICE.

Note: The pseudo-users sys, lvc and nvc are defined in the lookup table systemusers.csv of the uberAgent searchhead app. They are auto-expanded to the proper user names SYSTEM, LOCAL SERVICE and NETWORK SERVICE in uberAgent's data model.

Step 4

We add a filter for the name of the process we are interested in, Winword. exe in this example.

```
index=`uberAgent_index` sourcetype=uberAgent:Process:ProcessStartup
ProcUser!=sys ProcUser!=lvc ProcUser!=nvc ProcName=Winword.exe
```

Step 5

We count the number of (start) events per user.

Note: The only purpose of adding the field ProcName to the stats command is to make it part of the results table, too.

```
index=`uberAgent_index` sourcetype=uberAgent:Process:ProcessStartup
ProcUser!=sys ProcUser!=lvc ProcUser!=nvc ProcName=Winword.exe
stats count as Starts by ProcName ProcUser
```

Step 6

We only keep users with more than five starts in the results list.

```
index=`uberAgent_index` sourcetype=uberAgent:Process:ProcessStartup
    ProcUser!=sys ProcUser!=lvc ProcUser!=nvc ProcName=Winword.exe
    stats count as Starts by ProcName ProcUser
    where Starts > 5
```

Step 7

We rename fields to make them look nicer.

```
index=`uberAgent_index` sourcetype=uberAgent:Process:ProcessStartup
ProcUser!=sys ProcUser!=lvc ProcUser!=nvc ProcName=Winword.exe
```

```
2 | stats count as Starts by ProcName ProcUser
3 | where Starts > 5
4 | rename ProcUser as User ProcName as Process
```

Step 8

We sort the results so that the user with the highest number of starts is listed first. The 0 in the sort command ensures that the output is not truncated after the 10,000th result.

```
index=`uberAgent_index` sourcetype=uberAgent:Process:ProcessStartup
    ProcUser!=sys ProcUser!=lvc ProcUser!=nvc ProcName=Winword.exe

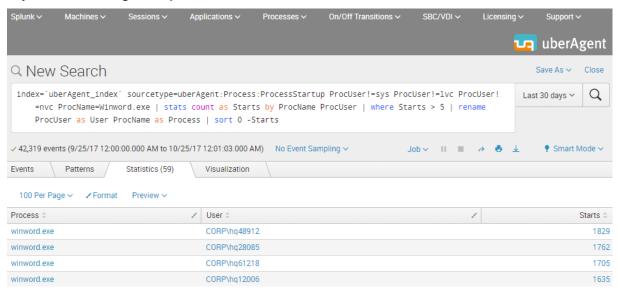
stats count as Starts by ProcName ProcUser

where Starts > 5
    rename ProcUser as User ProcName as Process

sort 0 -Starts
```

The Result

This is what the final Splunk SPL search for users with more than five starts of Winword. exe looks like. The screenshot below shows the search being run over the past 30 days. In practice, you would adjust the time range to any relevant time interval.



Accelerated Data Model Search

uberAgent comes with an accelerated data model. Searching an accelerated data model is a lot faster than searching the underlying index (by "a lot" we mean at least 50x), but requires a different search syntax based on the pivot or tstats commands. We are using pivot because of the easier syntax compared to tstats.

In this second example, we demonstrate how to search for starts of a "modern" UWP app, specifically the weather app that is part of Windows. Most UWP apps cannot be identified by process name - which is simply backgroundTaskHost.exe. Luckily uberAgent determines the real app name automatically.

Step 1

We start with a count of all process starts.

Note: The documentation for the Splunk pivot command can be found here.

Note: the macro uA_DM_Process_ProcessStartup resolves to the name of the data model containing the Process_ProcessStartup dataset. We use this technique to facilitate moving datasets between data models.

Step 2

We filter for the weather app.

Note: An easy way to identify the name of the weather app is to dig around with a search like the following: index=`uberAgent_index` sourcetype=uberAgent:Process:

ProcessStartup AppName=*Weather*

Step 3

We split by user so that we get a count of process starts per user (renaming the ProcUser field to User in the process).

Step 4

We only keep users with more than five starts in the results list. We also sort the results so that the user with the highest number of starts is listed first. The 0 in the sort command ensures that the

output is not truncated after the 10,000th result.

Step 5

We add the application name as a row to the results table.

```
pivot `uA_DM_Process_ProcessStartup` Process_ProcessStartup count(
    Process_ProcessStartup) as Starts latest(AppName) as Application
filter AppName is "Microsoft.BingWeather"
splitrow ProcUser as User
where Starts > 5
sort 0 -Starts
table Application User Starts
```

The Result

The resulting output is very similar to the first example above: a table with the application, the users and the number of starts that can easily be exported to CSV or otherwise be processed further.

How to Implement Drilldowns on Custom Dashboards

September 7, 2025

When you create a custom dashboard, Splunk automatically adds a drilldown to the search page. In many cases, that is not what you want. This article describes an easy way to implement custom drilldowns.

How It Works

- 1. Add a JavaScript file to your dashboard
- 2. Implement click event handlers in JavaScript, in which you set the new URL and optionally pass values to the drilldown page
- 3. Use the passed values in the drilldown page

Let's explain these steps in more detail.

Add a JavaScript File

To add one or more JavaScript files to your Simple XML dashboard specify the names of the .js files in the form tag like this:

JavaScript files reside in the appserver**static** directory of your app.

Click Event Handlers

In your JavaScript file add click event handlers to those dashboard elements (charts, tables, ...) you want to implement a custom drilldown behavior for.

Please note that the dashboard elements need to have unique IDs in Simple XML for this to work, e.g.:

```
1
```

The JavaScript could look like this:

```
1 // RequireJS dependency handling
2 require (["splunkjs/mvc",
            "splunkjs/mvc/simplexml/ready!"], function (mvc)
3
4
5
6
      // Set click event handlers
7
      var chart21 = mvc.Components.getInstance ("Chart_Panel21");
      chart21.on ("click", drilldown);
8
      var table41 = mvc.Components.getInstance ("Table_Panel41");
9
10
      table41.on ("click:row", drilldown);
11
      // Define a drilldown function that can be used by multiple click
12
         event handlers
      function drilldown (event)
13
14
      {
15
         // Don't do any further event processing
16
17
         event.preventDefault ();
18
19
         // Get token values
         var earliest = GetToken (mvc, "earliest");
20
21
         var latest = GetToken (mvc, "latest");
22
23
         // Build the new URL
         var drilldownUrl = "single_machine_detail";
24
         drilldownUrl += "?earliest=" + encodeURIComponent (earliest);
25
         drilldownUrl += "&latest=" + encodeURIComponent (latest);
26
         drilldownUrl += "&FilterHostName=" + encodeURIComponent (event.
27
            data["click.value"]);
28
         // Go to the new URL
29
```

```
30      window.location = drilldownUrl;
31    }
32
33  }
34 );
```

Use the Passed Values on the Drilldown Page

In the example above we are passing the search time range (earliest and latest) to the drilldown page, where it is used automatically.

In addition to time, we pass the variable FilterHostName. This variable can be used in the Simple XML drilldown page searches by enclosing it in dollar signs, e.g. \$FilterHostName\$.

If you want to pass a value to an input field instead, prepend the field token's name with "form.". Example: your input field on the drilldown page is defined like this:

Specify the field's value as follows in JavaScript:

```
drilldownUrl += "&form.FilterField="+ encodeURIComponent ("Some field
  value");
```

Examples

The technique described here is used extensively on uberAgent's dashboards. Poke around our search head app and you will find many real-world examples.

How to Report on CPU Seconds & RAM GB Hours per User

September 10, 2025

uberAgent determines all the required data for charging based on usage. If you want to bill your customers depending on how much CPU or RAM their users's essions consume you basically need the metrics CPU seconds per user and RAM GB hours per user. The latter can be explained as the number of gigabytes of RAM multiplied by the number of hours.

Example: RAM GB Hours per User

User A runs one session with an average RAM footprint of 2 GB for 3 hours. User B runs 2 sessions for 5 hours, one with an average RAM footprint of 1 GB and the other with an average RAM footprint of 2 GB. *GB hours* would be:

- User A: 2 GB * 3 hours = 6 GB hours
- User B: 1 GB * 5 hours + 2 GB * 5 hours = 15 GB hours

Splunk Search

The following Splunk search will return the total CPU seconds and RAM GB hours per Active Directory user account. It can be run over any time range (= billing period). Please note that due to the nature of the calculation every started hour counts in full, i.e. the resolution is one hour.

```
pivot uberAgent Session_SessionDetail_Users
      first(SessionUserLower) as User
3
      avg(SessionWorkingSetMB) as AvgHourSessionWorkingSetMB
      sum(SessionCPUTimeS) as SumHourSessionCPUTimeS
4
5
      splitrow
         _time
6
         period hour
7
     splitrow
8
         SessionGUID
9
10 | eval AvgHourSessionWorkingSetGB=AvgHourSessionWorkingSetMB/1024
11
   stats
12
      count as SessionHours
13
      sum(AvgHourSessionWorkingSetGB) as GBHours
      sum(SumHourSessionCPUTimeS) as CPUSeconds
15
      avg(AvgHourSessionWorkingSetGB) as AvgSessionGB
16
17
         User
18 | eval GBHoursRounded=round(GBHours, 2)
   eval CPUSecondsRounded=round(CPUSeconds, 2)
19
20
  | eval AvgSessionGBRounded=round(AvgSessionGB, 2)
  fields
22
      User
      SessionHours
23
      GBHoursRounded
24
25
      CPUSecondsRounded
26
      AvgSessionGBRounded
```

Above search returns these fields per user:

- · RAM GB hours
- · CPU seconds
- Session hours (sessions * hours run per session)
- · Average memory usage per session

How it Works

We are searching uberAgent's accelerated data model. That is why we use the pivot command.

The search consists of two main parts. First, we determine the average RAM usage per session and hour. Then we summarize the session hours per user.

CPU usage is even easier to calculate because uberAgent already reports it as CPU seconds so that we already have the length of time. We only need to summarize; we do that in two steps because the search needs to be constructed that way to determine RAM usage.

Data Collection

September 7, 2025

This section contains knowledge base articles about the data collection.

Citrix Applications Are Still Displayed with Old Name After Renaming

September 7, 2025

After renaming published applications in Citrix Studio, they still show up with the old name in uberAgent's dashboards.

uberAgent reads information for user's published applications from the registry from the path HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\Ica\Session\.

Registry value	uberAgent® field
PublishedName	SessionPublishedName
AppNames	SessionPublishedAppsCtx

When you look at a published application with Get-BrokerApplication via PowerShell you can identify multiple application name fields.

- ApplicationName
- BrowserName
- Name
- PublishedName

Citrix writes the application's BrowserName to the registry. But, this property does not get altered when changing the application's name through Studio. You can change the Browser-Name property with PowerShell: Get-BrokerApplication -Name SomeName | Set-BrokerApplication -BrowserName NewBrowserName

After setting the BrowserName correctly, published applications will show up with the new name in uberAgent's dashboards.

Dashboards Have No Data

September 12, 2025

If you do not see any data on a dashboard please check all of the following.

uberAgent® indexer app

Check the following in *Apps > Manage Apps*:

• Do you have a Splunk app with the name uberAgent indexer installed?

Index uberagent

Check the following in Settings > Indexes:

- Do you have an index with the name uberagent?
- What is the index'event count?
- How long ago was the latest event recorded?

Data flow

There are multiple options for sending the data uberAgent collects on the endpoints to the Splunk backend. Make sure one of the following is configured correctly:

- uberAgent on endpoint > TCP port 19500 on Splunk indexer
- uberAgent on endpoint > Splunk HTTP Event Collector on Splunk indexer
- **uberAgent** on endpoint > TCP port 19500 on **Universal Forwarder** on endpoint > receiver port 9997 on Splunk **indexer**

The port numbers above are default values that can be changed.

Index contents

Run the following Splunk search: index=uberagent*

- Do you see results from all hosts with uberAgent installed?
- Do you see results from many different source types?

Endpoints

If data from a specific endpoint is missing check the following on the endpoint:

- Make sure the service uber Agent is running.
- Check uberAgent's log file for issues.

Index permissions

The account you are accessing the uberAgent app with needs read permissions on the uberAgent index(es) or else no data will be returned by the searches. For details please see the article about multitenancy.

Time range

The dashboards display data from the selected time range only. Please make sure the time range selector is set to a period from which you expect events.

Differences between SessionPublishedAppsCtx and SessionPublishedName

September 7, 2025

The source type uberAgent: Session: SessionDetail contains two fields that appear to have the same purpose: SessionPublishedAppsCtx and SessionPublishedName.

One might assume, that both contain information about Citrix published applications run by a user. But, there are differences.

- SessionPublishedAppsCtx: all published applications run by a user. Applies to Citrix sessions
- SessionPublishedName: name of the published application which was used to create the session. Applies to Citrix and VMware sessions.

How Application Startup Duration is Measured

September 12, 2025

uberAgent measures the startup duration of every process. This happens fully automatically whenever an application is launched and does not require configuration per application.

How Not to Do it

uberAgent does not monitor application startup duration by waiting for specific windows to show up on the screen. Such an approach would be difficult to implement reliably because applications often display splash screens or other helper windows while starting up in order to reduce perceived launch times. A reliable mechanism would have to ignore those and wait for the main application window.

Additionally, even when the main window is shown, it may not be fully populated, the content might be missing.

Summing up, this would be hard to get right and would most likely require configuration per application, something we are trying very hard to avoid.

How Instead

Windows processes need to load DLLs in order to access operating system APIs or call functions from their own libraries. When a new process is created, it loads many DLLs in quick succession during its initialization phase. Once the process is ready, the DLL loading stops.

uberAgent monitors the DLL loading phase of new processes closely. The end of that phase is determined by looking for the first 30 second time window in which no DLLs are loaded.

Additionally, if there are IO operations during the DLL loading phase, uberAgent calculates the average IOPS during that phase and waits until IOPS drop to less than 20% for at least 10 seconds after the end of the DLL loading phase.

When those conditions are met uberAgent considers the process to be fully started up. Both of these timeout values can be adjusted globally. The DLL loading timeout is also available on a per-process level. Take look at the section ProcessStartupDurationWaitIntervalOverride of the configuration file.

DLL Loading and Disk IO

DLLs are only loaded from disk the first time around. When a process is started a second time most or all DLLs will already be in the operating system's file system cache. This optimization often effectively reduces the number of disk IOs incurred by a process start to zero.

uberAgent's startup duration algorithm works correctly regardless of whether DLLs are loaded from disk or from RAM (the file system cache).

Because uberAgent reports the number of disk IOs per process startup the data it collects can be used to easily determine how efficient the caching mechanism is.

"Visual" Startup Duration

uberAgent's algorithm for determining process and application startup durations is reliable and produces consistent results. However, it may not always correlate 100% with the duration as perceived by the end-user. The reason for this potential discrepancy is that uberAgent does not monitor what happens on the screen.

How to Configure the Data Collection Frequency

September 7, 2025

By default, uberAgent collects performance data every 30 seconds. This interval can be changed in the configuration.

Timers

uberAgent® can run an unlimited number of independent *timers*. Each timer wakes up at regular intervals and collects the metrics assigned to it. When a timer has completed a data collection task, it goes back to sleep for the configured length of the timer interval. This means that the **time between** data collections is the length of the timer interval plus the time it takes to collect the data.

Timer Runtime

In most cases data collection is nearly instantaneous and, therefore, the time between data collections is essentially identical to the timer interval. In some rare cases, e.g., where data is collected from WMI, the data collection may take a noticeable amount of time. In such cases, the time between data collections may be significantly longer than the configured timer interval.

Note: uberAgent's timers do not guarantee a certain number of data collections per time unit. Do not assume that, for example, a 30 second timer interval yields exactly two events per minute.

Changing the Timer Interval

As mentioned above, data collection happens every 30 seconds by default for most metrics. To change the interval to, e.g., 10 seconds, edit the uberAgent.conf configuration file so that the lines where the intervals are configured read like this:

```
1 # interval unit: milliseconds
2 interval = 10000
```

If, on the other hand, you want to receive only certain metrics at a higher resolution (e.g. 5 seconds), create a new timer section as follows:

```
1 [Timer]
2 Name = High-frequency GPU usage
3 Comment = Isolate GPU metrics from the other metrics
4 # interval unit: milliseconds
5 Interval = 5000
6 UA metric = GpuUsage
```

With this configuration, uberAgent collects GPU usage data every five seconds. Be sure to remove the GPUUsage metric from any other timers, or it will be collected there as well.

In addition to timers that collect data at time-based intervals, uberAgent also has on-demand metrics that collect data when specific events occur, such as user logins.

Note: Be sure to consider metric dependencies when separating metrics and placing them in individual timers.

Incomplete Boot Duration Metrics

September 12, 2025

uberAgent collects detailed information about each machine boot process. This is governed by the ondemand metric *BootDetail* which is enabled by default and can be adjusted through uberAgent's configuration.

Symptoms

Sometimes the collected *BootDetail* metrics are incomplete and not all data is visualized in the *Boot Duration* dashboard. After reviewing uberAgent's logfile you may find entries like this:

```
OnOffTransition, Data from boot trace file missing! The following analysis may be incomplete. Lost events: 1000000, lost buffers: 0. Typical cause: insufficient disk bandwidth
```

Resolution

uberAgent does not add any load to the boot processes. It uses logs that are created by Windows anyway. Depending on the complexity of the boot process (e.g. installed drivers, applications) the

pre-defined number of buffers, as well as the buffer size, are insufficient. You can adjust the number of buffers and the buffer size within the endpoint's registry:

```
1 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Diagnostics\
        Performance\BootCKCLSettings
2 "BufferSize"
3 "MaximumBuffers"
4 "MinimumBuffers"
```

Increase all three values until the *lost events* message disappears in uberAgent's logfile. Doubling the default values is a good starting point.

No Data in Splunk Even Though uberAgent® Sends Successfully

September 12, 2025

Scenario 1: uberAgent is sending data directly to Splunk

Symptoms

According to uberAgent's log file, there are no events in its in-memory send queue, indicating a successful data transfer to the Splunk server(s):

```
ReceiverStatistics, Splunk; SPLUNKSERVER: 19500 - Events in queue: 0, queue size: 0.0 KB, sent: 1597, added to queue: 1597, rejected from queue: 0
```

When searching in Splunk's internal logs for errors using the following search:index=_internal error you see messages like the following:

```
ERROR TcpInputProc - Message rejected. Received unexpected 707406419
byte message! from src=IPADDRESS:PORT. Maximum message allowed:
67108864
```

Cause

The port uberAgent sends data to (default: 19500) is configured to receive data from Universal Forwarders.

Splunk Universal Forwarders do not send raw event data, they use a specific protocol. uberAgent, on the other hand, sends raw event data. If the formats sent by the source and expected on the target do not match the above error message may be logged and the incoming data is ignored on the Splunk server.

Resolution

If uberAgent is sending data directly to Splunk do **not** open port 19500 via *Forwarding and receiving* on the Splunk server. Install the *uberAgent_indexer* app instead which opens port 19500 as a raw TCP port.

Scenario 2: uberAgent is sending data to a locally installed Splunk Universal Forwarder

Symptoms

According to uberAgent's log file, there are no events in its in-memory send queue, indicating a successful data transfer to the locally installed Universal Forwarder:

```
ReceiverStatistics, Splunk; localhost:19500 - Events in queue: 0, queue size: 0.0 KB, sent: 1597, added to queue: 1597, rejected from queue: 0
```

When searching for incoming data on port 19500 on the Splunk server using the following search: index=* source="tcp:19500" you see messages like the following (shortened):

Cause

The port Universal Forwarder sends data to (default: 9997) is configured to receive data from uberAgent.

Splunk Universal Forwarders do not send raw event data, they use a specific protocol. uberAgent, on the other hand, sends raw event data. If the formats sent by the source and expected on the target do not match above messages may be seen and the dashboards will be empty.

Resolution

If uberAgent is sending data to Splunk via a locally installed Universal Forwarder open TCP port 19500 on the Universal Forwarder (the same machine uberAgent runs on) and configure uberAgent to send to localhost:19500 as described here.

To enable Splunk to receive the Universal Forwarder's data open a receiving Port (default: 9997) on Splunk via *Forwarding and receiving* as described here. Do **not** open port 9997 as a raw TCP port.

Reasons For Empty SessionFgBrowserActiveTabHost Field

September 12, 2025

When the foreground window is a browser, uberAgent determines the active tab's URL and stores it in the SessionFgBrowserActiveTabHost field of the uberAgent:Session: SessionDetailsourcetype.

The SessionFgBrowserActiveTabHost field may be empty even though a browser window is in the foreground if any of the following is true.

Extension Not Installed or Enabled

The SessionFgBrowserActiveTabHost field is determined with the help of uberAgent's browser extension. If the extension is not installed or enabled in the browser window that is in the foreground, the field cannot be populated.

Private Mode

The uberAgent extension is not active in private mode unless the browser has specifically been configured to run the extension in private windows, too.

Denylist/Allowlist

If a tab's site URL is excluded by the BrowserWebAppURL_Filter configuration setting uberAgent leaves the SessionFgBrowserActiveTabHost field empty.

Save As or Similar Dialog

While a browser dialog such as *Save As* or *Authention Required* is being displayed, the foreground window is not a tab, but that modal dialog. Therefore, uberAgent leaves the foreground tab field SessionFgBrowserActiveTabHost empty. When that happens, the SessionFgWindowTitle field contains the title of the modal dialog, not the title of the previously active tab.

Developer Tools

While a browser's developer tools window is in the foreground, uberAgent leaves the foreground tab field SessionFgBrowserActiveTabHost empty. When that happens, the SessionFgWindowTitle field contains the title of the developer tools window.

Reported GPU Memory Usage per Process is Too High

September 12, 2025

uberAgent determines and reports the GPU memory usage. This happens if the *GpuUsage* configuration option is enabled (default: yes). GPU memory and compute usage are determined for every process that is using the GPU as part of the ProcessDetail source type.

Symptoms

On rare occasions, we have observed that the reported GPU memory usage is far too high. In those cases, the *ProcGpuMemMB* field would reach values as high as 17592178311168.

Cause

In the observed cases, the cause of the high values was a broken Citrix XenDesktop graphics driver that would cause display issues, too. The issue could be fixed by uninstalling and reinstalling the Citrix XenDesktop VDA (including a reboot after uninstall and reinstall).

Event Data Filtering Examples

September 12, 2025

Article Purpose

This article is a pool of Event Data Filtering rules and gets extended continually. Sources could be support tickets or community posts.

The rules serve as a suggestion of what is possible with Event Data Filtering and must be tested before use in your own company.

First, read the official documentation on Event Data Filtering. A few examples are listed there. Then, browse through the rules below.

List of Rules

Logons

Miscellaneous

```
1 # Do not send any data about the user "JohnDoe" in domain "AD"
2 # You need to list every source type with one of the following fields:
      User, ProcUser, or SessionUser
3 # A list of source types is available in the metrics documentation on /
      en-us/uberagent/
4 # Last rule update: 2021-12-22
5
6 [EventDataFilter]
7 Action = deny
8 Sourcetype = Application:BrowserPerformanceChrome
9 Sourcetype = Application:BrowserWebRequests2
10 Sourcetype = Application:Errors
11 Sourcetype = Process:LogoffProcesses
12 Sourcetype = Process:LogonProcesses
13 Sourcetype = Process:NetworkTargetPerformance
14 Sourcetype = Process:ProcessDetail
15  Sourcetype = Process:ProcessStartup
16  Sourcetype = Process:ProcessStop
17 Sourcetype = ActivityMonitoring:ProcessTagging
18 Query = ProcUser == "AD\\JohnDoe"
19
20 [EventDataFilter]
21 Action = deny
22 Sourcetype = Application:NetworkConnectFailure
```

```
23  Sourcetype = Application:UIDelay
24  Sourcetype = Logoff:LogoffDetail
25  Sourcetype = Logon:GroupPolicyCSEDetail2
26  Sourcetype = Logon:LogonDetail
27  Sourcetype = Tags:UserHost
28  Query = User == "AD\\JohnDoe"
29
30  [EventDataFilter]
31  Action = deny
32  Sourcetype = Session:SessionDetail
33  Query = SessionUser == "AD\\JohnDoe"
```

PowerShell Constrained Language mode

September 12, 2025

This document explains how to use uberAgent with PowerShell's Constrained Language mode enabled.

Understanding Constrained Language Mode

PowerShell Constrained Language mode is a security feature that restricts access to sensitive language elements that can be used to invoke arbitrary Windows APIs. These features are often required to perform sophisticated cyber attacks. For a detailed description, see this Microsoft blog post.

Impact on uberAgent®

uberAgent relies on PowerShell for collecting various metrics, such as details related to Citrix or Custom Scripts. The required data is accumulated via multiple APIs, most of which need full access to PowerShell's capabilities.

Identifying Potential Issues

If you encounter problems in this context, you will notice the following keywords near powershell .exe in uberAgent's log files:

- PermissionDenied
- PSNotSupportedException

The above keywords indicate issues that may have arisen due to the limitations imposed by Constrained Language mode in PowerShell.

How to use Constrained Language Mode With uberAgent

Constrained Language mode is often implemented by system-wide application control tools, such as AppLocker or Windows Defender Application Control. These tools can also remove the restrictions for files and folders you trust, allowing full command functionality for those particular files.

AppLocker

If AppLocker is used for application control, you can allow-list uberAgent's PowerShell scripts with the following steps:

- 1. Open the Group Policy editor.
- 2. Navigate to Computer Configuration > Windows Settings > Security Settings > Application Control Policies > AppLocker > Script Rules.
- 3. Create a new rule
 - a) Action: Allow
 - b) You can choose between Publisher (4) and Path (5)
- 4. Did you choose Publisher?
 - a) Select an uberAgent script, e.g., C:\ProgramData\vast limits\uberAgent\ Configuration\Security inventory\Windows\Antivirus\Antivirus. ps1
 - b) Set the slider to **Publisher**
- 5. Did you choose Path?
 - a) Select Browse Folders
 - b) Select a folder e.g., %OSDRIVE%\ProgramData\vast limits\uberAgent\
 Configuration\Security inventory*
- 6. If you want to exclude files from the allowlist, you can do that on the Exceptions page.
- 7. Finally, enter a name for the rule and a description.
- 8. Click **Create** to add the new rule.

Once the policies are synchronized at the endpoint, uberAgent's scripts should run in FullLanguage mode.

Ensure that allow-listed folders and scripts are read-only for regular users. This prevents privilege escalation and ensures PowerShell can execute scripts without modifications.

Saving uberAgent® Data to Disk on the Endpoint

September 12, 2025

Occasionally, you may find yourself in a situation where you need to look at uberAgent's collected data before it is sent to the configured backend(s). This knowledgebase article shows you how to do that by guiding you through the following steps:

- Make the required **adjustments** to your **uberAgent configuration**.
- Set up a **local TCP listener** on the endpoint, which ultimately saves the data to a text file on the local disk.
- Compare local with backend data.

uberAgent Configuration

Add an additional [Receiver] stanza to your active uberAgent configuration (uberAgent.conf) as follows:

```
1 [Receiver]
2 Name = Local TCP Receiver
3 Type = Splunk
4 Protocol = TCP
5 Servers = localhost:19501
```

This instructs uberAgent to send the data to a local TCP listener on port 19501 - in addition to any other backends you already had configured.

TCP Listener

Download the latest version of the TCP listener script from the uberAgent Support Scripts GitHub repository and save it to a location of your choice on the endpoint. We use C:\Temp\uA-StartTcpReceiver.ps1 here. Start the TCP listener script by running one of the following examples in an elevated PowerShell console.

Example 1

```
1 C:\Temp\uA-StartTcpReceiver.ps1 -Port 19501 -TimeoutMinutes 10 -
EnableLogging
```

This starts the TCP listener on port **19501** and saves the received data to C:\Temp\uA-Data.txt. The script automatically **stops after 10 minutes**. Logging is enabled, and the log file is saved to C:\Temp\uA-StartTcpReceiver.ps1.log.

Example 2

```
1 C:\Temp\uA-StartTcpReceiver.ps1 -Port 19501 -TimeoutMinutes 0 -
    SearchString "sourcetype=uberAgent:Application:Errors" -
    EnableLogging
```

This starts the TCP listener on port **19501** and saves the received data to C:\Temp\uA-Data.txt. The script does not stop after a fixed timeout. It **stops when the string** sourcetype=uberAgent: Application: Errors **is found** in the received data, meaning an application crash occurred. Logging is enabled, and the log file is saved to C:\Temp\uA-StartTcpReceiver.ps1.log.

Comparing Local With Backend Data

After the TCP listener stops, you can now open the file C:\Temp\uA-Data.txt with your text editor of choice and compare the raw data before it leaves the endpoint with the data that is available in your backend(s). For the sake of this article, we compare the formatting and values of a particular event from the uberAgent:System:SystemPerformanceSummary2 sourcetype.

Local Data

The raw data, as saved locally by the script, looks as follows:

Please note that this data format uses two lines per event: one line of metadata (which does **not** count towards the Splunk data volume) and one line of actual event data.

Backend Data

We use the below Splunk search to retrieve the same data as saved locally:

```
index=uberagent host=VM-WINDOWS11ARM sourcetype=uberAgent:System:
SystemPerformanceSummary2 Timestamp=1694008385925
```

The search gives us an event that is identical to the locally saved data (the metadata has, of course, been processed by Splunk).

So, in this case, everything works as it should.

Data Storage

September 7, 2025

This section contains knowledge base articles about data storage.

How to Configure Data Retention

September 10, 2025

Splunk is very flexible with regards to data retention. You can configure when data is old enough to be deleted (after optionally being archived elsewhere). The place to do this is the file indexes.conf in uberAgent's app directory.

uberAgent stores its data in its own index called uberagent. The default configuration for the uberagent index comes from the file [uberagent app directory]\default\indexes.conf:

```
1 [uberagent]
2 homePath = $SPLUNK_DB/uberagent/db
3 coldPath = $SPLUNK_DB/uberagent/colddb
4 thawedPath = $SPLUNK_DB/uberagent/thaweddb
5 maxMemMB = 20
6 maxConcurrentOptimizes = 6
7 maxHotIdleSecs = 86400
8 maxHotBuckets = 10
9 maxDataSize = auto_high_volume
```

Important: Do not change this file! If you do, your changes will be lost when the application is updated. Instead, create a new indexes.conf in the app's local subdirectory. Settings from local/indexes.conf overwrite settings from **default**/indexes.conf.

The Splunk documentation page Configure index storage lists the relevant settings from indexes. conf. The most important settings for controlling index storage and data retention are:

- frozenTimePeriodInSecs: Absolute time in seconds after which data is deleted (default) or archived (if configured). The default is approximately 6 years.
- maxTotalDataSizeMB: Maximum total size of the index in MB. The default is 500,000 MB. When the index reaches this size, the oldest buckets (data directories) are "rolled to frozen", a process that triggers archival (if configured) and subsequent deletion.

By the way, Splunk will never completely fill your disks. By default, it stops accepting new data when the free disk space reaches 2,000 MB.

Data Volume

September 7, 2025

This section contains knowledge base articles about the data volume.

The Data Volume Dashboard Does Not Display Values For All Metrics

September 7, 2025

Symptom

The data volume dashboard only displays "N/A" for the volume of some or all metrics.

Possible Cause: Splunk Configuration

The data volume dashboard queries Splunk's _internal index which in turn reads that data from Splunk's log file license_usage.log. By default, every Splunk indexer periodically reports to the license manager stats of the data indexed: broken down by source, source type, host, and index. If the number of distinct (source, source type, host, index) tuples grows over the *squash_threshold*, Splunk squashes the {host, source} values and only reports a breakdown by {sourcetype, index}. This is to prevent high memory usage and an unwieldy number of license_usage.log lines.

Resolution

Increase the squash_threshold by adding the following to \$SPLUNK_HOME/etc/system/local
/server.conf:

```
1 [license]
2 squash_threshold = 10000
```

You will find more information here.

Possible Cause: Permissions

Your user account might not have permissions for the index _internal. To check first go to Settings -> Access controls -> Users -> Your user name and note the roles assigned to you. Then go to Settings -> Access controls -> Roles and check if any of your roles has either _internal or All internal indexes in the box Selected search indexes, i.e. one of these:

Index Name filter	Included ?	Default 🔞	All ▼
All non-internal indexes	\checkmark		
All internal indexes	\checkmark		
_audit			
_internal			
_introspection			
_metrics			
_telemetry			
_thefishbucket			
cim_modactions			
history			
main		<u> </u>	
summary			
uberagent			

Resolution

Assign either _internal or All internal indexes to Selected search indexes of one of your roles.

Footprint & Performance

September 7, 2025

This section contains knowledge base articles about footprint and performance.

Changing the Accelerated Time Range

September 7, 2025

uberAgent's dashboards make use of a Splunk technology called *accelerated data model*. In a nutshell, an accelerated data model relies on an additional index that speeds up searches by 50x to 100x. As a caveat, an accelerated data model creates a slightly higher CPU load during index time and takes up more disk space on the indexers.

When Dashboards Might Load Slowly

You may notice that dashboards load slowly if the selected time range goes further back than seven days. This is due to the fact that uberAgent's default accelerated time range is exactly seven days. Older events will be included in searches and dashboards, too, of course, given an appropriate time range was selected, but will be a lot slower to come up.

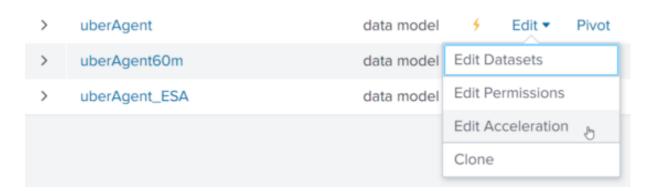
What To Do About It

To speed up searches that go further back than seven days you can increase the summary range, i.e. the number of days the accelerated data goes back in time. This can be done via the UI or via configuration files. In both cases, the actually changed setting is stored in [uberagent app directory]\local\datamodels.conf on the search heads.

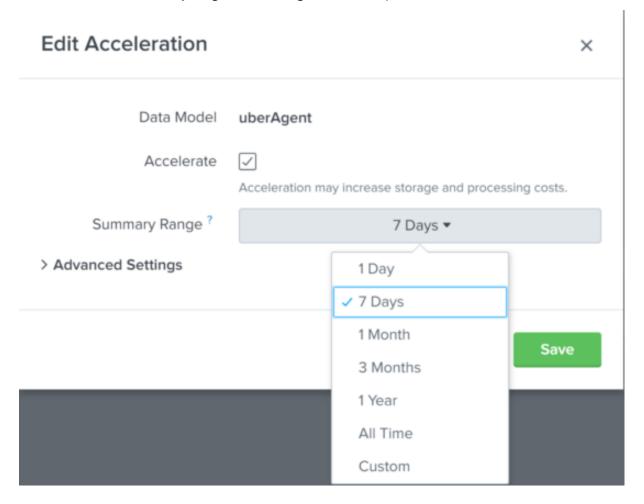
Important: After updating the uberAgent search head (dashboard) app, make sure your changed file(s) in the local subdirectory are still there.

User Interface

To change the accelerated summary range via the UI navigate to *Settings > Data models* and click *Edit > Edit Acceleration* for any of the uberAgent® data models:



Select the desired summary range in the dialog that comes up:



Configuration File

To change the accelerated summary range via the configuration files:

Create a new directory \$SPLUNK_HOME\etc\apps\uberAgent\local (if it does not already exist)

- Copy \$SPLUNK_HOME\etc\apps\uberAgent\default\datamodels.conf to \$SPLUNK_HOME\etc\apps\uberAgent\local\datamodels.conf
- Edit the setting acceleration.earliest_time in \$SPLUNK_HOME\etc\apps\uberAgent\ local\datamodels.conf
- Restart Splunk

Estimating Disk Space Requirements

Before you change the accelerated summary range you should make sure that sufficient disk space is available. To determine the disk space currently occupied by the high-performance analytics store (the special index used by data model acceleration) navigate to *Settings > Data models* in the Splunk UI and click the arrow next to uberAgent. You should see information similar to the following:

uberAgent

Enables data analytics and reporting for uberAgent.

MODEL

Datasets 46 Events, 2 Transactions Edit

Permissions Shared Globally. Owned by nobody. Edit

ACCELERATION

Rebuild Update Edit

Status 100.00% Completed

Access Count 1114. Last Access: 12/2/19 11:56:21.000 AM

Size on Disk 21.09 MB

Summary Range 604800 second(s)

Buckets 2

Updated 11/27/19 10:56:15.000 AM

This shows the summary range (the default is 604800 seconds which is equivalent to 7 days) and the *Size on Disk*. If you plan to extend the summary range to a month expect an approximate increase by 4x.

Reuse of Open HTTP Connections

September 7, 2025

This article explains how the uberAgent endpoint agent handles open HTTP connections.

Where HTTP is Used

uberAgent makes use of HTTP(S) to send the collected data from the endpoint to some types of backends, for example, Splunk HEC, Elasticsearch, or Apache Kafka (via Confluent REST Proxy).

HTTP Connection Reuse

All HTTP(S) communication initiated by uberAgent is performed through libcurl (a variant of curl), which is probably the highest-quality networking library available today.

Libcurl automatically caches and reuses HTTP(S) connections. As the documentation states:

Reusing a connection instead of creating a new one offers significant benefits in speed and required resources.

Requirements for HTTP Connection Reuse

For an HTTP connection to be reused, both server and client must support and enable **HTTP/1.1**.

Splunk HTTP Event Collector (HEC)

In its default configuration, Splunk's HTTP Event Collector (HEC) only enables HTTP/1.1 if the client sends a user agent string. uberAgent does that starting with version 6.0 beta 2.

We recommend configuring Splunk to always enable HTTP/1.1 for all versions of uberAgent by setting the following in the HEC's inputs.conf file, located in \$SPLUNK_HOME/etc/apps/splunk_httpinput/local:

```
1 [http]
2 forceHttp10 = never
```

Server Failover and Load-Balancing

uberAgent can be configured with multiple servers per receiver. When there is more than one server per receiver, uberAgent randomly switches between servers every 100 seconds. If a server does not respond, uberAgent fails over to the next server in the list. This algorithm ensures that the load is distributed evenly between backend servers.

Installation & Upgrade

September 7, 2025

This section contains knowledge base articles about the installation and upgrades.

Directories and Registry Key Created by uberAgent's Installer

December 11, 2025

uberAgent is not only lightweight and unobtrusive, but it also creates only a minimal set of files and registry keys during installation that can be removed easily.

Uninstalling uberAgent

Windows

If you want to remove uberAgent from a Windows machine please use the installer's uninstall functionality from *Programs and Features*. The following list is intended as a reference.

macOS

Use the uninstall.command file to remove uberAgent. It can only be executed with elevated privileges. Only use this script if you want to completely remove uberAgent and its configuration from the computer. Its default location is /Library/Application Support/uberAgent/uninstall.command.

File System Changes

Windows

All files required by uberAgent go into the installation directory selected during setup (typically c:\Program Files\Citrix\uberAgent). During operation, the following additional files/folders are created:

- uberAgent's log file
- %ProgramData%\vast limits\uberAgent
- %SystemRoot%\System32\drivers\uberAgentDrv.sys
- %SystemRoot%\System32\drivers\uberAgentFilter.sys
- %SystemRoot%\System32\drivers\uberAgentNetMon.sys

macOS

- uberAgent's log file
- uberAgent's configuration file
- Application bundle /Library/uberAgent/uberAgent.app
- Daemon configuration file / Library / Launch Daemons / com. vastlimits.uber Agent
 .plist

Registry Changes

uberAgent stores installation and runtime state information to the key HKEY_LOCAL_MACHINE\SOFTWARE\vast limits.

uberAgent® macOS Installation Fails When Executed From a Network Drive

September 7, 2025

Problem

uberAgent installation on macOS might fail when executed from a network drive, with a similar error.
PackageKit: Install Failed: Error Domain=PKInstallErrorDomain Code
=106 "The package "uberAgent.pkg"is missing or invalid."

Workaround

If you are facing a problem like the one described above, copy the uberAgent.pkg file to a local directory on the endpoint first and repeat the installation from there.

uberAgent With Splunk Cloud: Differences to On-Premises Splunk Enterprise

September 12, 2025

If you are running **uberAgent** in combination with **Splunk Cloud**, there are several things to be aware of. Due to the certification policies for Splunk Cloud apps, the uberAgent indexer app and uberAgent dashboard apps (UXM & ESA) slightly differ from the ones available for download on our website. Hence you need to perform the following tasks by hand after the uberAgent apps have been installed in your Splunk Cloud environment.

uberAgent® Indexer App

Index Creation

Manually create the uberAgent index. This can be achieved by using Splunk Web and the steps provided here. Use the following settings.

uberAgent Events

Index Name: uberagentIndex Data Type: EventsApp: uberAgent_indexer

uberAgent Scores

Index Name: score_uberagent_uxm

Index Data Type: Events

App: uberAgent_indexer

Index Name: score_uberagent_esa

Index Data Type: Events

• **App**: uberAgent_indexer

Further index settings depend on your individual requirements. Feel free to download uberAgent from our website and have a closer look at the settings we ship with the indexes.conf for non-cloud deployments.

Configure Data Input

Splunk Cloud only accepts data via encrypted protocols. This means that you have the following options for sending uberAgent data to Splunk Cloud:

- via uberAgent's native functionality to send to Splunk's HTTP Event Collector (HEC). A guide on how to create an HEC token in Splunk Cloud is available here
- via a Universal Forwarder installed on the endpoint and configured to communicate with Splunk
 Cloud

Read here if you run into problems with self-signed certificates and how that affects your uberAgent deployment.

Alternatively, heavy forwarders can be used. More information on how to configure forwarders to send data to Splunk Cloud can be found here and here.

uberAgent Dashboard App

Data Model Acceleration

Enable acceleration for all uberAgent data models. Please follow the Splunk documentation for guidance.

Data Model Configuration

To avoid skipped searches, we recommend allowing the Splunk search scheduler to randomly distribute scheduled searches more evenly over their periods. To enable this setting, you need acceleration.allow_skew = 100% to be set within every uberAgent's app datamodels. conf file for each uberAgent data model (documentation).

The customization may be applied in one of these two places:

- Directly modify the datamodels.conf file shipped with the uberAgent apps in \$SPLUNK_HOME /etc/apps/[uberAgent|uberAgent_ESA]/default/
- Create a new datamodels.conf file containing the acceleration.allow_skew setting
 in \$SPLUNK_HOME/etc/apps/[uberAgent|uberAgent_ESA]/local/

For reference, please download uberAgent from our website to inspect the settings we ship with the datamodels.conf for non-cloud deployments. As direct modifications to configuration files are not possible when using Splunk Cloud, you need the assistance of Splunk support to change this setting.

uberAgent HTTP Event Collector (HEC) Receiver Configuration

Carefully read Splunk's documentation on how to send data to a HEC on Splunk Cloud Platform.

Important: Do not add the <endpoint> option, e.g. /services/collector/event, to your receiver configuration, as uberAgent does this automatically.

Please note that uberAgent defaults to **TCP protocol** unless configured otherwise. Select **HTTP protocol** (even if sending over HTTPS) when sending data to Splunk HEC.

Using uberAgent With Self-Signed Certificates

September 12, 2025

uberAgent natively supports secure data transport for multiple backends, like Splunk, Elasticsearch, or Apache Kafka (via Confluent REST Proxy). For such communication via HTTPS uberAgent uses libcurl (a variant of curl), which is probably the highest-quality networking library available today.

Why Using Self-Signed Certificates

One might come to a point, during a PoC or evaluation phase, when using a certificate issued by an external or internal CA is not possible or a very complex process. Backends like Splunk or Elastic-search offer the creation of self-signed certificates, which, by default, are not trusted by libcurl when presented to the client during the communication process. Therefore communication between uber-Agent and the desired backend will fail. However, there are ways to change the configuration to make such a test scenario work.

Working With Self-Signed Certificates on macOS

uberAgent on macOS uses the operating systems implementation of libcurl. And libcurl itself utilizes *LibreSSL* as its library.

This can be easily verified by typing curl --version in the Terminal. The following output is an excerpt from a system running macOS 11.1 (Big Sur).

```
1 curl 7.64.1 (x86_64-apple-darwin20.0) libcurl/7.64.1 (SecureTransport)
LibreSSL/2.8.3 zlib/1.2.11 nghttp2/1.41.0
```

In order to establish a successful connection, the following tasks need to be accomplished:

- Import the self-signed certificate into the macOS system keychain (aka *Keychain.app*), e.g. by double-clicking it
- Set the trust level for the just imported certificate to Always Trust, by using the Keychain.app

Working With Self-Signed Certificates on Windows

uberAgent supports a variety of different versions of Microsoft Windows. Since not every operating system release comes with its own implementation of libcurl, uberAgent takes care of that.

Libcurl for Windows relies on Schannel as its library. Since Schannel acts differently, compared to LibreSSL on macOS when dealing with self-signed certificates, the following steps are required:

- Import the self-signed CA certificate into the Windows certificate store (Trusted Root Certification Authorities)
- Depending on your requirement, add either TLSRevocationChecksDisabled or TLSRevocationChecksBestEffort or TLSVerifyPeerDisabled or TLSVerifyHostDisabled as an additional ConfigFlag to your uberAgent configuration

An example configuration stanza looks like this:

```
1 [Miscellaneous]
2 DebugMode = true
3 ConfigFlags = TLSRevocationChecksBestEffort
```

Licensing

September 7, 2025

This section contains knowledge base articles about the licensing.

How to Enable uberAgent® on a Subset of Machines Only

September 7, 2025

With technologies like Citrix Provisioning Services (PVS) a single operating system image can be used for many machines. Typically all relevant applications are installed in that image.

Some customers may want to install uberAgent in such an image but not use it on all machines that run the image. To only enable uberAgent on a subset of machines do the following:

- Install uberAgent in the image
- Change the start type of the system service uber Agent from automatic to manual
- Use a computer startup script to determine whether uberAgent should be enabled on a machine. If so, start the service uberAgent

Supported License File Names & Multiple License Files

September 12, 2025

When you receive a license file for uberAgent it will most likely be named uberAgent.lic. That name can be changed, but when doing so please follow these guidelines:

- License files names must follow the pattern: uberAgent*.lic
- Multiple license files are supported. uberAgent will use the first license file that is valid.
- On Windows the license file(s) need to reside in the same directory as the main executable uberAgent.exe. On macOS the license file needs to be copied to /Library /Application Support/uberAgent.
- Alternatively, license file(s) can be hosted on a central file share (details).

These are examples for valid license file names:

- uberAgent.lic
- uberAgent-clients.lic
- uberAgent license 2019-05-08.lic

Storing uberAgent's License in Azure Files

September 12, 2025

Prerequisites

Note

This article describes how to use an Azure storage account key to access a file share hosted on Azure Files. Storage account keys are administrative keys for a storage account that grant full read and write permissions for all files, folders, and file shares within the storage account. The permissions are also applied to other storage resources, such as blobs, queues, and tables, contained within the storage account.

Please review Microsoft's documentation and make sure you understand the potential security concerns and whether this concept of storing uberAgent data in Azure Files meets your requirements.

If you want to store your uberAgent license file(s) in Azure Files, you need to meet the following prerequisites:

- TCP port 445 is not blocked (firewall/ISP)
- For mounting an SMB Azure file share on a Windows machine, SMB 3.1.1 is used. This means that Windows 10, version 1507, or Windows Server 2016 or above is needed. Microsoft provides a detailed list of supported OS versions.
- For mounting an SMB Azure file share on a macOS machine, SMB 3 is used. This means that
 macOS High Sierra 10.13 or above is needed. Further details on the requirements for macOS
 can be found here.

This KB article assumes that a file share within the Azure Storage account already exists. The uberAgent license file(s) can be stored in the file share directly.

uberAgent Configuration

To configure a central license directory, the LicenseFilePath option must be configured in the uberAgent configuration; the value of that option must contain the UNC path to the Azure files directory.

Using Azure Files With Your On-Premises Client

By default, Azure Files SMB shares can be accessed with a storage key that must be provided when mounting the directory, e.g.:

net use

When mapping the drive with the command shown above, it is mapped in the *USER* context. Therefore, uberAgent cannot interact with the file share because the agent runs in the *SYSTEM* context.

uberAgent accesses its central license file path via integrated authentication. The login data must be stored for the SYSTEM account by adding the credentials to the credential store. To store credentials as SYSTEM, one could use Psexec by running the following command:

```
.\psexec.exe -s -i cmd.exe cmdkey /add:"
```

After adding the credentials to the credential store for the SYSTEM account, uberAgent should be able to access the license file(s) stored in Azure Files.

Setting Up an Azure File Share With On-Premises AD-Authentication

There is a possibility to integrate a storage account into the local Active Directory and set permissions for your on-premises groups or users. Based on our research, it is not possible to set permissions for computer objects, though. Hence, this can't be used for uberAgent's license validation.

Logon

September 7, 2025

This section contains knowledge base articles about the logon.

"GP logon script" is longer than "Total duration"

September 12, 2025

Symptoms

Looking at uberAgent's **User Logon Duration** dashboard, you notice that for some logons, the value for **GP logon script** is larger than the value for **Total duration**.



Cause

Most likely, your group policy logon scripts are not configured to run synchronously. By default, Explorer is started before logon scripts have finished. Thus, the desktop appears earlier, and the logon seems to be faster. Many administrators do not want this —they want to make sure all customizations are in place when the desktop is displayed. That is why synchronous script execution is often enabled.

In any case, with uberAgent, the **total logon duration is defined as the time from the actual logon until the shell is fully initialized**. If logon scripts are still running (potentially invisibly) when the second point is reached, then the script execution duration can be longer than the total logon duration.

See also Logon Data Arrives Late or Never in the Backend for more information how uberAgent calculates the **GP logon script** phase.

Not all CSEs Used are Listed on the Dashboard "User Logon Duration - Group Policy"

April 28, 2025

The dashboard **Session** > **User Logon Duration - Group Policy** lists all Group Policy Client-Side Extensions (CSEs) that were applied during each of the logons listed. However, sometimes CSEs that are used in Group Policy are not shown on the dashboard. The display may look like this:

Data table

User \$	Host \$	Logon time \$	Total policy duration \$	DC discovery \$	Citrix Group Policy \$
AD) deninil	LADTOD DOUTLIE	2020 05 25 07-50-25	0.13	,	
AD\dominik	LAPTOP-DOMINIK	2020-05-26 07:58:25	0.13		
AD\dominik	LAPTOP-DOMINIK	2020-05-25 13:24:56	0.06		
AD\dominik	LAPTOP-DOMINIK	2020-05-19 16:15:23	0.11		

The dashboard only lists CSEs whose settings are *applied* during a logon. When a user has an existing user profile and a Group Policy Object (GPO) has not changed since the last logon the GPO normally is not applied again - this improves logon performance. Since the CSE's settings are not applied, it does not slow down the logon and consequently, it does not show up on the dashboard.

What is the Definition of the Metric "Pre Logon Init"

September 7, 2025

The *pre login init* metric, displayed on the dashboard *Single Logon*, measures the time from session creation until user logon. High values may or may not indicate a problem, depending on the situation.

Example 1: Citrix Virtual Apps and Desktops™ (CVAD)

During a logon to a Citrix XenApp terminal server typically a new session is created. In this case, the *pre logon init* metric is important: it shows how long it takes to prepare the new session and connect to it from the client.

Example 2: Physical PC

On a PC, on the other hand, the situation is often different. When a machine is booted, it presents its logon screen, waiting for the user to enter credentials. That, however, may take a very long time. The user might not even be near the machine when it is started. Therefore the *pre logon init* value can be very high without indicating a problem.

Logon Data Arrives Late or Never in the Backend

September 12, 2025

Symptoms

- Logon data for a user session is not available in Splunk immediately. Instead, it arrives after the user logged off.
- Logon data for a user session is not available in Splunk at all.

Cause

The cause is similar to "GP logon script" is longer than "Total duration" and how uberAgent determines the **GP logon script** phase.

For uberAgent, the phase starts with the process start <code>gpscript.exe</code> /logon. The phase ends when all recursive children of that process are stopped. So, if you have a main logon script that starts other scripts or processes and these continue to run, uberAgent waits for these to stop.

Two situations make uberAgent® stop monitoring the logon:

- 1. **Logoff**: the user logs off, which effectively stops all processes in the session, including the ones from your logon script. uberAgent stops the logon monitoring and sends the data to the backend. This typically results in high values for the phase **GP logon script**.
- 2. **Logon timeout expires**: after 30 minutes, uberAgent stops monitoring the logon. No data about the logon is sent.

Splunk

September 7, 2025

This section contains knowledge base articles about Splunk.

Configuring Alerts

September 7, 2025

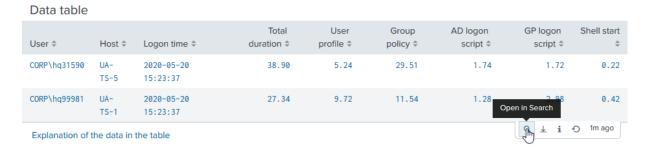
Splunk has a powerful alerting system that can be used to send emails or run arbitrary commands whenever a specific condition is met, as defined in a Splunk search.

In this walkthrough, we demonstrate how to alert when the duration of user logons exceeds a certain threshold.

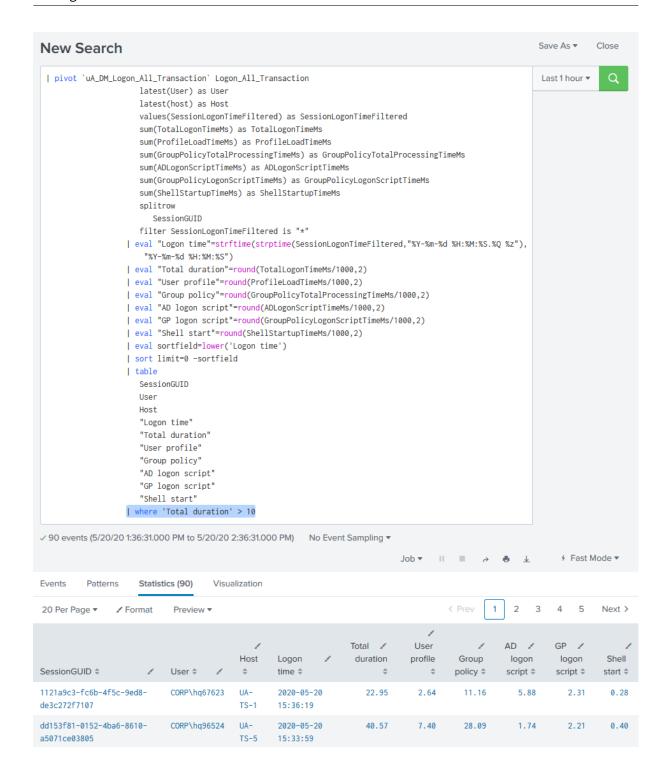
Defining the Condition

An easy way to find the right Splunk search for defining the alert condition is to use an element already present on one of uberAgent's dashboards. In this example, we are interested in logon duration which is displayed on the **User Logon Duration** dashboard.

Navigate to the table near the bottom and click the button with the little lens symbol on it:



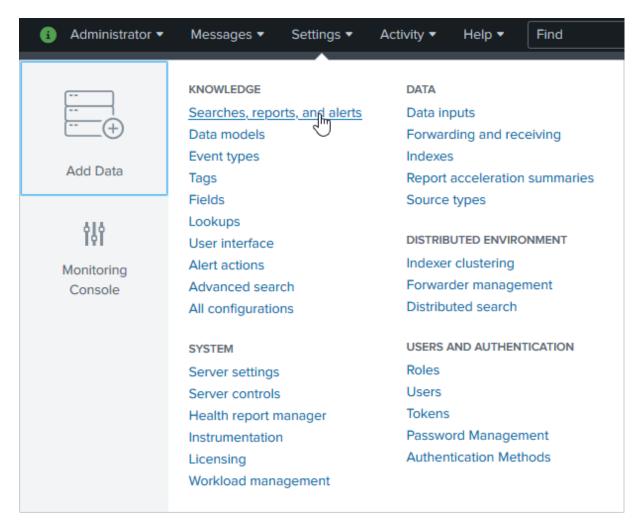
This opens the search in another window. At this stage you can add a condition (highlighted below) to filter for specific events:



Setting up the Alert

Once you are happy with the results returned from your conditional search, copy the search string.

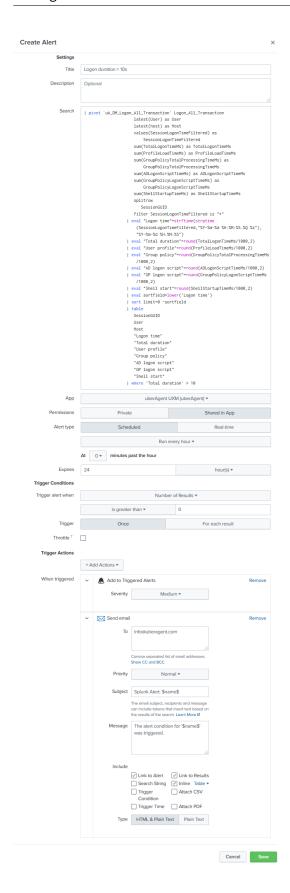
Click **Settings** > **Searches**, **reports and alerts**:



Click **New Alert**:



Configure the alert as shown in the following very large screenshot:

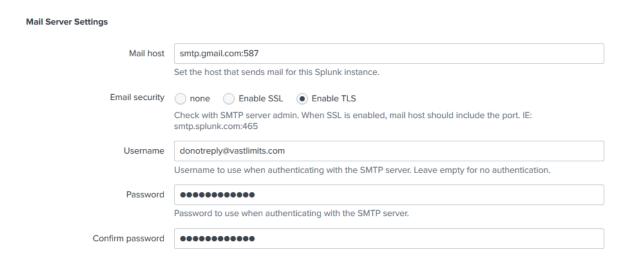


Specify email addresses for the email trigger action. It might also be a good idea to check **Inline** so that you get the actual data causing the alert right in the email.

Configure Email Alerting

To configure alerting via Email go to Settings > Server settings > Email settings.

The following mail server settings apply to Google Apps:

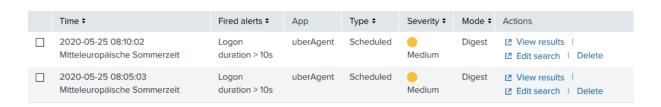


The Resulting Alerts

With that, you are all done. With the sample configuration you will receive an email like the following whenever a user logon takes more than 10 seconds:



You can also see all alerts in **Activity** > **Triggered Alerts**:



How to Change uberAgent's Splunk Index Name

September 12, 2025

By default, uberAgent sends the data it collects to the Splunk index uberagent.

How is the index created

The index *uberagent* is created in the indexer app *uberAgent_indexer*. The file **default**\indexes. conf contains the relevant definitions.

How to change the index name

If you want to change the index name, you need to do so in the following places:

- indexes.conf (see above)
- uberAgent configuration (see below)
- macros.conf (see below)
- eventtypes.conf (see below)

uberAgent configuration

The index uberAgent sends the collected data to can be configured in uberAgent's configuration with the setting *Index*.

Macros.conf

The index searched in the dashboards can be configured through the *uberAgent_index* stanza in the file macros.conf of the dashboard (search head) app. The default is as follows:

```
1 [uberAgent_index]
2 definition = uberagent*
```

Eventtypes.conf

The index searched for the event type <code>uberAgent_index_query</code> can be configured through the <code>uberAgent_index_query</code> stanza in the file <code>eventtypes.conf</code> of the dashboard (search head) apps. The default is as follows:

```
1 [uberAgent_index_query]
2 search = index=uberagent*
```

Splunk Product Editions (SKUs) Supported by uberAgent®

September 12, 2025

Splunk comes in multiple product editions:

- Splunk Enterprise
- Splunk Cloud
- Splunk Free
- Splunk Light (discontinued as of 2020-05-01)

Splunk Enterprise, Splunk Free, and Splunk Light are hosted on-premises while Splunk Cloud is hosted by Splunk.

Out of these SKUs, Splunk Enterprise and Splunk Cloud are fully supported by uberAgent.

Splunk Enterprise

After installation, Splunk operates in Enterprise mode for 60 days after the installation. After that, it reverts to Free mode if no license is added.

During the 60-day trial period, Splunk is restricted to a daily data volume of 500 MB per day.

Splunk Cloud

uberAgent apps can be installed using the self-service app installation method. More information is available in Splunk's documentation.

The following apps are available in Splunk Cloud:

- uberAgent indexer app
- uberAgent UXM dashboard app
- uberAgent ESA dashboard app

After the uberAgent apps have been installed in your Splunk Cloud environment, some manual actions need to be taken. This knowledgebase article contains all the necessary details.

Splunk Free

uberAgent generally works well with Splunk Free except for one thing: Splunk bug SPL-40332 breaks not the initial creation but the update of CSV lookup tables. To workaround that we had to replace the outputlookupcommand with action.populate_lookup in a saved search. That, however, is a feature not enabled with Splunk Free.

As a result, uberAgent does not work correctly on Splunk Free until SPL-40332 has been fixed in a future version of Splunk.

However, using this workaround the lookup table can be generated manually.

Please see this document for more information on Splunk Free. There is also a feature comparison table between Splunk Free, Splunk Enterprise and Splunk Cloud available.

Splunk Light (Discontinued)

Splunk Light has a very limited feature set that does not even include the installation of apps (see Splunk Light vs. Splunk Enterprise). Due to these limitations, uberAgent cannot work with Splunk Light.

What to Do When You Get Splunk License Errors

September 7, 2025

What Are Splunk License Warnings and Violations

The Splunk documentation explains license warnings and violations as follows:

Warnings and violations occur when you exceed the maximum indexing volume allowed for your license.

If you exceed your licensed daily volume on any one calendar day, you will get a violation warning. The message persists for 14 days. If you have 5 or more warnings on an Enterprise license or 3 warnings on a Free license in a rolling 30-day period, you are in violation of your license, and search will be disabled for the offending pool (but indexing continues). Search capabilities return when you have fewer than 5 (Enterprise) or 3 (Free) warnings in the previous 30 days, or when you apply a temporary reset license (available for Enterprise only).

Symptoms of Splunk License Violations

When a license violation occurs you typically get this message:

Error in 'litsearch'command: Your Splunk license expired or you have exceeded your license limit too many times. Renew your Splunk license by visiting www.splunk.com/store or calling 866.GET.SPLUNK.

What You Can Do

You can do either one of the following things to get back search functionality:

- Send fewer data to Splunk for indexing and then wait until there are no more than three (Splunk Free) / five (Splunk Enterprise) violations in the past 30 days
- Uninstall and then reinstall Splunk
- If you are on Splunk Enterprise contact Splunk to get a temporary reset license
- If you are trying the product out contact Splunk to get an evaluation license *and* a temporary reset license

Workaround for Lookup Errors with Splunk Free

September 12, 2025

On Splunk Free, uberAgent® cannot automatically generate needed lookup tables. Because of the missing lookup tables, the following or similar error messages are displayed on many dashboards:

- · No results found
- The lookup table lookup_appnameidmapping does not exist. It is referenced by configuration uberAgent: Process: NetworkTargetPerformance.
- The lookup table lookup_appnameidmapping does not exist. It is referenced by configuration uberAgent: Process: ProcessDetail.
- The lookup table lookup_appnameidmapping does not exist. It is referenced by configuration uberAgent: Process: ProcessStartup.

See this article for details and for information on officially supported versions.

Workaround

As a workaround, the lookup tables can be generated manually. To do that run slightly modified searches from uberAgent's savedsearches.conf.

One of the original searches:

```
index="uberAgent_index" sourcetype=uberAgent:Application:
    AppNameIdMapping AppId=* AppName=* | stats latest(_time) as _time
    mode(AppName) as AppName by AppId | inputlookup append=t
    lookup_appnameidmapping | stats latest(_time) as _time latest(
    AppName) as AppName by AppId | eval TimeDelta=now()-_time | search
    TimeDelta<31536000 | fields AppName AppId _time</pre>
```

We simply append the outputlookup command to have Splunk create the lookup tables. The full searches look like this:

```
index="uberAgent_index" sourcetype=uberAgent:Application:
    AppNameIdMapping AppId=* AppName=* | stats latest(_time) as _time
    mode(AppName) as AppName by AppId | inputlookup append=t
    lookup_appnameidmapping | stats latest(_time) as _time latest(
    AppName) as AppName by AppId | eval TimeDelta=now()-_time | search
    TimeDelta<31536000 | fields AppName AppId _time | outputlookup
    lookup_appnameidmapping</pre>
```

```
1 index="uberAgent_index" (sourcetype=uberAgent:System:MachineInventory
     OR sourcetype=uberAgent:System:NetworkConfigInformation) OsVersion=*
       | stats latest(_time) as _time latest(OsVersion) as OsVersion
     latest(OsBuild) as OsBuild latest(OsType) as OsType latest(
     AdDomainDns) as AdDomainDns latest(AdSite) as AdSite latest(AdOu) as
      AdOu latest(CtxFarmName) as CtxFarmName latest(
     CtxMachineCatalogName) as CtxMachineCatalogName latest(
     CtxDeliveryGroupName) as CtxDeliveryGroupName latest(HwManufacturer)
       as HwManufacturer latest(HwModel) as HwModel values(
     NetworkConfigIPv4) as NetworkConfigIPv4 by host | inputlookup append
     =t lookup_hostinfo | fields - Ipv4Address | stats latest(_time) as
      time latest(OsVersion) as OsVersion latest(OsBuild) as OsBuild
     latest(OsType) as OsType latest(AdDomainDns) as AdDomainDns latest(
     AdSite) as AdSite latest(AdOu) as AdOu latest(CtxFarmName) as
     CtxFarmName latest(CtxMachineCatalogName) as CtxMachineCatalogName
     latest(CtxDeliveryGroupName) as CtxDeliveryGroupName latest(
     HwManufacturer) as HwManufacturer latest(HwModel) as HwModel values(
     NetworkConfigIPv4) as Ipv4Address by host | eval TimeDelta=now()-
      _time | search TimeDelta<31536000 | fields host OsVersion OsBuild
     OsType AdDomainDns AdSite AdOu CtxFarmName CtxMachineCatalogName
     CtxDeliveryGroupName HwManufacturer HwModel Ipv4Address _time |
     outputlookup lookup_hostinfo
```

```
index="uberAgent_index" sourcetype=uberAgent:System:MachineInventory
    RAMSizeGB=* | stats latest(_time) as _time latest(RAMSizeGB) as
    RAMSizeGB latest(IsBatteryPresent) as IsBatteryPresent latest(
    CPUName) as CPUName latest(CPUSockets) as CPUSockets latest(
    CPUCoresPhysical) as CPUCoresPhysical latest(CPUCoresLogical) as
    CPUCoresLogical latest(CPUMaxMhz) as CPUMaxMhz latest(
    HwIsVirtualMachine) as HwIsVirtualMachine latest(
    OsUpdateBuildRevision) as OsUpdateBuildRevision by host |
    inputlookup append=t lookup_hostinfo2 | stats latest(_time) as _time
    latest(RAMSizeGB) as RAMSizeGB latest(IsBatteryPresent) as
```

IsBatteryPresent latest(CPUName) as CPUName latest(CPUSockets) as CPUSockets latest(CPUCoresPhysical) as CPUCoresPhysical latest(CPUCoresLogical) as CPUCoresLogical latest(CPUMaxMhz) as CPUMaxMhz latest(HwIsVirtualMachine) as HwIsVirtualMachine latest(OsUpdateBuildRevision) as OsUpdateBuildRevision by host | eval TimeDelta=now()-_time | search TimeDelta<31536000 | fields host RAMSizeGB IsBatteryPresent CPUName CPUSockets CPUCoresPhysical CPUCoresLogical CPUMaxMhz HwIsVirtualMachine OsUpdateBuildRevision _time | outputlookup lookup_hostinfo2

```
pivot uberAgent Process_ProcessStartup latest(_time) as LastSeen
splitrow ProcName | eval ProcName = lower(ProcName) | inputlookup
append=t lookup_processstartup_processlist | stats first(LastSeen)
as LastSeen by ProcName | eval LastSeen = round(strptime(LastSeen, "
%Y-%m-%dT%H:%M:%S.%Q%z"), 0) | eval TimeDelta=now()-LastSeen |
search TimeDelta<31536000 | fields ProcName LastSeen | outputlookup
lookup_processstartup_processlist</pre>
```

```
1 | pivot uberAgent Process_NetworkTargetPerformance latest(_time) as
    LastSeen splitrow NetTargetRemoteNameAddress | eval ProcName = lower
    (NetTargetRemoteNameAddress) | inputlookup append=t
    lookup_networktargetperformance_targetlist | stats first(LastSeen)
    as LastSeen by NetTargetRemoteNameAddress | eval LastSeen = round(
    strptime(LastSeen, "%Y-%m-%dT%H:%M:%S.%Q%z"), 0) | eval TimeDelta=
    now()-LastSeen | search TimeDelta<31536000 | fields
    NetTargetRemoteNameAddress LastSeen | outputlookup
    lookup_networktargetperformance_targetlist</pre>
```

Run these searches over a longer time range (e.g. last seven days) to capture among other things mappings for applications that are run only infrequently, too.

After running one of the full searches Splunk might display error messages like "Could not write to file 'lookup_appnameidmapping': Failed to move file to final destination." However, we found that it still creates all output files successfully.

User Interface

September 7, 2025

This section contains knowledge base articles about the user interface.

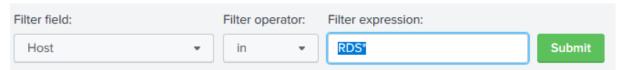
How to Separate Data from Different Types of Machines

September 12, 2025

If you are monitoring different types of machines with uberAgent, say XenDesktop/VDI clients and XenApp/RDS servers, you may want to separate the data in the dashboards so that you only see data from one group of machines or the other.

Temporary Separation

To temporarily view only data from a group of machines enter that part of the computer names that uniquely define machines in the desired group in the *Filter expression* input box on the dashboard. E.g. to filter for machines whose names start with the string *RDS*:



Permanent Separation

To permanently separate data from a group of machines utilize uberAgent's multi-tenancy capabilities.

Splunk stores data in containers called indexes. By default uberAgent stores all its data in the index *uberagent*. But you can easily configure one group of machines to store data in an index called *uberagent-clients* and another to store in *uberagent-servers*. The only requirement is that all index names should start with a common prefix, otherwise the dashboards will not work.

By default uberAgent's dashboards search all indexes whose names start with *uberagent*. But you can configure individual Splunk user accounts so that they only have permissions to search in the index of one machine group, not the other. Depending on the user account you log on to Splunk with you see data from different machine groups.

For details on how to implement this please see this article.

Alternative for Permanent Separation

As an alternative to separating data into multiple indexes, you can always create custom dashboards that use some other means of differentiating between different types of machines. You could, for example, use a lookup table that stores a mapping between machine groups and computer name regexes.

Remoting Protocol is Console Instead of ICA® or RDP

September 7, 2025

It may happen the dashboard *User Sessions* displays the remoting protocol as *Console* even though you know that the users were connecting over ICA or RDP.

Explanation

The Windows API used to query for the connection type does not always return ICA/RDP for an ICA/RDP session. During the logon and logoff phases, the connection type returned by the API is *Console*.

uberAgent determines the connection type every 30 seconds by default. Since the connection type may change during the lifetime of a session uberAgent needs to choose somehow which of the potentially multiple values to display. It does so by displaying the last reported value for that session.

For that reason sessions that take long to log on and/or off and/or are short-lived may be displayed with a connection type of *Console* instead of the expected *ICA* or *RDP*.

The Dashboards Do Not Work Correctly in Internet Explorer

April 28, 2025

Unfortunately part of the dashboard functionality does not work correctly in Internet Explorer 8. This also affects newer versions of IE in compatibility mode. If you have IE9 or newer, disable compatibility mode.

As of Splunk 6.1 support for Internet Explorer 7 and 8 has officially been removed by Splunk. The release notes state:

Internet Explorer versions 7 and 8: Browser support has been removed because they have either been marked as end-of-life by Microsoft or are no longer widely used. Support for these browsers might be removed entirely in a future release. For Internet Explorer support, use versions 9, 10, or 11.

Practice Guides

September 7, 2025

This section contains practical examples of how to use uberAgent for specific tasks.

Detecting Network Connectivity Problems

September 7, 2025

Network connectivity issues severely impact application functionality and performance, yet are often difficult to diagnose. This practice guide demonstrates how uberAgent helps.

Network issues come in two flavors: permanent and intermittent. The following sections explain both in detail.

Permanent Network Connectivity Issues

Permanent issues are often caused by configuration errors. Examples:

- A server service was migrated to a new machine but the application configuration is still pointing to the old machine.
- Firewall rules are missing so application connectivity is blocked.

Intermittent Network Connectivity Issues

Intermittent issues only occur from time to time and may cause seemingly random application slowness or occasional application errors. Examples:

- Bad WiFi signal reception
- Packet loss
- · Saturated internet connection

Diagnosing Network Connectivity Issues

uberAgent monitors all network traffic and enriches it with metadata like the originating application, the user account, the machine type, Active Directory OU, Citrix site, and much more. Network traffic is categorized as successful or failed connection, regular transmission or retransmit, and so on.

When suspecting network problems the dashboard to consult is *Application Network Issues*, located in the *Applications* menu.

Network Availability Indicator

The first thing to check is the *Network availability* metric:

Overview

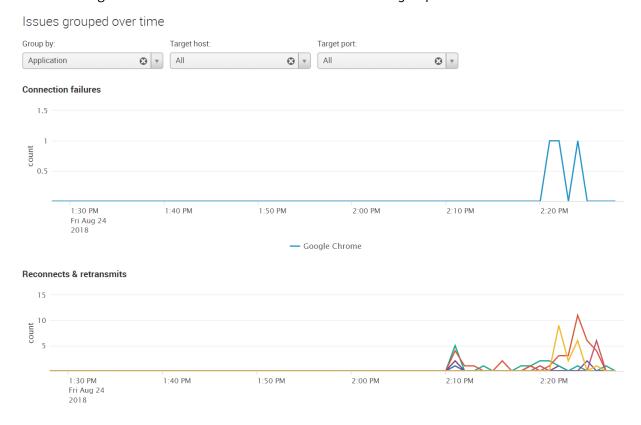
Network availability:

98.80 %

It is the ratio of successful connections and transmissions to the total number of connection and transmission attempts and should be at 100%.

Network Issues Over Time

The next thing to check are the timecharts in the section Issues grouped over time:



The two graphs show connection failures and reconnects & retransmits over the selected time range. By default both graphs group errors per application, but you can switch to errors per process, per source or target host, per target port or even per user.

Network Issues per Application

To further analyze the errors for a specific application (or host, user, etc.) click on the respective row of the table *Issues grouped (top 100)*. This performs an in-page drilldown, bringing up an additional table and chart with details on the selected item:

Target port 0 #Failed connects 0 #Successful connects 0 #Reconnects 0 #Retransmits 0 Target host 34.196.163.159 443 0 0 0 0 0 1 52 45 125 18 443 0 0 0 0 0 54.174.70.29 443 2 0 3 104.197.19.184 443 0 3 0 4 17 28 104.244.42.196 443 0 4 59 24 378 443 0 21 10 api.twitter.com 16 189 app2.frontapp.com 443 0 14 0 5 250 406 2 capi.grammarly.com 443 0 5 6 275 566 443 0 10 11 f-log-extension.grammarly.io 2 mail.google.com 443 0 86 1579 « prev 1 2 next » 10 1:30 PM 1:40 PM 1:50 PM 2:00 PM 2:10 PM 2:20 PM Fri Aug 24 2018 #Failed connects #Reconnects

Targets with issues: Application = Google Chrome

In the screenshot above we can see that reconnection and retransmission errors started at around 2:10 PM for the selected application (Google Chrome). The errors are not limited to specific target hosts. This indicates intermittent problems, most likely related to unstable internet connectivity.

Citrix ADC Monitoring & Alerting

September 7, 2025

uberAgent 5.2 introduced Citrix ADC monitoring (formerly NetScaler ADC). This functionality lets you check the appliance health, gateway data volume, and service availability of your ADCs. While it is great to have all this information in dashboards, it sometimes makes sense to get notified when things are not working the way they should. This article demonstrates how to use Splunk's alerting capabilities to configure just that.

Splunk Alerting

If you are not familiar with Splunk alerting here is the explanation in a nutshell: you create a search; every time it produces a result you will get notified. Several notification methods are available (email, webhooks and so on). More on this topic is available in Splunk's documentation.

Example Searches for Citrix ADC Alerts

We created some example searches showing what is possible with uberAgent's data and Splunk's alerting capabilities. Feel free to customize them to your needs or use them as a starting point for your own creations.

Max Bandwidth per Appliance

The purchased license determines the maximum amount of data the ADC will process - it is a software limitation. Hence it is important to keep an eye on the bandwidth usage to react in a timely manner and buy a bigger license to not slow down the users. Here is an example where you will be notified when the bandwidth usage exceeded 900 megabytes.

Too Many HA Status Changes

A Citrix ADC high-availability (HA) pair consists of a primary and a secondary node. If the primary fails the secondary takes over. Too many status changes indicate that there is something wrong. Maybe your hypervisor does live migration of VMs? It should not for Citrix ADC VPX machines!

The current status is collected once per day by default consequently let that search run for at least a few days.

Get Notified When SSL Cards Are Down

In a hardware Citrix ADC appliance, SSL cards handle the encryption and decryption of SSL traffic. If an SSL card is down the encryption/decryption rate drops which possibly affects user experience.

```
pivot `uA_DM_CitrixADC_ApplianceInventory`
    CitrixADC_ApplianceInventory

latest(SSLCards) as "#SSL cards"

latest(SSLCardsUp) as "#SSL cards up"

splitrow

HostName

eval "#SSL cards down" = '#SSL cards' - '#SSL cards up'

where '#SSL cards down' != 0
```

Get Notified When the Configuration Was Not Saved Within 24 Hours After a Change

Citrix ADC configuration changes are active immediately, even if they have not been specifically saved. However, unsaved changes are lost when the appliance is rebooted. With this search, you will be notified after 24 hours if someone forgot to save the configuration.

Get Notified When a Certificate Expires Within Four Weeks

The all-time favorite. A certificate is installed but the team managing it forgot to update it. Never let that happen again with this search!

```
1 | pivot `uA_DM_CitrixADC_Certificate` CitrixADC_Certificate
       latest(CertExpirationDate) as CertExpirationDate
2
3
       splitrow
          CertName as "Certificate name"
5 | eval CertExpirationDate_epoch = strptime(CertExpirationDate, "%Y-%m-%
      d %H:%S:%M")
6 | eval CurrentTime_epoch = now()
   convert ctime(now)
8 | eval thirty_days_from_now = CurrentTime_epoch + 2592000
9 | eval Expires_within_next_30_days = if(CertExpirationDate_epoch >=
      CurrentTime_epoch AND CertExpirationDate_epoch <=</pre>
      thirty_days_from_now, "yes", "no")
where Expires_within_next_30_days = "yes"
11
  table
     "Certificate name"
```

```
CertExpirationDate
Expires_within_next_30_days
```

List All IPs Where Management Access Is Enabled but It Is Not an NSIP

It is a common best practice to enable management only on the NetScaler IP (NSIP). Anyway, managing it through the Subnet IP (SNIP) is much more easy, right? Just don't! Keep safe with this search:

```
pivot `uA_DM_CitrixADC_Ip` CitrixADC_Ip
      latest(IpNetmask) as Netmask
3
      latest(IpType) as Type
      latest(IpvServer) as "Bound to vServer"
4
     latest(IpMgmtAccess) as "Mgmt. access"
6
     splitrow
         IpAddress as "IP address"
7
8
     filter HostName is "ns1"
9 | eval "Mgmt. access" = if('Mgmt. access'=1,"Yes","No")
10 | where Type != "NSIP" and 'Mgmt. access' = "Yes"
11 | table
      "IP address"
12
13
      Netmask
14
      Type
15
      "Bound to vServer"
16
     "Mgmt. access"
```

Generating Driver Version Inventory Reports

December 11, 2025

When users report hardware problems, it is often not the hardware itself that is malfunctioning, but the installed driver. In these situations, it can be invaluable to have an overview of all drivers on your endpoints. Here is how to create driver reports that list names and versions of some or all installed drivers.

The scripts listed in this guide are managed in vast limits' public GitHub repository.

Listing Drivers With uberAgent's Built-In Functionality

uberAgent collects version numbers for all installed applications, including driver packages. The following search, for example, gives you an overview of all installed Nvidia and Intel graphics software:

```
1 | pivot `uberAgent_index` Application_ApplicationInventory
2   dc(host) as "#Installations"
3   splitrow
```

```
DisplayName as Name
5
     splitrow
6
         DisplayVersion as Version
       filter DisplayName in ("Nvidia Graphics Driver*", "Intel(R)
7
           Processor Graphics")
8
   table
9
     Name
     Version
10
11
     "#Installations"
```

Listing Even More Drivers With Custom Scripts

Anyway, not all drivers are installed via software packages. Some are e.g. installed via Microsoft updates. uberAgent's custom script functionality to the rescue! In a nutshell, it executes any script you like and sends the output to Splunk.

Use this PowerShell script to list all installed drivers:

```
$0utput = @{
2
     }
3
4 $DriverPackages = $null
5
6 $DriverPackages = Get-WmiObject Win32_PnPSignedDriver | select
      devicename, driverversion, driverprovidername | where-object {
    $PSItem.driverprovidername -notlike "" -and $PSItem.driverprovidername
        -notlike "*Microsoft*" }
8
9
10 Foreach ($DriverPackage in $DriverPackages)
11
12
13
       # Do some formatting for Intel drivers as the vendor name is not
          consistent
14
       If ($DriverPackage.driverprovidername -like "*Intel*")
15
16
           $DriverPackage.driverprovidername = "Intel"
17
18
        }
19
       $0utput = @{
20
21
          'DeviceName' = "`"$($DriverPackage.devicename)`""
22
          'DriverVersion' = $DriverPackage.driverversion
23
24
          'DriverVendor' = "`"$($DriverPackage.driverprovidername)`""
25
        }
26
27
       Write-Output $($Output.Keys.ForEach({
    "$_=$($Output.$_)" }
28
    ) -join ' ')
29
    }
```

I denylisted everything Microsoft related reducing the list to third-party drivers only. Another way would be to just include specific vendors:

```
$0utput = @{
2
     }
3
4
  $DriverPackages = $null
5
6 $DriverPackages = Get-WmiObject Win32_PnPSignedDriver | select
      devicename, driverversion, driverprovidername | where-object {
    $PSItem.driverprovidername -like "*Intel*" -or $PSItem.
       driverprovidername -like "*Lenovo*" }
8
9
10 Foreach ($DriverPackage in $DriverPackages)
11
12
       # Do some formatting for Intel drivers as the vendor name is not
13
           consistent
14
       If ($DriverPackage.driverprovidername -like "*Intel*")
15
16
17
           $DriverPackage.driverprovidername = "Intel"
18
        }
19
20
       $0utput = @{
21
          'DeviceName' = "`"$($DriverPackage.devicename)`""
22
          'DriverVersion' = $DriverPackage.driverversion
23
          'DriverVendor' = "`"$($DriverPackage.driverprovidername)`""
24
25
        }
26
27
       Write-Output $($Output.Keys.ForEach({
28
    "$_=$($Output.$_)" }
    ) -join ' ')
29
    }
```

In any case, filtering is recommended to sort out unneeded drivers and keep the indexed data volume as small as possible.

Let us stick to the first example script and have a look at the output:

```
DriverVersion=19.3.4.219
7 DriverVendor="Intel" DeviceName="Intel(R) Display-Audio" DriverVersion
      =10.22.1.97
  DriverVendor="Realtek Semiconductor Corp." DeviceName="Realtek High
      Definition Audio" DriverVersion=6.0.1.8551
  DriverVendor="Intel" DeviceName="Mobile 6th/7th Generation Intel(R)
      Processor Family I/O PMC - 9D21" DriverVersion=10.1.1.38
10 DriverVendor="Synaptics" DeviceName="Synaptics Pointing Device"
      DriverVersion=19.3.4.219
11 DriverVendor="Lenovo" DeviceName="Lenovo Power Manager" DriverVersion
      =10.0.56.0
12 DriverVendor="Lenovo" DeviceName="Lenovo PM Device" DriverVersion
      =1.67.12.23
13 DriverVendor="Intel" DeviceName="Mobile 7th Generation Intel(R)
      Processor Family I/O LPC Controller (U Premium) - 9D58"
      DriverVersion=10.1.1.38
14 DriverVendor="Intel" DeviceName="Mobile 6th/7th Generation Intel(R)
      Processor Family I/O PCI Express Root Port #9 - 9D18" DriverVersion
      =10.1.1.38
15 DriverVendor="Intel" DeviceName="Intel(R) Dual Band Wireless-AC 8265"
      DriverVersion=20.70.3.3
16 DriverVendor="Intel" DeviceName="Mobile 6th/7th Generation Intel(R)
      Processor Family I/O PCI Express Root Port #3 - 9D12" DriverVersion
17 DriverVendor="Intel" DeviceName="Mobile 6th/7th Generation Intel(R)
      Processor Family I/O PCI Express Root Port #1 - 9D10" DriverVersion
      =10.1.1.38
18 DriverVendor="Intel" DeviceName="Intel(R) Management Engine Interface "
       DriverVersion=11.7.0.1040
19 DriverVendor="Intel" DeviceName="Mobile 6th/7th Generation Intel(R)
      Processor Family I/O Thermal subsystem - 9D31" DriverVersion
      =10.1.1.38
20 DriverVendor="SunplusIT" DeviceName="Integrated Camera" DriverVersion
      =3.5.7.4802
21 DriverVendor="Intel" DeviceName="Intel(R) Wireless Bluetooth(R)"
      DriverVersion=19.30.1648.920
22 DriverVendor="Sierra Wireless Inc." DeviceName="Sierra Wireless EM7455
      Qualcomm Snapdragon symbbnode device 01" DriverVersion=17.3.2.9
23 DriverVendor="AlcorMicro" DeviceName="Alcor Micro USB Smart Card Reader
      " DriverVersion=1.7.45.15
24 DriverVendor="Logitech" DeviceName="Logitech USB Input Device"
      DriverVersion=1.10.78.0
25 DriverVendor="Realtek Semiconductor Corp." DeviceName="Realtek USB 3.0
      Card Reader" DriverVersion=10.0.14393.31228
26 DriverVendor="Lenovo" DeviceName="Wide viewing angle & High density
      FlexView Display 2560x1440" DriverVersion=6.3.0.0
27 DriverVendor="Intel" DeviceName="Intel(R) HD Graphics 620"
      DriverVersion=21.20.16.4590
28 DriverVendor="Intel" DeviceName="Intel(R) Xeon(R) E3 - 1200 v6/7th Gen
      Intel(R) Core(TM) Host Bridge/DRAM Registers - 5904" DriverVersion
      =10.1.1.38
29 DriverVendor="Sierra Wireless Incorporated" DeviceName="Sierra Wireless
       Location Sensor" DriverVersion=17.8.1030.33
```

Start Collecting Data

Save the script to disk and create a new timer in uberAgent's configuration. After a service restart, uberAgent starts collecting data.

Splunk it

Once the data is in Splunk you can use it to help you troubleshooting these nasty driver issues. Run the following search to list all driver versions per device:

```
1 index = `uberAgent_index` sourcetype = "\"uberAgent:Script:PowerShell
      Driver Versions\""
2
   stats
3
      values(DriverVersion) as "Driver versions"
4
      dc(DriverVersion) as "#Driver versions"
      latest(DriverVendor) as Vendor
5
6
         by DeviceName
7
  | sort limit=0 Vendor
8
   table
9
      Vendor
      DeviceName
10
      "Driver versions"
11
      "#Driver versions"
12
```



Note that the number of driver versions is always one as I ran this only on my laptop. The number will likely change when running the script in a corporate environment on multiple machines.

Querying Windows Performance Counters

September 12, 2025

In addition to its built-in metrics, uberAgent can collect data from Windows performance counters.

Configuration

As with all other uberAgent metrics, performance counters need to be associated with a timer that defines how often data is collected. Performance counter metrics can be added to an existing timer or placed in a new timer section. See the configuration docs and the performance counter metrics documentation for details.

Example

In the following example, we configured a new timer that collects data every 60 seconds. We added two performance counters to the timer that collect .NET information for the entire machine and for a specific process (PowerShell). We also added a performance counter that collects the system's uptime. Finally, we added a performance counter that collects the handle count for every running process. The result looks like this:

Counter Paths

Most performance counter paths have one of the following two formats:

```
1 \object(instance)\counter
2 \object\counter
```

As you can see, some counter paths have instance names (powershell in one of the examples above) while others do not.

See Microsoft Docs for more information.

Wildcards

uberAgent can use the wildcard characters \star and ? in the instance section of performance counter paths.

Finding Counter Paths

To find the paths for your counters you can use the following method.

Add the desired counters to Performance Monitor. Then right-click the graph section of Perfmon's window, select *Save settings as...*, save as web page (*.html) and locate the counter path in the HTML code. Perfmon saves the counter path in language-neutral format, which is what is uberAgent needs.

Language-Neutral or Localized

Some tools require localized performance counter paths. This becomes a problem if you configure paths for machines with different language versions of Windows.

With uberAgent, you can configure localized or language-neutral performance counter paths. The performance counter path is always sent to the backend in English.

Documenting Applied Computer GPOs

December 11, 2025

Managing thousands of machines is a tough job for which many organizations are using Group Policy. If you are familiar with uberAgent you may know that it lists GPOs that are applied during user logon. Computer policies, on the other hand, are not part of uberAgent's regular feature set. However, that can easily be remedied with the help of uberAgent's custom script functionality. This article shows how.

The scripts listed in this guide are managed in vast limits' public GitHub repository.

Listing Applied Machine Policies

In a nutshell, the uberAgent custom scripts feature executes any script you like and sends the output to Splunk. This works with any scripting engine, of course. In this case, we used PowerShell.

The following script lists all applied machine policies.

```
1 # We need a temporary XML file to store the data
  $OutputFile = "C:\Windows\Temp\TempGPOExport.xml"
4
  # If the file exists delete it
5 If (Test-Path $OutputFile)
6 {
7
8
      Remove-Item $OutputFile -Force
9
    }
10
11
   # Run gpresult and store the result in the temporary xml file
12
   gpresult.exe /Scope Computer /X $OutputFile /F
13
14
15 # Read the xml file
16 [xml]$XML = Get-Content $OutputFile
17
18 # Get the names of all GPOs
  $GPOs = ($XML.Rsop.ComputerResults.GPO).Name | Sort-Object
20
21 # Remove the temporary file
22 Remove-Item $OutputFile -Force
23
24 # Join all GPOs to a long string
25  $GPOs = $GPOs -join ';'
26
27
   # Write the output. uberAgent will pick this up.
28 Write-Output "MachineGPOs=`"$GPOs`""
```

Save the script somewhere. For this example, we save the script as C:\Program Files\Citrix \uberAgent\Scripts\Get-MachineGPOs.ps1.

Configure uberAgent to Run the Script

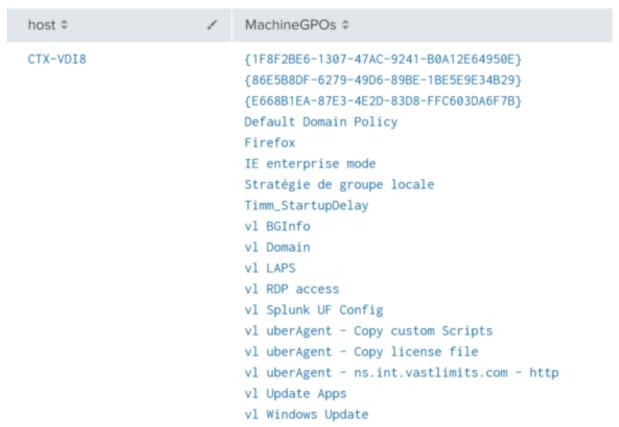
Create a new timer in uberAgent's configuration. With the settings shown below, the script will be executed once per day.

```
1 [Timer]
2 Name = Get-MachineGPOs
3 Interval = 86400000
4 Start delay = 600000
5 Persist interval = true
6 Thread priority = background
7 Script = powershell.exe -executionpolicy bypass -file "C:\Program Files \Citrix\uberAgent\Scripts\Get-MachineGPOs.ps1"
8 ScriptContext = SessionOAsSystem
```

Splunk it

Once the data is in Splunk it can be used to document the applied computer GPOs. Run the following search to list all group policy objects per machine.

The results from the above search look like this:



Identifying Applications That Use 100% of a CPU Core

September 12, 2025

Some applications fully use one or multiple CPU cores, either because they are badly written or be-

cause they simply make such complex calculations. Back in the days of single-core CPUs, this was easy to detect: the machine's CPU usage would spike to 100%. Today, even lightweight laptops have at least four physical cores, workstations many more. Looking at a machine's or a process'CPU usage percentage is not enough. You need to factor in the number of CPU cores in order to determine whether one or multiple cores are fully utilized. This article explains how to do that.

uberAgent determines the number of physical and logical CPU cores as part of its machine inventory metric. The resulting data is then added to all sourcetypes as additional fields during search time via automatic lookups. This means that you can use (nearly) all machine inventory fields in (nearly) all searches! The main exceptions are sourcetypes where the data does not apply to a specific endpoint, e.g., Citrix site or ADC metrics.

With that knowledge, we can build a simple search that lists processes that utilized at least a given number of CPU cores for the duration of a data collection interval (30 seconds by default):

In the example above, I filtered for events where one process used at least 80% of a CPU core (where CoresUsed > 0.8). The actual calculation of the number of cores used is simple: CoresUsed = ProcCPUPercent * CPUCoresLogical / 100. The last command, table, selects the fields to be displayed: application name, application version, process name, number of cores used, total number of physical and logical cores.

The result looks like this:

_time \$	host 🗸	AppName ✓	AppVersion ✓	ProcName /	Cores used 🗸	Physical cores 🗸	Logical cores /
2019-05-08 23:04:50.376	HK87K	Cinebench	20.0.4.0	Cinebench.exe	1.00	6	12
2019-05-08 23:04:20.357	HK87K	Cinebench	20.0.4.0	Cinebench.exe	1.00	6	12
2019-05-08 23:03:50.342	HK87K	Cinebench	20.0.4.0	Cinebench.exe	1.10	6	12
2019-05-08 23:02:50.307	HK87K	Cinebench	20.0.4.0	Cinebench.exe	9.37	6	12
2019-05-08 23:02:20.287	HK87K	Cinebench	20.0.4.0	Cinebench.exe	11.10	6	12

You may notice that I ran a CPU benchmark, Cinebench, to generate a high enough load. First I ran the multi-core, then the single-core benchmark. Please note that I renamed some fields to optimize formatting.

Collecting the Processor Temperature With uberAgent®

December 11, 2025

The other day a customer asked if uberAget collects the CPU temperature. By default, it doesn't, but you can easily add the CPU temperature as a metric via uberAgent's custom script functionality. Here is how.

In a nutshell, uberAgent's custom script functionality allows you to execute arbitrary scripts whose output is sent to the backend (e.g., Splunk). Go here to get more details on the configuration.

The scripts listed in this guide are managed in vast limits' public GitHub repository.

Choose Your Preferred Data Source

The processor temperature is stored in one of these WMI objects, or both:

- MSAcpi_ThermalZoneTemperature
- 2. Win32_PerfFormattedData_Counters_ThermalZoneInformation

On some test machines, the values differed between the two objects. We compared them with the values from other tools like HWInfo and found that Win32_PerfFormattedData_Counters_ThermalZoneIr is the better option for our machines. That could be different for yours, though.

Either way, your machines have to support at least one of these WMI classes. If your PCs are equipped with Intel processors, they will likely do. If not, you will get the error Get-WMIObject: Not supported when querying WMI.

The PowerShell script gives you the temperature in Celsius, Fahrenheit, and Kelvin. Choose your preferred unit by commenting out the other unnecessary rows.

```
1 <#
    .SYNOPSIS
2
3
    uberAgent script to determine the current CPU temperature.
5
    .DESCRIPTION
    Reads the current CPU temperature from WMI and converts the resulting
         output to the KV format required by uberAgent custom scripts.
7
8
    If the default WMI class does not yield satisfactory resulty, try
        switching to the alternative data source by commenting out the
        relevant lines.
9
    Most machines have multiple thermal zones. Test with your PCs and
        enter the name of the appropriate thermal zone in the variable
        $thermalZone.
    To retrieve a list of all thermal zones run either of the following:
```

```
- Get-CimInstance -ClassName
        Win32_PerfFormattedData_Counters_ThermalZoneInformation
     - Get-CimInstance -ClassName MSAcpi_ThermalZoneTemperature -Namespace
13
         "root/wmi"
14 #>
15
16
  # Thermal zone (wildcard string)
17 $thermalZone = "*tz00*"
18
  # Default: get the CPU temperature from the WMI class
19
      Win32_PerfFormattedData_Counters_ThermalZoneInformation
20 $temp = Get-CimInstance -ClassName
      Win32_PerfFormattedData_Counters_ThermalZoneInformation | Where-
      Object -Property Name -like $thermalZone
21 $TempKelvin
                   = $temp.Temperature
22
23 # Alternative: get the CPU temperature from the WMI class
      MSAcpi_ThermalZoneTemperature
24 # Note: requires elevation (admin rights)
25 # $temp = Get-CimInstance -ClassName MSAcpi_ThermalZoneTemperature -
      Namespace "root/wmi" | Where-Object -Property InstanceName -like
       $thermalZone
26 # $TempKelvin
                     = $temp.Temperature / 10
27
28 $TempKelvin
                   = $temp.Temperature
29 $TempCelsius
                   = $TempKelvin - 273.15
30 $TempFahrenheit = (9/5) * $TempCelsius + 32
31
32 $Output = @{
34
      # delete rows which are not needed
35
      'TempCelsius' = [math]::Round($TempCelsius)
      'TempFahrenheit' = [math]::Round($TempFahrenheit)
37
      'TempKelvin' = [math]::Round($TempKelvin)
38
39
40 Write-Output $($Output.Keys.ForEach({
41
   "$_=$($Output.$_)" }
    ) -join ' ')
42
```

The output of the script looks like this: TempCelsius=65 TempFahrenheit=149 TempKelvin =338

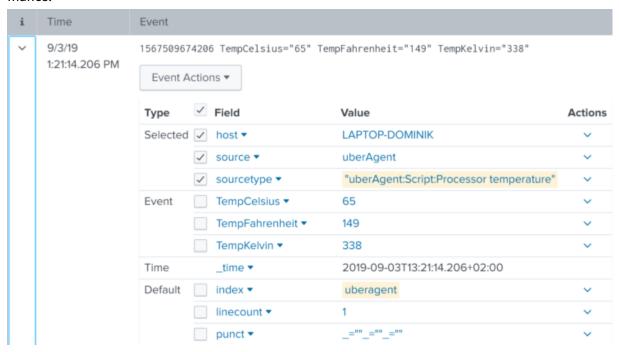
Configure uberAgent to Start Querying

Store your preferred script somewhere on the target machines. We went with C:\Program Files \Citrix\uberAgent\Scripts\Get-ProcessorTemperature.ps1.

Next step is to create a new timer in uberAgent's configuration, like this:

Splunk it

Now you have the processor's temperature in Splunk and can relate it to the machine's performance.



Please note that there are more advanced technologies to get the processor temperature, like Intel DTS. But using these with PowerShell would go beyond the scope of a practice guide.

User & Host Tagging Examples

September 12, 2025

With uberAgent 5.3 comes a very powerful and flexible tagging feature which lets you enrich uberAgent's dataset with your own custom data. While there is a feature description in the advanced topics section, we wanted to share a comprehensive list of tags you may find useful which you can copy and paste without further ado. Please read the feature description first to get the most out of the following list.

Operating System Language

```
1 # The language the operating system was installed with
2 [UserHostTagging]
3 Tag name = Host install language
4 Tag type = Host
5 Tag source = Registry
6 Tag value = HKLM\SYSTEM\CurrentControlSet\Control\Nls\Language\
      InstallLanguage
7
8 # The default language for the operating system
9 [UserHostTagging]
10 Tag name = Host default language
11 Tag type = Host
12 Tag source = Registry
13 Tag value = HKLM\SYSTEM\CurrentControlSet\Control\Nls\Language\Default
14
15 # The user's preferred language
16 [UserHostTagging]
17 Tag name = User preferred language
18 Tag type = User
19 Tag source = Registry
20 Tag value = HKCU\Software\Microsoft\CTF\SortOrder\Language\00000000
```

Windows 10 Version

```
# Windows 10 version like 1709 or 1909. More information: https://docs.
    microsoft.com/en-us/windows/release-information/
[UserHostTagging]
Tag name = WindowsVersion
Tag type = Host
Tag source = Registry
Tag value = HKLM\SOFTWARE\Microsoft\Windows NT\CurrentVersion\ReleaseId
```

User Name

```
4 Tag type = User
5 Tag source = Environment
6 Tag value = USERNAME
```

User Domain

User Principal Name

```
1 # The user's principal name (UPN). Example: johndoe@company.com
2 [UserHostTagging]
3 Tag name = UPN
4 Tag type = User
5 Tag source = Ad
6 Tag value = userPrincipalName
```

User Company

User Department

User AD Organizational Unit

```
1 [UserHostTagging]
2 Tag name = User OU
3 Tag type = User
4 Tag source = Ad
5 Tag value = distinguishedName
```

User DNS Domain

```
1 # This gives you the user's full qualified DNS domain name
2 [UserHostTagging]
3 Tag name = User DNS domain
4 Tag type = User
5 Tag source = Environment
6 Tag value = USERDNSDOMAIN
```

User Account Control

Querying Windows Event Log

December 11, 2025

Note: Event log forwarding is a native feature of uberAgent ESA Starting with version 7.3.0, uberAgent ESA is able to forward log entries from the Windows Event log. Please find more details in the Eventlog forwarding documentation.

A question we get asked quite often is whether uberAgent is able to query Windows Event Log for specific events IDs. This functionality is not in the product, as Splunk, uberAgent's primary backend, has this built-in. Hence we generally recommend making use of Splunk's capabilities.

However, not all of our customers have Universal Forwarder, Splunk's client software, deployed to their endpoints, mostly for performance reasons. If that is the case for you, too, then this practice

guide should be of interest. If you do have Splunk's Universal Forwarder deployed, please use its functionality instead. UF is more efficient than the script-based solution presented in this article.

The scripts listed in this guide are managed in vast limits' public GitHub repository.

Collect Event IDs With a Custom Script

As Windows Event Log data is not part of uberAgent's default data set, we are using the agent's custom script functionality.

In a nutshell, the uberAgent custom scripts feature executes any script you like and sends the output to Splunk. This works with any scripting engine, of course. In this case, we are using PowerShell.

The following script queries Event Log for a given event ID in a specific event log (Application, System, etc.). It also needs an interval in which it should search. Due to the parameters, you can use that script to query arbitrary events and don't need a new script for each. The required parameters are passed to the script through an uberAgent timer.

```
PARAM
2
   (
       [Parameter(Mandatory = $true)]
3
       [System.Int32]$EventID,
4
5
       [Parameter(Mandatory = $true)]
6
7
       [System.String]$EventLog,
8
9
       [Parameter(Mandatory = $true)]
10
       [System.Int32]$IntervalMS
11
12
13
   $IntervalMS = -$IntervalMS
14
   $StartTime=$(get-date).AddMilliseconds($IntervalMS)
15
16
17
   $Filter= @{
18
       LogName="$EventLog"
19
       StartTime=$StartTime
       Id=$EventID
21
    }
23
24
   $Events = Get-WinEvent -FilterHashtable $Filter -ErrorAction
25
       SilentlyContinue
27
   if (@($Events).Count -gt 0)
28
29
       foreach ($Event in $Events)
31
```

```
33
            [Hashtable] $ Output = @{
34
                'ProviderName' = "`"$($Event.ProviderName)`""
                'Id' = $Event.id
37
                'LevelDisplayName' = $Event.LevelDisplayName
                'LogName' = $Event.LogName
38
                'Message' = "`"$($Event.Message)`""
                'TimeCreated' = "`"$($Event.TimeCreated)`""
40
                'TaskDisplayName' = "`"$($Event.TaskDisplayName)`""
41
            }
42
43
44
           Write-Output $($Output.keys.foreach({
    "$_=$($Output.$_)" }
45
    ) -join ' ')
46
47
48
        }
49
    }
```

Save the script somewhere. For this example, we save the script as C:\Program Files\Citrix \uberAgent\Scripts\Get-WinEvent.ps1.

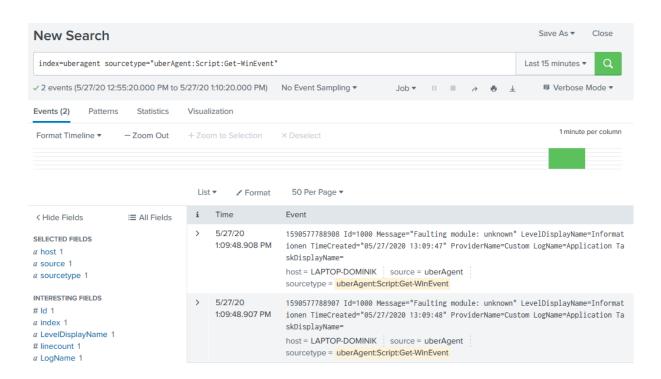
Configure uberAgent® to Run the Script

Create a new timer in uberAgent's configuration. With the settings shown below, the script will be executed every five minutes.

Note that you define the parameters in the Script setting. The parameter IntervalMS should be the same number of milliseconds as the setting Interval.

Splunk it

Once the data is in Splunk it can be used to search for Windows Events.



Collecting More WiFi Details From WFH Employees

December 11, 2025

Note: WiFi signal quality is also part of uberAgent's inventory metrics. Please note that uberAgent natively collects the WiFi signal quality alongside other WiFi-relevant metrics. More details can be found here.

Normally, laptop workers enjoy good quality WiFi or even a LAN network, connected through a docking station, in their company offices. Well, that changed during the Corona pandemic. The majority of employees are now working from home - connected through their personal WiFi and internet connection. That can be challenging for administrators when they have to troubleshoot a problem, as they have no insight into the quality of the employee's network.

uberAgent supports administrators already to identify if a bad network is the cause of an issue.

One cannot have enough information when it comes to solving problems, though. Custom scripts to the rescue! This practice guide helps you with collecting even more information about WiFi connections.

The scripts listed in this guide are managed in vast limits' public GitHub repository.

Collecting WiFi Information With PowerShell

Data Source: Netsh Command-Line Tool

Of course, using PowerShell is the standard these days when it comes to scripting. Sadly, there is no native PowerShell cmdlet for the information we're interested in. We have to use the good old netsh command: netsh wlan show **interface**.

The output looks similar to the following:

```
1 There is 1 interface on the system:
2
3
      Name
      Description
                            : Intel(R) Dual Band Wireless-AC 8265
4
                            : 1796b603-2174-45f7-8001-c05c4a011617
5
      GUID
6
     Physical address
                           : ac:ed:5c:02:f0:30
7
     State
                           : connected
      SSID
8
                           : G12
                           : cc:ce:1e:2d:b0:86
9
     BSSID
     Network type
                            : Infrastructure
10
     Radio type
                            : 802.11n
                           : WPA2-Personal
12
     Authentication
                           : CCMP
      Cipher
13
     Connection mode
                           : Profile
14
      Channel
                           : 1
     Receive rate (Mbps) : 144.4
      Transmit rate (Mbps) : 144.4
17
                            : 86%
18
      Signal
19
      Profile
                            : Dominiks-WiFi
20
21
      Hosted network status : Not available
```

The most interesting bits are the **signal strength**, the **receive/transmit rates**, the **radio type**, and the **authentication type**. With a little work, we can refactor that old-style text output to some useful PowerShell objects we can actually work with.

Converting Netsh Output to PowerShell Objects (EN)

```
1 $interface = @(netsh wlan show interface)
2 $hash = $null
3
4 # We only support machines with one interface for now. The following line also makes sure that the scripts only proceed if a WiFi interface is found at all.
5 If ($interface -match 'There is 1 interface on the system')
6 {
7
8 # The following builds a hash table from the netsh output foreach($item in $interface)
```

```
{
10
11
            if($item.Contains(':'))
12
13
            {
14
15
                $hash += @{
16
                     $item.Replace(" ","").split('{
17
18
     : }
     ')[0] = $item.Replace(" ","").split('{
19
21
     ')[1]
22
                 }
23
24
             }
25
26
         }
27
28
29
        # Only connected interfaces are interesting
        If ($hash.State -eq 'connected')
31
32
33
            # Get the WiFi band by looking at the used channel
34
            If ([int]$hash.Channel -gt 33)
35
                $Band = '5'
37
38
             }
40
            Else
41
            {
42
43
                \$Band = '2.4'
44
             }
45
46
            # Build the output hash
47
48
            $0utput = @{
49
               'Signal' = $hash.Signal -replace '%',''
50
51
               'Type' = $hash.Radiotype
52
               'Receiverate' = $hash.'Receiverate(Mbps)'
               'Transmitrate' = $hash.'Transmitrate(Mbps)'
53
               'Band' = $Band
54
               'SSID' = "`"$($hash.SSID)`""
55
56
               'Authentication' = $hash.Authentication
57
               'Cipher' = $hash.Cipher
             }
58
59
60
            # Finally, write the hash to stdout. The output will be picked
61
               up by uberAgent.
```

```
Write-Output $($Output.Keys.ForEach({
63
    "$_=$($Output.$_)" }
    ) -join ' ')
64
65
        }
67
       Else
       {
70
71
            Throw "Interface $($hash.Name) not connected. Exiting..."
72
        }
74
    }
75
76 Else
77
78
       Throw 'Zero or more than one interface on machine. Exiting...'
79
80
    }
```

Running that script outputs the following:

Authentication=WPA2-Personal Transmitrate=144.4 Signal=86 Type=802.11 n SSID="Dominiks-WiFi"Cipher=CCMP Receiverate=144.4 Band=2.4

Converting Netsh Output to PowerShell Objects (DE)

Unfortunately, the netsh output is language-specific. Hence the above script only works on **English** Windows operating systems. Below is a version for a **German** Windows, too. If you have other languages, please check the script and replace localized words according to your requirements.

```
1 $interface = @(netsh wlan show interface)
2 $hash = $null
3
4 # We only support machines with one interface for now. The following
      line also makes sure that the scripts only proceed if a WiFi
      interface is found at all.
5 If ($interface -match 'Es ist 1 Schnittstelle auf dem System vorhanden'
6
   {
7
       # The following builds a hash table from the netsh output
8
       foreach($item in $interface)
9
10
11
12
           if($item.Contains(':'))
13
14
               $hash += @{
15
16
                    $item.Replace(" ","").split('{
17
```

```
18
    : }
19
    ')[0] = $item.Replace(" ","").split('{
20
    : }
21
    ')[1]
22
                 }
23
24
             }
25
26
        }
27
28
29
       # Only connected interfaces are interesting
       If ($hash.Status -eq 'Verbunden')
31
32
            # Get the WiFi band by looking at the used channel
34
            If ([int]$hash.Kanal -gt 33)
37
                \$Band = '5'
38
             }
39
40
            Else
41
            {
42
                \$Band = '2.4'
43
44
             }
45
46
            # Build the output hash
47
48
            $0utput = @{
49
50
               'Signal' = $hash.Signal -replace '%',''
51
               'Type' = $hash.Funktyp
               'Receiverate' = $hash.'Empfangsrate(MBit/s)'
52
               'Transmitrate' = $hash.'Übertragungsrate(MBit/s)'
53
54
               'Band' = $Band
               'SSID' = "`"$($hash.SSID)`""
55
               'Authentication' = $hash.Authentifizierung
57
               'Cipher' = $hash.Verschlüsselung
58
             }
61
            # Finally, write the hash to stdout. The output will be picked
               up by uberAgent.
            Write-Output $($Output.Keys.ForEach({
    "$_=$($Output.$_)" }
63
    ) -join ' ')
64
        }
67
68
       Else
69
```

```
Throw "Interface $($hash.Name) not connected. Exiting..."

Throw "Interface $($hash.Name) not connected. Exiting..."
```

Start Collecting Data

Save the script to disk and create a new timer in uberAgent's configuration. After a service restart, uberAgent starts collecting data.

The interval at which the script is run in the timer configuration above is 60 seconds; adjust it to your needs as required. Just remember that the value is specified in milliseconds.

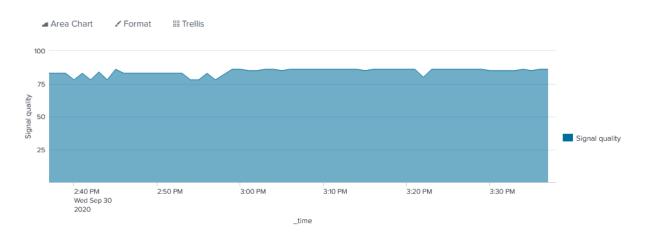
Splunk it

Once the data is in Splunk you can use it to help you troubleshoot issues in WFH scenarios even easier.

Let's assume you get a call by a WFH user who complains about a slow application. With the following search, you can quickly check if the user's WiFi signal strength is low, causing the slowness of the application.

```
index=uberagent sourcetype="uberAgent:Script:Get-WifiInfo"host="
LAPTOP-DOMINIK"| timechart latest(Signal)as "Signal quality (%)"
```

In the author's case, the signal quality looks okay, but could be better:



Signal quality is only one of the metrics we collected. Go and try one of the others for yourself!

Monitoring Windows Update Performance

September 7, 2025

Use the Splunk search below to list the duration of Windows Update activities that art part of the machine boot process. In addition to the Windows Update processing time, the search returns the disk IO incurred by the update process.

Why Measuring Windows Update Performance Is Crucial

A fundamental component of good endpoint management is Windows Update management. All devices must be kept up to date in order to provide as few opportunities as possible for malware to attack.

However, applying Windows updates also means stopping work for users, because typically the computer has to be restarted for this purpose. This is because Windows updates are installed during the computer startup.

Administrators are therefore keen to ensure that everything runs smoothly during the installation of updates in order to minimize the waiting time for users. So they need a way to monitor the performance of the update installation.

How uberAgent® Can Help

uberAgent provides a deep insight into the computer startup performance of Windows endpoints in the dashboard *Boot Duration*. Every computer startup is divided into phases based on the Microsoft document Windows On/Off Transitions Solutions Guide. The installation of Windows updates is not a separate phase, but only a sub-phase.

Nevertheless, the installation of Windows Updates can be monitored with uberAgent, because uberAgent determines the runtime, command line and performance for each process that ran during boot.

Windows updates are installed by the *Windows Update* service. This is an instance of the svchost. exe process and can be identified by the following command line: svchost.exe -k netsvcs -p -s wuauserv.

The performance of processes at boot is best measured by the number of disk accesses (IOs). Many IOs means that the application or service has a negative impact on boot performance.

Splunk Search

The search below returns the following results for each *Windows Update* service startup:

- The computer name
- The unique ID generated by uberAgent to analyze the complete computer startup
- The start time of the computer startup
- The duration of the Windows Update phase
- The percentage of the total boot time that is taken up by the Windows Update phase
- The total duration of the computer startup
- The number of IOs of the Windows Update phase
- The percentage of the Windows Update phase in the total IOs of the computer startup
- The total number of IOs of the computer startup

```
pivot `uA_DM_OnOffTransition_BootProcesses`
      OnOffTransition_BootProcesses
2
      latest(ProcLifetimeMs) as ProcLifetimeMs
3
      latest(TotalBootDurationMs) as TotalBootDurationMs
      sum(ProcIOReadCount) as SumProcIOReadCount
4
      sum(ProcIOWriteCount) as SumProcIOWriteCount
5
      splitrow BootUID
6
      splitrow host
      splitrow ProcCmdline
8
      filter ProcCmdline is "*svchost.exe -k netsvcs -p -s wuauserv"
9
  | join type=left BootUID
11
      pivot `uA_DM_OnOffTransition_BootProcesses`
12
         OnOffTransition_BootProcesses
         sum(ProcIOReadCount) as SumTotalBootProcIOReadCount
13
         sum(ProcIOWriteCount) as SumTotalBootProcIOWriteCount
14
15
         splitrow BootUID
      | fields + BootUID SumTotalBootProcIOReadCount
16
         SumTotalBootProcIOWriteCount
```

```
17 1
18
   | join type=left BootUID
19
      pivot `uA_DM_OnOffTransition_BootDetail`
20
         OnOffTransition BootDetail
21
         latest(_time) as BootStartTime
         splitrow BootUID
22
      | eval "Boot start time"=strftime(strptime(BootStartTime, "%Y-%m-%dT
         %H:%M:%S.%Q%z"), "%Y-%m-%d %H:%M:%S")
      | fields + BootUID "Boot start time"
24
25
   | eval "Applying Windows Updates duration (s)" = round(ProcLifetimeMs /
26
       1000,1)
   | eval "Total boot duration (s)" = round(TotalBootDurationMs / 1000,1)
   | eval "Windows Updates duration of total (%)" = round(ProcLifetimeMs /
28
       TotalBootDurationMs * 100,1)
   | eval "Applying Windows Updates IO count" = SumProcIOReadCount +
      SumProcIOWriteCount
31 | eval "Total boot IOs" = SumTotalBootProcIOReadCount +
      SumTotalBootProcIOWriteCount
   | eval "Windows Updates IOs of total (%)" = round('Applying Windows
      Updates IO count' / 'Total boot IOs',1)
33
   | sort - "Applying Windows Updates duration (s)"
34
   l table
      host
      "Boot start time"
37
38
      BootUID
      "Applying Windows Updates duration (s)"
40
      "Total boot duration (s)"
      "Windows Updates duration of total (%)"
41
      "Applying Windows Updates IO count"
42
43
      "Total boot IOs"
      "Windows Updates IOs of total (%)"
```

Splunk Search Result

This is what the result looks like in Splunk's UI:

host ‡ 🗸	Boot / start time \$	BootUID ≎ ✓	Applying / Windows Updates duration (s) \$	Total / boot duration (s)	Windows / Updates duration of total (%) ‡	Applying Windows Updates IO count	Total / boot IOs	Windows / Updates IOs of total (%) \$
T14S- DOMINIK	2021-01-13 02:44:04	00000344-0049-004b-a3c5-f6924de9d601	145.3	171.2	84.9	1667	289953	0.0
HK87K	2021-01-13 15:31:11	0000014d-0037-004b-b598-41bdb8e9d601	134.0	150.9	88.8	191	363129	0.0
CJ580DS	2021-01-20 13:45:46	000001c1-0044-0053-55e9-3e2c2aefd601	118.6	138.5	85.6	183	236700	0.0
T14S- DOMINIK	2021-01-20 10:15:58	00000344-0049-004b-7285-0add0cefd601	117.1	152.1	77.0	0	202613	0.0

Example result for above search

Customize Using Filters

Above's search gives you probably a long list back. By extending the search with the following line, the output can be filtered to computer startups where the Windows Update phase exceeds a certain value in seconds.

```
| where 'Applying Windows Updates duration (s)'> 60
```

Creating a TPM Status Inventory Report

December 11, 2025

This article shows how to collect detailed status and inventory information about each endpoint's trusted platform module (TPM). The output includes the TPM's state and version and can easily be used in Splunk reports and dashboards.

There are multiple ways to get TPM information. We chose the command-line tool tpmtool.exe as our data source because its output is more complete than PowerShell's Get-Tpm cmdlet (which lacks the TPM version).

The scripts listed in this guide are managed in vast limits' public GitHub repository.

Collecting TPM Information With PowerShell From Tpmtool

Data Source: Tpmtool.exe

When run with the parameter getdeviceinformation, Tpmtool's output looks as follows

```
1 -TPM Present: True
2 -TPM Version: 2.0
3 -TPM Manufacturer ID: INTC
4 -TPM Manufacturer Full Name: Intel
5 -TPM Manufacturer Version: 302.12.0.0
6 -PPI Version: 1.3
7 -Is Initialized: True
8 -Ready For Storage: True
9 -Ready For Attestation: True
10 -Is Capable For Attestation: True
11 -Clear Needed To Recover: False
12 -Clear Possible: True
13 -TPM Has Vulnerable Firmware: False
14 -PCR7 Binding State: 0
15 -Maintenance Task Complete: True
16 -TPM Spec Version: 1.16
17 -TPM Errata Date: Wednesday, September 21, 2016
18 -PC Client Version: 1.00
```

```
19 -Is Locked Out: False
```

Converting Tpmtool's Output to a Key Value String

We'll use the following PowerShell script to execute tpmtool and convert its output to the KV string format required by uberAgent® custom scripts:

```
1 <#
     .SYNOPSIS
2
3
     uberAgent script to collect TPM status information.
4
5
     .DESCRIPTION
     Runs the command "tpmtool.exe getdeviceinformation" and converts the
        output to the KV format required by uberAgent custom scripts.
7 #>
8
9 # Run tpmtool
10 $tpmtoolOutput = @(tpmtool getdeviceinformation)
11
12 # We'll store the output fields here
13 $output = @{
14
    }
15
16
17
  foreach ($line in $tpmtoolOutput)
18 {
19
      # Ignore empty lines
21
      if (!$line) {
22
     continue }
23
24
25
      # Remove the leading dash
      $line = $line -replace "^-", ""
26
27
      # Split at the colon
28
29
      $kv = $line.Split(":")
31
     if ($kv.Count -ne 2) {
32
     continue }
33
34
      # Remove the leading space in the value
      $kv[1] = $kv[1] -replace "^\s+", ""
37
      # Ignore certain fields
      if ($kv[0] -like "*spec version*" -or $kv[0] -like "*errata date*")
40
     continue }
41
42
```

The script's output looks like this:

Configuring uberAgent to Run the Script

Deploy the script to any directory on your endpoints. In this example, we're storing it in C:\Program Files\Citrix\uberAgent\scripts as Get-TpmtoolAsKv.ps1.

Create a new timer in uberAgent's configuration. With the settings shown below, the script is executed five minutes after uberAgent is started and then once every 24 hours.

Restart the agent to start collecting data.

Splunk It

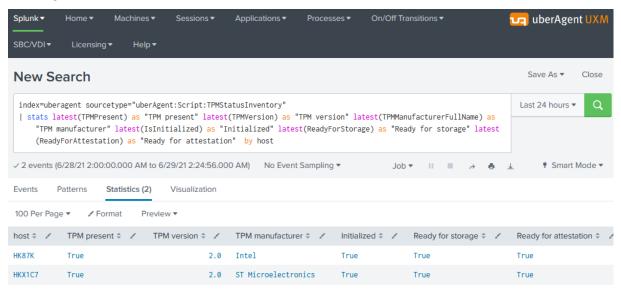
Once the data is in Splunk, you can list the incoming event data as follows

```
1 index=uberagent sourcetype="uberAgent:Script:TPMStatusInventory"
```

To generate a report, use a Splunk search like the following:

```
index=uberagent sourcetype="uberAgent:Script:TPMStatusInventory"
lstats latest(TPMPresent) as "TPM present" latest(TPMVersion) as "TPM version" latest(TPMManufacturerFullName) as "TPM manufacturer" latest(IsInitialized) as "Initialized" latest(ReadyForStorage) as "Ready for storage" latest(ReadyForAttestation) as "Ready for attestation" by host
```

The above Splunk search creates a table with the latest TPM status per endpoint (host in Splunk terminology):



Building a Browser Extension Inventory Report (Chrome/Edge/Firefox)

December 11, 2025

This article shows how to collect detailed inventory information about all installed browser extensions. The solution presented includes a Splunk dashboard that visualizes the collected data.

The scripts listed in this guide are managed in vast limits' public GitHub repository.

Solution Brief: Browser Extension Inventory

- 1. Extensions and metadata are stored in **browser profiles**.
- 2. A **PowerShell script** extracts extension info from browser profiles. The script inspects all browser profiles in the current user's Windows user profile.
- 3. The script is executed by **uberAgent** for each user logged on to the endpoint. The script's output is captured by uberAgent and forwarded to the (Splunk) backend.
- 4. A **Splunk dashboard** visualizes the collected data.

Background Information

Listing Chrome Profiles

Getting the Location of the User Data Directory

- Default location on Windows: %LocalAppData%\Google\Chrome\User Data
- Documentation

Parsing the JSON file 'Local State' to Find Profile Directories

- 1. Profile objects are children of the following: profile > info_cache
- 2. Profile properties related to the user:
 - gaia_given_name
 - gaia_id
 - gaia_name
 - name
 - shortcut_name
 - user_name
- 3. Profile names
 - Default profile: Default
 - Additional profiles: Profile
- 4. Locating profile directories
 - Profile directories are subdirectories of the user data directory
 - Names of profile directories are idential to profile names

Listing Edge Profiles

Getting the Location of the User Data Directory

- Default location on Windows: %LocalAppData%\Microsoft\Edge\User Data
- Everything else is identical to Chrome

Collecting Chrome Extension Inventory Data

'Preferences'vs. 'Secure Preferences' Extensions are listed in one of two possible JSON files located in the profile directory: Preferences or Secure Preferences. The script checks both.

Note: Secure Preferences is typically used instead of the Preferences file.

Extension Settings Extension settings are children of the following: extensions > settings > <extension ID>.

Relevant settings for inventory purposes include:

- from_webstore: was the extension installed from the Chrome Web Store?
- install_time: timestamp of the last update (format: FILETIME / 10 [= microseconds since Jan 1st 1601])
- path: extension path, either absolute or relative to the profile subdirectory Extensions
- location: 1 = user data subdirectory Extensions, 5 = Chrome installation directory
- state: 1 = enabled
- was_installed_by_default: [part of Chrome, not removable?]
- version: extension version

Collecting Firefox Extension Inventory Data

Getting the Location of the Profile Directory

• Default location on Windows: %AppData%\Mozilla\Firefox\Profiles

Extension Settings The configuration of Firefox extensions is stored in each profile's extensions .json file. Within that file, extension settings are children of: addons.

Relevant settings for inventory purposes include:

- sourceURI: installation source (Firefox Addons or a different site?)
- updateDate: timestamp of the last update (format: Unix epoch in ms)
- location: app-profile = browser profile
- active: true = enabled
- version: extension version

Configuring uberAgent® to Run the Inventory Script

Note: you can find the latest version of the script in vast limits' public GitHub repository.

- 1. Store the script file in C:\Program Files\Citrix\uberAgent\scripts as Get-BrowserExtensionInfo.ps1.
- 2. Create a new timer in uberAgent's configuration. With the settings shown below, the script is executed in each user session five minutes after uberAgent is started. The script execution is repeated every 24 hours.

Restart the agent to start collecting data.

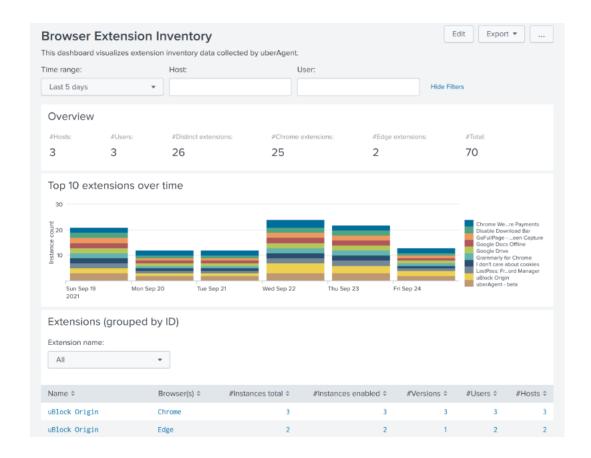
Script Output

The output from the inventory script looks like this:

Splunk Dashboard

Once inventory data is sent from endpoints with uberAgent to Splunk, install the Splunk app that is part of this practice guide. You can find it in this guide's GitHub repository or in Splunkbase.

The dashboard provides a timeline of the top 10 extensions along with a data table listing all browser extensions. Selecting an extension's row in the table brings up additional charts and tables that list all extension instances in full detail.



Internet Explorer: Distinguish Standalone and Edge IE Mode Starts

September 12, 2025

Internet Explorer has been with us for many years as the ever-present browser. Most people will agree that the relationship is quite ambivalent. Especially in the corporate world, Internet Explorer was and still is deeply rooted. Many companies have applications in use that were not only developed on the basis of Internet Explorer but would not work at all without it.

Background Information

End-of-Life for Internet Explorer Announced

As you may have noticed, Microsoft has announced that the Internet Explorer 11 desktop application will be retired and go out of support on June 15, 2022. The challenge is to identify the dependencies of existing web applications on Internet Explorer and, perhaps more importantly, which of these applications are actually still being used.

Capture Internet Explorer Starts: Standalone & Edge IE Mode

Typically, two scenarios are of interest. Either the user launches Internet Explorer, iexplore.exe, directly, or a website is launched within Microsoft Edge in *Internet Explorer mode*. We would like to be able to capture both and distinguish between them.

To do so, the command line of the process contains the necessary information. To get a better understanding, let us compare a direct Internet Explorer startup vs. one coming from Edge IE mode.

Standalone Internet Explorer Start When Internet Explorer is launched as a standalone application, the command line looks as follows:

```
"C:\Program Files (x86)\Internet Explorer\IEXPLORE.EXE"SCODEF:6456
CREDAT:9730 /prefetch:2
```

Internet Explorer Started in Edge IE Mode In Edge IE mode, the command line of the embedded Internet Explorer executable looks as follows:

```
"C:\Program Files (x86)\Internet Explorer\IEXPLORE.EXE"SCODEF:11244
CREDAT:75266 APPID:MSEdge /prefetch:2
```

As you can see, the additional parameter APPID: MSEdge can be used to distinguish between standalone IE and Edge IE mode.

Configuration Instructions

Activate uberAgent® Feature: EnableExtendedInfo

uberAgent does not send the command line to the backend by default. The reason behind this is that we want to keep the generated data volume as low as possible (more information about managing the data volume can be found here). However, for this scenario, the command line is required. Activate EnableExtendedInfo via uberAgent.conf as shown below.

```
Setting name: EnableExtendedInfo
      Description: Send detailed information about each started process
2 #
      to the backend, e.g. path, command line, process ID, parent ID. This
      also enables the population of the ProcGUID field in other
      sourcetypes, which can be used for detailed process instance
      tracking.
  #
      Valid values: true | false
4 #
      Default: false
5 #
      Required: no
6
  [ProcessStartupSettings]
8 EnableExtendedInfo = true
```

Configure uberAgent Feature: Event Data Filtering

uberAgent provides a feature called Event Data Filtering. It is a powerful filtering mechanism for the collected data that operates right on the endpoint. Please learn more about it in our documentation.

For this use scenario, Event Data Filtering allows us to reduce the additional data volume generated by activating by EnableExtendedInfo to an absolute minimum. Specifically, we only need the command line for the process <code>iexplore.exe</code> in the sourcetypes <code>uberAgent:Process:ProcessDetail</code> and <code>uberAgent:Process:ProcessStartup</code>.

Since the only extra fields of interest are ProcID, ProcGUID and ProcCmdline, everything else that is not needed can be removed. Please find the example configuration below. Save the content as uberAgent-eventdata-filter-vastlimits-Internet-Explorer.conf and place that file in the same directory as uberagent.conf.

```
1 [EventDataFilter]
2 # Unnecessary for this use case.
3 Action = clear
4 Sourcetype = Process:ProcessDetail
5 Field = ProcGUID
6 Query = true
  [EventDataFilter]
9 # Unnecessary for any other process than iexplore.exe.
10 Action = clear
11 Sourcetype = Process:ProcessStartup
12 Field = ProcID
13 Field = ProcParentID
14 Field = SessionID
15 Field = ProcGUID
16 Field = SessionGUID
17 Field = ProcParentName
18 Field = ProcPath
19 Field = ProcCmdline
20 Field = ProcParentGUID
21 Query = ProcName != "iexplore.exe"
23
  [EventDataFilter]
24 # Remove unnecessary fields for iexplore.exe itself.
25 Action = clear
26 Sourcetype = Process:ProcessStartup
27 Field = ProcParentID
28 Field = SessionID
29 Field = SessionGUID
30 Field = ProcParentName
  Field = ProcPath
32 Field = ProcParentGUID
33 Query = ProcName == "iexplore.exe"
```

Include the new configuration file by using the @ConfigInclude directive below. A good place for

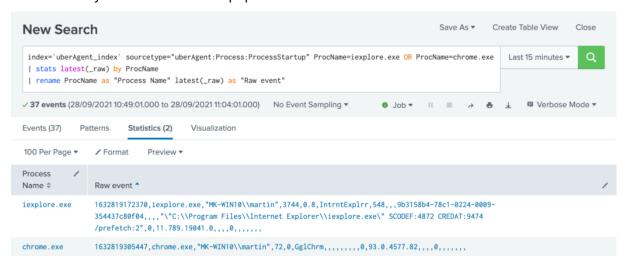
the include directive is in uberAgent-eventdata-filter.conf which also resides in the same directory as uberAgent.conf. Find out more about configuration file locations here.

```
    # Additional fields for Internet Explorer analysis (requires
        EnableExtendedInfo to be enabled)
    @ConfigInclude uberAgent-eventdata-filter-vastlimits-Internet-Explorer.
        conf platform=Windows
```

Finally, restart uberAgent with the new configuration in place and head over to Splunk.

Verify Configuration

To prove our newly configured event data filtering works as expected, run the search below which highlights two raw events in Splunk. One for <code>iexplore.exe</code> and another one for <code>chrome.exe</code>. You can clearly see the difference in populated fields.



Splunk it

Once the data is available in Splunk, it can be used to search for every direct or indirect Internet Explorer start, for every user on every host. In order to get the information about the actual web applications being used, the uberAgent browser add-on for Internet Explorer is required (documentation). This information is only available for direct Internet Explorer starts though, because of Microsoft Edge/Chromium API limitations.

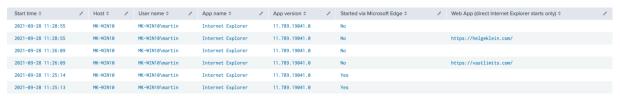
The Search

```
1 | pivot `uA_DM_Process_ProcessStartup` Process_ProcessStartup
2    latest(AppName) as "App name"
3    latest(AppVersion) as "App version"
```

```
latest(_time) as StartTime
5
       latest(ProcCmdline) as "Process Commandline"
6
       latest(ProcID) as ProcID
       filter host in ("*")
7
8
       filter ProcName is "iexplore.exe"
9
       splitrow ProcGUID
10
       splitrow host as Host
       splitrow ProcUser as "User name"
11
12
   | join type=left Host, ProcID
13
14
       pivot `uA_DM_Application_BrowserPerformanceIE`
          Application_BrowserPerformanceIE
15
           values(URL)
16
           splitrow host as Host
           splitrow ProcID
18
       fields + *
       ٦
19
  | eval "Start time" = strftime (strptime (StartTime, "%Y-%m-%dT%H:%M:%S
20
       .%Q%z"), "%Y-%m-%d %H:%M:%S")
21 | eval "Started via Microsoft Edge"=if(like('Process Commandline', "%
      APPID: MSEdge "), "Yes", "No")
  | eval "Web App (direct Internet Explorer starts only)"=nullif('values(
      URL) ', "none")
   | sort - "Start time"
23
24 | table "Start time", Host, "User name", "App name", "App version", "
      Started via Microsoft Edge", "Web App (direct Internet Explorer
      starts only)"
```

The Results

The resulting table shows for each instance of <code>iexplore.exe</code> whether it was launched standalone or via Edge IE mode (column "Started via Microsoft Edge"). For standalone IE processes that are used to rendering a web page, the URL is displayed, too.



Testing the Azure AD (Entra ID) Join Status

December 11, 2025

This article shows how to test each endpoint's Azure AD (aka Entra ID) join status. The output can easily be used in Splunk reports and dashboards.

Machines do not always register smoothly with Azure AD. This is especially true for customers with non-persistent virtual desktops, as these types of machines must re-register with Azure AD each time they start. The script presented in this guide helps with troubleshooting by making the registration state available in Splunk.

Note: The script(s) listed in this guide are managed in vast limits' public GitHub repository.

Collecting AAD Join Status With PowerShell From Dsregcmd

Data Source: Dsregcmd.exe

When run with the parameter Status, Dsregcmd's outputs a lot of information. Below is the output cropped to the data we are interested in:

Converting Dsregcmd's Output to a Key-Value String

We'll use the following PowerShell script to execute Dregcmd and convert its output to the KV string format required by uberAgent® custom scripts:

```
1 function Test-AzureAdJoined {
3
      $output = & dsregcmd /status
      # Check if the output contains "AzureAdJoined: YES"
5
      return $output -match "AzureAdJoined\s+:\s+YES"
6
7
8
9
10 $AzureAdJoined = 0
11
12 $joinedToAzureAd = Test-AzureAdJoined
13
14 if ($joinedToAzureAd) {
15
```

```
$AzureAdJoined = 1
   }
17
18
19
20 # Build the output hash
23
      'AzureAdJoined' = $AzureAdJoined
24
   }
25
27 # Finally, write the hash to stdout. The output will be picked up by
      uberAgent.
28 Write-Output $($Output.Keys.ForEach({
29
   "$_=$($Output.$_)" }
30 ) -join ' ')
```

The script's output looks like this:

```
1 AzureAdJoined=1
```

Configuring uberAgent to Run the Script

Deploy the script to a directory on your endpoints. In this example, we're storing it in C:\Program Files\Citrix\uberAgent\scripts as Get-AzureAdJoinStatus.ps1.

Create a new timer in uberAgent's configuration. With the settings shown below, the script is executed one hour after uberAgent is started to give the registration process enough time, and then once every 24 hours.

Restart the agent to start collecting data.

Splunk It

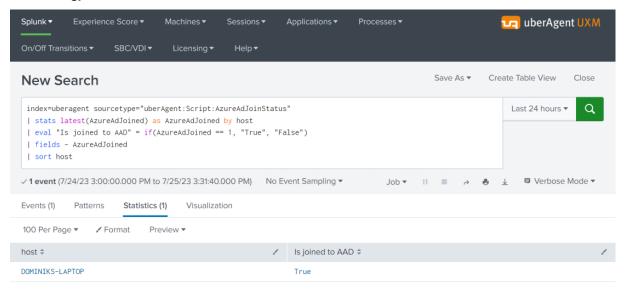
Once the data is in Splunk, you can list the incoming event data as follows:

```
1 index=uberagent sourcetype="uberAgent:Script:AzureAdJoinStatus"
```

To generate a report, use a Splunk search like the following:

```
index=uberagent sourcetype="uberAgent:Script:AzureAdJoinStatus"
l stats latest(AzureAdJoined) as AzureAdJoined by host
leval "Is joined to AAD" = if(AzureAdJoined == 1, "True", "False")
leval "Is joined to AdJoined == 1, "True", "False")
leval "Is joined to AdJoined == 1, "True", "False")
leval "Is joined to AdJoined == 1, "True", "False")
leval "Is joined to AdJoined == 1, "True", "False")
leval "Is joined to AdJoined == 1, "True", "False")
leval "Is joined to AdJoined == 1, "True", "False")
```

The above Splunk search creates a table with the latest AAD join status per endpoint (host in Splunk terminology):



Addons and Tools

December 11, 2025

uberAgent® Config & Support Tool

The uberAgent Config & Support Tool simplifies the configuration process for **uberAgent**, enabling proof-of-concept installations with minimal effort.

uberAgent Helpdesk Splunk App

uberAgent Helpdesk is a Splunk app for IT professionals who support virtual or physical desktops and who need to resolve issues quickly. This app provides a different view of the existing uberAgent dataset that is streamlined for helpdesk use.

uberAgent Event Generator

The event generator is the perfect tool for uberAgent product demonstrations. It simulates a large number of endpoints and generates data for all dashboards.

uberAgent Log Collector Splunk App

uberAgent Log Collector helps you monitor the health of your uberAgent deployment by collecting the data logged by uberAgent and sending it to Splunk for indexing. Dashboards provide easy access.

uberAgent Logfile Syntax Highlighter for Notepad++

This syntax highlighter makes uberAgent log files easier to read in Notepad++.

uberAgent® Config & Support Tool

December 11, 2025

The uberAgent Config & Support Tool helps with setting up uberAgent for a proof of concept installation and creating uberAgent support bundles.

Features

- Quick and easy configuration of a uberAgent installation
- Creation of central config file management archive files
- · One-click creation of uberAgent support bundles

Quick Links

- Changelog and Release Notes
- · Quickstart Guide

Getting Started

To get started with the uberAgent Config & Support Tool, follow the steps outlined in the Quickstart Guide .

Related Tools

- uberAgent Event Generator for Splunk
- uberAgent Helpdesk Splunk App
- uberAgent Log Collector Splunk App

For a complete list of uberAgent addons and tools, visit our Addons and Tools page.

Changelog and Release Notes

November 3, 2025

Version 1.1.0

• Added Advanced Configuration Workflow

Version 1.0.1

 Resolved an issue causing a crash during startup on Windows 10 version 1607 and Windows Server 2016.

Version 1.0.0

• Initial Release

uberAgent® Config & Support Tool - 1.1.x

December 11, 2025

The **uberAgent Config & Support Tool** simplifies the configuration process for **uberAgent**, allowing you to set up a proof-of-concept installation with minimal effort.

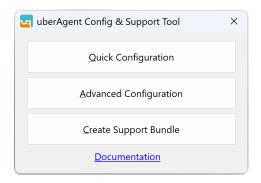
System Requirements

- Windows 10 version 1607 or later
- Windows Server 2016 or later

Download and Installation

- 1. Install uberAgent before proceeding.
- 2. Download the uberAgent Config & Support Tool from the Citrix Observability website.
- 3. Once the download has finished, launch the tool.

Main Dialog Options



The tool provides three options:

- Quick Configuration: Streamlined configuration process for basic uberAgent setup perfect for proof-of-concept installations.
- Advanced Configuration: Extended configuration options with maximum flexibility.
- Create Support Bundle: Collects log files and settings for troubleshooting.

Quick Configuration

The Quick Configuration option provides a streamlined approach to configuring uberAgent with predefined templates and simplified settings. This option maintains the same functionality as described in the Quickstart 1.0.x documentation, including:

- Configuration source selection (Web/GitHub or Local)
- Data volume optimization options
- Receiver type configuration (Splunk, Elasticsearch, OMS Log Analytics, Kafka, Azure Event Hubs)
- License file selection
- Apply configuration or create config archive options

For detailed instructions on using Quick Configuration, refer to the Quickstart 1.0.x documentation.

Advanced Configuration

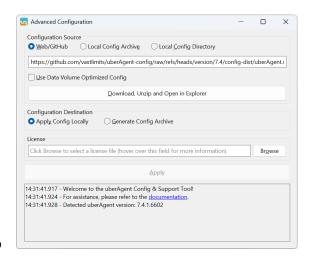
The Advanced Configuration option provides enhanced flexibility for managing uberAgent configurations with extended configuration source options.

Note

If uberAgent is not installed, the configuration cannot be applied locally.

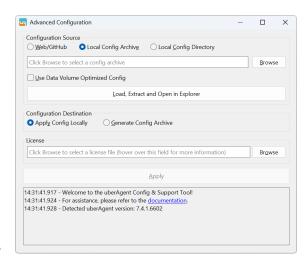
Supported Configuration Sources

The Advanced Configuration supports three configuration sources:



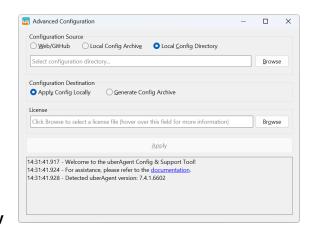
Web/GitHub

Downloads configuration templates from specified URLs, typically from the uberAgent config GitHub repository.



Local Config Archive

Uses a configuration archive from the local disk. This is particularly helpful for configuring machines without internet access or for editing existing configuration archives and repackaging them.



Local Config Directory

Works with a local configuration directory structure. This is particularly helpful for creating configuration archives for Central Config File Management.

Note

When using the uberAgent configuration directory (C:\ProgramData\vast limits\uberAgent\Configuration) as source, only creating a config archive is available.

Advanced Configuration Workflow

The workflow is identical for all Advanced Configuration options:

- 1. **Select Source**: Choose your configuration source (Web/GitHub, Local Config Archive, or Local Config Directory)
- 2. Load Configuration: If available, click the Load button to load the configuration files
- 3. **Edit Configuration**: The working directory with config files automatically opens in File Explorer. Make your changes using any text editor of your choice (e.g., Notepad, Notepad++, VSCode)
- 4. **Select Destination**: Choose whether to apply the configuration locally or create a config archive
- 5. **Apply Changes**: Click the **Apply** button to execute the selected process

Creating a Support Bundle

To generate an **uberAgent support bundle**, select the "**Create Support Bundle**" button from the main dialog. Upon completion, you'll receive a notification, and the bundle will be saved to your desktop.

uberAgent® Config & Support Tool - 1.0.x

November 3, 2025

The **uberAgent Config & Support Tool** simplifies the configuration process for **uberAgent**, allowing you to set up a proof-of-concept installation with minimal effort.

Note

For Windows there is a new version 1.1.x available. You can find the documentation for that version at Quickstart 1.1.x.

System Requirements

- Windows 10 version 1607 or later
- Windows Server 2016 or later
- macOS Ventura or newer

Download and Installation

- 1. Install uberAgent before proceeding.
- 2. Download the uberAgent Config & Support Tool from the Citrix Observability website.
- 3. Once the download has finished, launch the tool.

Creating a Support Bundle



To generate an **uberAgent support bundle**, select the "**Create Support Bundle**" button. Upon completion, you'll receive a notification, and the bundle will be saved to your desktop.

Configuring uberAgent

The **Configuration Dialog** can be used to configure a local uberAgent installation or to create configuration archives that can be used for Central Config File Management (CCFM).

1. Open the Configuration Dialog



Click on the "Configure uberAgent" button in the main window to open the configuration dialog.



2. Select the Configuration Source

- Web/GitHub: the tool downloads the configuration templates from the specified URL.
 - By default, it downloads the corresponding version from the uberAgent config GitHub repository.
- Local: Uses a template archive from the local disk.
 - When using **Local**, click **Browse** to locate and select a configuration archive.

3. (Optional) Enable Data Volume Optimization

The "Use Data Volume Optimized Config" option activates an optimized configuration designed to minimize data transmission volume. This is especially beneficial when reducing costs is a priority.

However, this optimization comes with a trade-off: instead of sending data for all processes, only the top five processes per category are transmitted. Additionally, data collection intervals are extended, leading to greater smoothing of peaks, making them less visible.

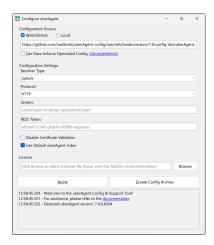
For more information, see Reducing the Data Volume.

4. Select a Receiver Type

The **Receiver Type** specifies the backend to which uberAgent sends the collected data. The available options are:

- Splunk
- Elasticsearch
- · OMS Log Analytics
- Kafka
- Azure Event Hubs

Configuration for each Receiver Type



Splunk

- Protocol: Choose either HTTP or TCP.
- **Servers**: Specify the Splunk server address (e.g., https://server1:port for HTTP, or server1:port for TCP).
- REST Token: Enter the Splunk HTTP Event Collector (HEC) token (required for HTTP).
- **Disable Certificate Validation**: Enable this option if you are using a Splunk Cloud trial instance, as the HEC certificate will likely not be trusted on your machines (**not recommended for production use**).
- **Use Default uberAgent Index**: If you want to use a different Splunk index than the default, uncheck this option.

For more details, see Configuring Splunk's HTTP Event Collector.



Elasticsearch

- **Servers**: Enter the Elasticsearch endpoint (e.g., https://server1:port).
- **REST Token**: Provide the authentication token in the format username: password.

For more details, see Installing and Configuring Elasticsearch & Kibana.



Azure Monitor (OMS Log Analytics)

- Servers: Enter the Log Analytics workspace endpoint.
- **REST Token**: Provide the workspace key for authentication.

For more details, see Configuring Microsoft Azure Monitor.

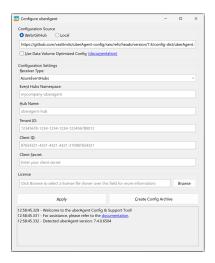


Kafka

• **Servers**: Enter the Kafka broker addresses (e.g., https://server1:port).

• TLS Client Certificate: Specify the certificate path in the format <store location>\< store name>\<thumbprint>.

For more details, see Configuring Apache Kafka & Confluent REST Proxy.



Azure Event Hubs

- Event Hubs Namespace: Enter the namespace.
- **Hub Name**: Specify the hub name.
- Tenant ID: Enter the Azure Tenant ID.
- Client ID: Provide the Client ID for authentication.
- Client Secret: Enter the authentication secret.

For more details, see Configuring Microsoft Azure Data Explorer (ADX) & Azure Event Hubs.

5. (Optional) Select License File

When a license file is selected, the tool automatically copies it to the uberAgent installation directory. This ensures that the service can start immediately after applying the configuration.

If you only plan to create a configuration archive for Central Config File Management (CCFM), it is not necessary to specify a license file. The generated archive does not include a license. The target machines must have a valid license file in their uberAgent installation directory for the service to work.

6. Apply and Save the Configuration

Once the configuration has been defined, you have two options for applying or saving it:

Apply the Configuration Selecting **Apply** immediately applies the configuration to the locally installed uberAgent installation.

- If a valid license file is already present in the installation directory or has been specified within the tool's UI, the tool will also automatically start the uberAgent service.
- If no valid license file is found or specified, the service will not start. In this case, you must manually copy a valid license file to the uberAgent installation directory before the service can be started.

Create Config Archive Selecting **Create Config Archive** generates a configuration archive without applying it to the local system. This is especially useful for Central Config File Management (CCFM) deployments, where configurations are distributed to multiple machines.

No license file is required when creating the archive. However, for uberAgent to function on the target machines, a valid license file must be present in the installation directory of each system where it is deployed.

For more details, see Central Config File Management (CCFM).

uberAgent® Event Generator for Splunk

September 12, 2025

The uberAgent Event Generator is a powerful tool designed for product demonstrations of uberAgent. It simulates a large number of endpoints and generates data for all dashboards, allowing you to showcase the full capabilities of uberAgent without the need for a complex setup.

Features

- · Simulates multiple endpoints
- Generates data for all uberAgent dashboards
- Perfect for product demonstrations and testing

Quick Links

- Changelog and Release Notes
- · Quickstart Guide

Getting Started

To get started with the uberAgent Event Generator:

- 1. Download the Event Generator from the Citrix Observability website
- 2. Install the Event Generator on your Splunk instance
- 3. Access your uberAgent Splunk dashboards to see the simulated data

For more detailed instructions, please refer to our Quickstart Guide.

Related Tools

- uberAgent Config & Support Tool
- uberAgent Helpdesk Splunk App
- uberAgent Log Collector Splunk App

For a complete list of uberAgent addons and tools, visit our Addons and Tools page.

Changelog and Release Notes

September 7, 2025

Version 7.1

Release notes

- Increased .NET version to 7.
- Changed configuration file format to JSON.

Improvements

- Log messages are written to stdout and a log file located in the %TEMP% (Windows) or /tmp (Linux) directory.
- The fields Session FgBrowser Type, Session FgBrowser Type and Session FgBrowser Active To fsource type uber Agent: Session: Session Detail are now available on macOS, too.

New Sourcetypes

Newsourcetype uberAgentESA: System: SecurityInventory with fields: SecurityInventoryOne, SecurityInventoryName, SecurityInventoryScore, SecurityInventoryRiskScore, SecurityInventoryResultData, SecurityInventoryErrorCode, SecurityInventoryErrorCode, SecurityInventoryScope, SecurityInventoryScopeEntity.

Updated Sourcetypes

- **Sourcetype** [B287]: uberAgent:Process:ProcessStatistics has new field(s): ProcInputDelayMaxMs, ProcInputDelaySumMs and ProcInputDelayCount.
- Sourcetype [B287]: uberAgent: Session: SessionDetail has new field(s): SessionInputDelay
 , SessionInputDelaySumMs and SessionInputDelayCount.
- **Sourcetype** [B751]: uberAgent:OnOffTransition:BootDetail2 has new field(s): UserLogonWaitDurationMs.
- Sourcetype [B766]: uberAgentESA: Process: DnsQuery has new field(s): DnsRisk52Chars
 , DnsRisk27UniqueChars, DnsRiskEmptyResponse, DnsRiskTXTRecord,
 DnsRiskHighEntropy, DnsResponseStatus.

Version 7.0

Release notes

• macOS client machines are now supported.

Improvements

- Machines get their IP addresses once and they do not change.
- Machines get their disk volumes only once and they do not change during their lifetime.
- A random in-session process needs a long time to start.
- Application UI delay events can now only be generated by processes started during a session.
- WiFi data is now sent only for WiFi adapters.
- BSODs are now sent less frequently.

New Sourcetypes

- **Sourcetype:** new sourcetype uberAgent:CitrixSession:VirtualChannelDetail with fields: SessionGUID, SessionUser, VirtualChannelVendorName, VirtualChannelData, VirtualChannelDataVolumeOutputMB.
- Sourcetype: new sourcetype uberAgent: CitrixSession: SessionConfig with fields: SessionGUID, SessionUser, AudioActualPriority, AudioPolicyAllowMicrophoneRedir, AudioPolicyAllowRedirection, AudioPolicyPriority, AudioPolicySoundQuality, CdmActualPriority, CdmVolumes, CdmPolicyAllowDriveRedirection, CdmPolicyPriority, CdmPolicyReadOnly, DisplayMode, ThinwireActualPriority, ThinwireColorDepth, ThinwireComponentEncoder, ThinwireHardwareEncodeInUse, ThinwireVideoCodecType, ThinwireColorspace, ThinwireVideoCodecUse,

ThinwirePolicyFps,ThinwirePolicyPriority,ThinwirePolicyUseHardwareEncoding ,ThinwirePolicyUseVideoCodec,ThinwirePolicyVisualQuality,FramehawkActualPri ,FramehawkPolicyPriority,D3DActualPriority,D3DPolicyAeroRedirection ,D3DPolicyGraphicsQuality,D3DPolicyPriority,GraphicsActualPriority ,GraphicsPolicyDisplayDegradeNotifyUser,GraphicsPolicyDisplayDegradePolicy ,GraphicsPolicyPriority,NetworkConnectedVia,NetworkEdtMtu,NetworkPolicyAcce ,NetworkPolicyICAListenerPortNumber,NetworkPolicySessionReliabilityPort ,NetworkPolicySessionReliabilityTimeout,PrinterActualPriority,PrinterSessionPrinter,PrinterPolicyAllowRedirection,PrinterPolicyAutoCreate,PrinterPolicyPriority,USBActualPriority,USBPolicyAllowPNPRedirection ,USBPolicyAllowUSBSupport,USBPolicyPriority.

- **Sourcetype:** new sourcetype uberAgent:Process:ProcessStatistics with fields: ProcHandleCount, ProcThreadCount, ProcPriority, ProcPrivateMB, ProcVirtualSizeMB, ProcPageFaultsPS, ProcPageFileMB, ProcName, ProcID, ProcGUID, ProcUser and AppId.
- Sourcetype: new sourcetype uberAgent:System:PerformanceCounter with fields: PerformanceCounterObject,PerformanceCounterInstance,PerformanceCounterName,PerformanceCounterValue.

Updated Sourcetypes

- **Sourcetype:** uberAgent:Application:NetworkConnectFailure has new field(s): NetTargetSourcePort.
- **Sourcetype:** uberAgent: System: MachineInventory has new field(s): HwHypervisorVendor
- Sourcetype: uberAgent: Session: SessionDetail has new field(s): SessionRoundTripTimeMs
 , SessionFps, SessionTransportProtocols.
- Sourcetype: uberAgent:Citrix:Applications has new field(s): CustomerId.
- Sourcetype: uberAgent:Citrix:Catalogs has new field(s): CustomerId.
- Sourcetype: uberAgent:Citrix:DesktopGroups has new field(s): CustomerId.
- Sourcetype: uberAgent:Citrix:Machines has new field(s): CustomerId.
- **Sourcetype:** uberAgent:Citrix:PublishedDesktops has new field(s): CustomerId
- Sourcetype: replaced KV sourcetype uberAgent:PerformanceCounter:<TimerName
 with CSV sourcetype uberAgent:System:PerformanceCounter.
- **Sourcetype:** uberAgent: Application: ApplicationUsage has been removed (it was marked as deprecated as of version 6.1.1).

Version 6.2.0

Updated Sourcetypes

- **Sourcetype:** uberAgent:Application:NetworkConnectFailure has new field(s): NetTargetSourcePort.
- **Sourcetype:** uberAgent:Process:NetworkTargetPerformance has new field(s): NetTargetSourcePort.

Version 6.1.1.4416

Improvements

- Improved number of sent events during session lifetime.
- Improved values in Application Performance dashboard.

Bugfixes

• Added chmod call to "StartEventgen.cmd".

Version 6.1.1

Improvements

- Added some more hardware models.
- Added ModuleName and ExceptionCode to the sourcetype uberAgent: Application : Errors (applications crashes).
- Generated outliers for Process DNS.

Updated Sourcetypes

- **Sourcetype:** uberAgent:Process:ProcessStartup has new field(s): HashMD5, HashSHA1, HashSHA256, HashIMP, SignatureStatus, IsSignedByOSVendor, SignerName.
- **Sourcetype:** uberAgent: Process: ProcessStartup: fields ProcHash and HashType have been removed.
- **Sourcetype:** uberAgent:Process:ProcessStop has new field(s): HashMD5, HashSHA1, HashSHA256, HashIMP.

- **Sourcetype:** uberAgent:Process:ProcessStop: fields ProcHash and HashType have been removed.
- **Sourcetype:** uberAgent:Process:ProcessDetail has new field(s): SessionID.
- Sourcetype: uberAgent:CitrixADC:AppliancePerformance has new field(s): CpuFan0Speed,CpuFan1Speed,SystemFanSpeed,Cpu0Temp,Cpu2Temp,InternalTemp,PowerSupply1Status,PowerSupply2Status,PowerSupply3Status,PowerSupply4Status,VoltageV33Main,ICAOnlySessions,ICAOnlyConnections,SmartAccessSessions,SmartAccessICAConnections,SSLSessions.
- **Sourcetype:** uberAgent:CitrixADC:Gateway has new field(s): HSTS, HSTSMaxAge, HSTSInclSubdom, TLS13.
- **Sourcetype:** uberAgent:CitrixADC:vServer has new field(s): HSTS, HSTSMaxAge, HSTSInclSubdom, TLS13.
- Sourcetype: uberAgent:System:NetworkConfigInformation has new field(s): NetworkConfigWiFiSignalQuality,NetworkConfigWiFiType,NetworkConfigWiFiAuthon.

New Sourcetypes

• **Sourcetype**: new sourcetype uberAgentESA: Process: DnsQuery with fields: ProcName , ProcGUID, DnsRequest, DnsResponse, DnsResponseType and DnsEventCount.

Bugfixes

• SMB paths had only one backslash.

Demoing uberAgent® With the Event Generator for Splunk

September 12, 2025

Demonstrating uberAgent can be a bit difficult if you do not have a few dozen machines with live users available. To simplify demos, we offer an event generator that simulates an active environment with various hosts and users.

Architecture

Starting with uberAgent version 6, the Splunk event generator dependency was removed and uberAgent event generator is a single Splunk app. When Splunk is started, a .NET program generates sample

data. By default sample data for two hours is generated. If you want to generate additional sample data, you can either restart the Splunk service after 2 hours, or modify the uAEventGen.conf.json file (see section "Advanced configuration").

The Splunk app can be used on Windows, Linux, and on macOS-based Splunk installations. Single server setups and distributed deployments are fully supported. The standard installation sends the data to a local Splunk instance using the TCP port 19500.

Installation

.NET 7

As of uberAgent version 7.1, .NET 7.0 is a prerequisite that must be installed on the same server where Splunk is installed. In the case of a distributed environment, .NET 7 must be installed on the same Splunk indexers where you want to install the uberAgent event generator Splunk app.

You can download .NET 7.0 here.

uberAgent Event Generator

Install the uberAgent event generator on one of the indexers. If you have a single Splunk server, install the event generator on that server.

- Download the uberAgent event generator (find out what's new in the changelog)
- On the Splunk server navigate to Manage apps
- · Click Install app from file
- Select the archive you downloaded earlier and click Upload
- Restart Splunk

That's it. The event generator starts generating events right after Splunk has been restarted. It will continue to do so for approx. 2 hours and then stop on its own. Just what you need for a demo. To re-enable restart Splunk again.

Configuration

Enabling or Disabling the Event Generator

To enable or disable the uberAgent event generator:

- 1. On the Splunk server where the uberAgent event generator app is installed navigate to **Manage** apps
- 2. Locate the *uberAgent event generator* app and click on **enable** or **disable**
- 3. Restart Splunk

Advanced Configuration

The default configuration should work for a single instance Splunk environment. If you have a distributed Splunk environment or you want to generate different generated sample data, you can modify the configuration file uAEventGen.conf.json which is located %Splunkhome %/etc/apps/uberAgent_eventgenerator/bin/uAEventGenBinaries/your platform. On a Linux system, for example, this would be: /opt/splunk/etc/apps/uberAgent_eventgenerator/bin/uAEventGenBinaries/Linux

The file contains full documentation of all possible configuration options.

Running Event Generator on macOS ARM

The Eventgen binaries are currently not signed with any certificate. MacOS on an ARM CPU requires a valid certificate otherwise the executable is terminated/killed directly after process startup. In order to start the event generator on a macOS run the following command:

codesign -s "-"/opt/splunk/etc/apps/uberAgent_eventgenerator/bin/ uAEventGenBinaries/macOS/uAEventGen

The command adds an ad-hoc certificate to the executed binary.

uberAgent® Helpdesk Splunk App

September 12, 2025

The uberAgent Helpdesk Splunk App is a specialized tool designed for IT professionals who support virtual or physical desktops and need to resolve issues quickly. This app provides a streamlined view of the existing uberAgent dataset, optimized for helpdesk use.

Features

- Simplified view of uberAgent data tailored for helpdesk professionals
- Quick access to key metrics and information for troubleshooting
- Intuitive interface for faster issue resolution
- · Customized dashboards for common helpdesk scenarios

Quick Links

- Changelog and Release Notes
- Quickstart Guide

Getting Started

To get started with the uberAgent Helpdesk Splunk App:

- 1. Ensure you have uberAgent and Splunk installed and configured
- 2. Download the Helpdesk Splunk App from the Citrix downloads page
- 3. Install the app on your Splunk instance
- 4. Start using the specialized dashboards for efficient issue resolution

For more detailed instructions, please refer to our Quickstart Guide.

Related Tools

- uberAgent Config & Support Tool
- uberAgent Event Generator for Splunk
- uberAgent Log Collector Splunk App

For a complete list of uberAgent addons and tools, visit our Addons and Tools page.

Changelog and Release Notes

September 7, 2025

Version 1.5.0

Improvements

 Dashboards: session scores are now displayed after a session is selected and overall visibility is improved.

Bug fixes

• **Dashboards:** fixed wrong column name in *Machine details* panel.

Version 1.4.0

Improvements

• Dashboards: added user input delay metrics that were introduced in uberAgent 7.1.

Release notes

• **Dashboards:** replaced the chart *Disk latency (ms)* with *Input delay (ms)*.

Version 1.3.0

Improvements

- Dashboards: added Citrix metrics that were introduced in uberAgent 7.0.
- **Dashboards:** the WiFi signal quality chart is inserted into the *Network details* section dynamically. In older versions, it was always there, even for non-WiFi connections.
- Dashboards: all charts are now column charts for better visibility.

Bug fixes

• **Dashboards:** fixed wrong timeframe evaluation in the *Machine details* chart. It now loads much faster.

Release notes

• **Dashboards:** removed the chart *Session activity* in favor of session connection change annotations.

Version 1.2.3

Improvements

• **Splunk:** added sc_admin permissions to meet Splunk Cloud requirements.

Version 1.2.2

Improvements

• **Dashboards:** upgraded dashboards to version 1.1. This is a requirement for Splunk Cloud.requirements.

Version 1.2.1

Bug fixes

- Dashboards: rounded Wifi signal quality
- Dashboards: fixed timeframe issues for the machines and network details charts

Version 1.2.0

Improvements

- Dashboards: added WiFi metrics
- Dashboards: added network latency metric selector

Version 1.1

Support for uberAgent 6.0.

Version 1.0

• Initial release

uberAgent® Helpdesk Splunk App

September 12, 2025

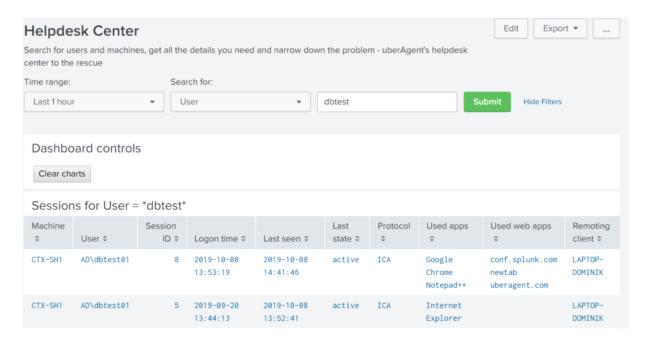
The uberAgent Helpdesk Splunk App is designed for helpdesk heroes who support virtual or physical desktops and who need quick answers to typical questions like the following:

- Why is my login so slow? It was fast yesterday.
- Why is my app constantly crashing?
- Citrix is slow!
- The website is not loading fast enough!

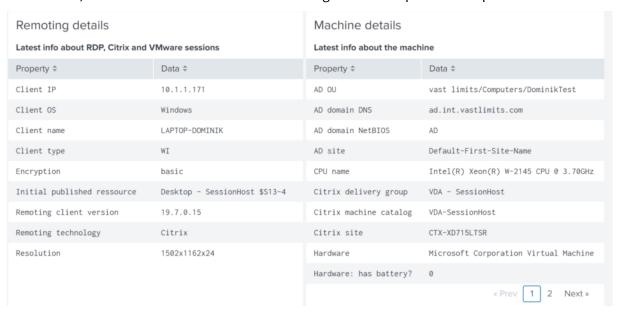
What Does the App Look Like

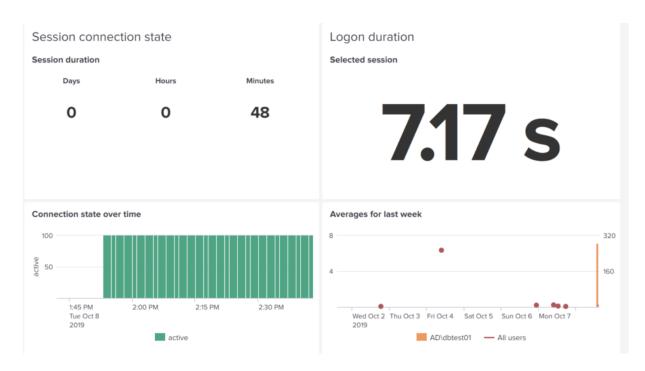
The app has just one dashboard, nice and easy. You start by searching either for a user or a machine. After selecting a session of interest detailed information will be provided.

Note: enter a * in the search field to see all user sessions or machines.

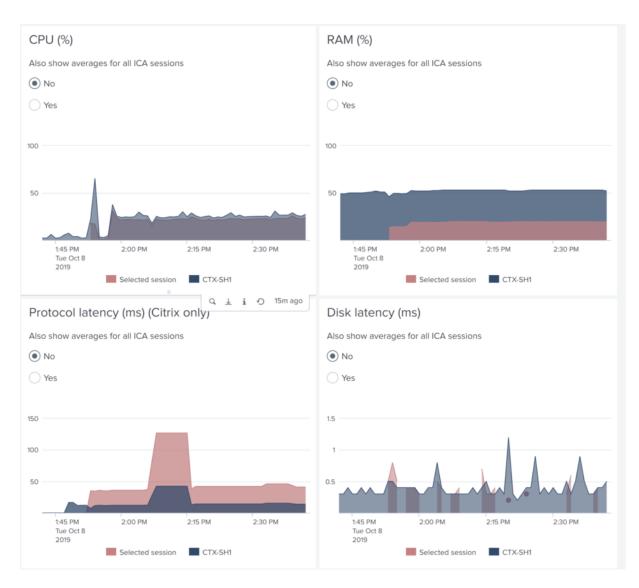


The dashboard gives you an overview of the user's session with helpful content like user and machine information, connection state over time as well as logon time compared to the previous week.

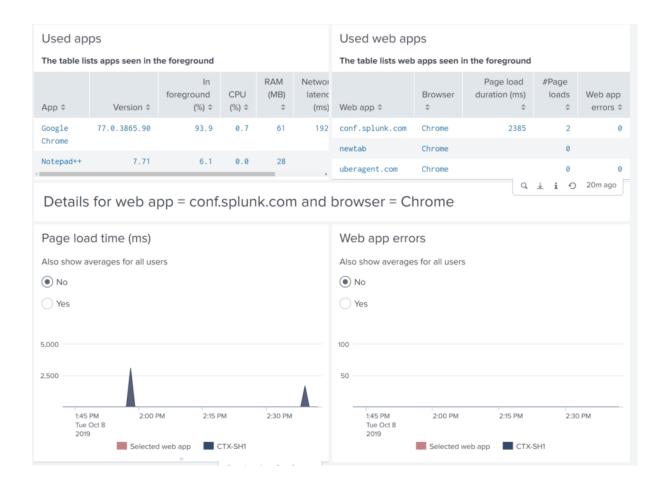




Now dive into the session's performance and compare it to the entire machine or even to other sessions in the organization.



The user is reporting issues with a specific native application or SaaS app? Click on an item in the list and you will get details to solve the user's problem immediately!



Download

The app is available **for free** and can be downloaded from Splunkbase.

Requirements

The helpdesk app provides a different view of the regular dataset collected by uberAgent. As such it requires a working uberAgent infrastructure on Splunk. General uberAgent requirements apply.

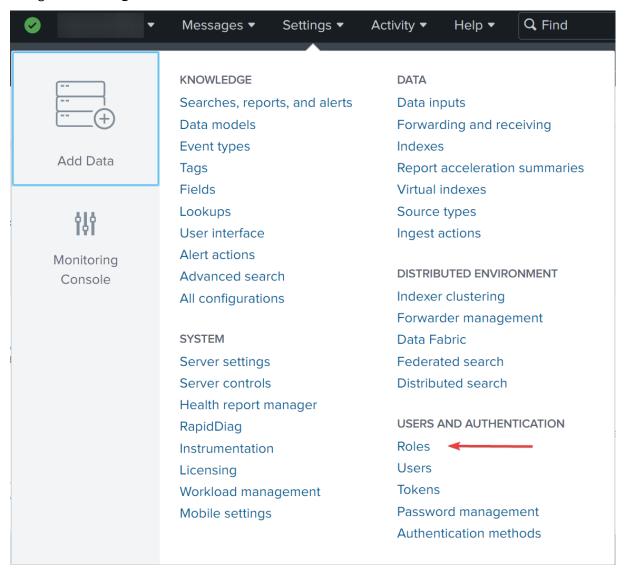
uberAgent Version

• uberAgent UXM 6.0 or greater

Limit Helpdesk Employees to the Helpdesk App

With role based access in Splunk, you can configure that helpdesk employees only see the helpdesk app and are automatically forwarded to the app after logging on to Splunk.

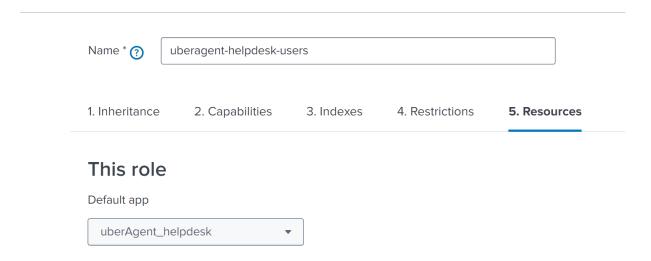
Navigate to **Settings** -> **Users and Authentication** -> **Roles**.



Create a new **user** role with a meaningful name like **uberagent-helpdesk-users**. More information on roles are available in Splunk's documentation.

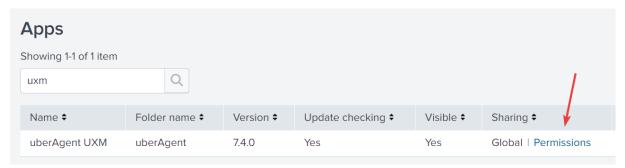
In the last step, select the **uberAgent_helpdesk** app as default.

New Role



Put your helpdesk users in the new **uberagent-helpdesk-users** role.

Go to **Apps -> Manage Apps**, find the uberAgent UXM app, click on **Permissions**, and remove **Read** access for **Everyone**. Give **Read** access to admins only.

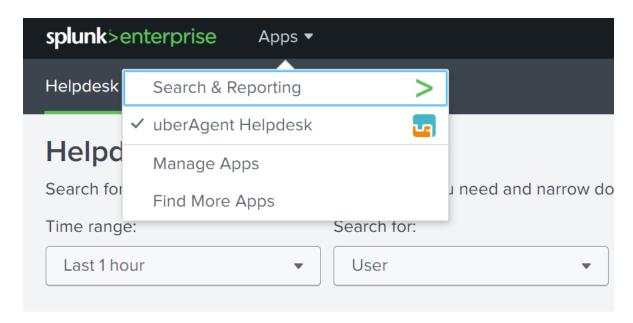


Note that the group **uberagent-helpdesk-users** does not have read access anymore.

Permissions Apps » uberAgent » Permissions **App permissions** Users with read access can only save objects for themselves, and Roles Write Read **Everyone ✓ ✓** admin can_delete power splunk-system-role uberagent-helpdesk-users user

Repeat the process for the uberAgent ESA app.

Now helpdesk employees only see the helpdesk app when logging on to Splunk.



This chapter was contributed by Antoin Carroll.

uberAgent® Log Collector Splunk App

September 12, 2025

The uberAgent Log Collector Splunk App is a powerful tool designed to help you monitor the health of your uberAgent deployment. It collects the data logged by uberAgent and sends it to Splunk, providing easy access through pre-build dashboards.

Features

- Automated collection of uberAgent log data
- Centralized logging and monitoring of uberAgent deployments
- Custom dashboards for quick health checks and troubleshooting
- · Easy integration with existing Splunk environments

Quick Links

- Changelog and Release Notes
- Quickstart Guide

Getting Started

To get started with the uberAgent Log Collector App, please refer to our Quickstart Guide.

Related Tools

- uberAgent Config & Support Tool
- uberAgent Event Generator for Splunk
- uberAgent Helpdesk Splunk App

For a complete list of uberAgent addons and tools, visit our Addons and Tools page.

Changelog and Release Notes

December 11, 2025

Version 1.2.5

- Updated OS platform filter label.
- Updated regex extraction patterns to make some fields optional, improving log parsing robustness.

Version 1.2.4

Added more granular permissions to the TA component to meet Splunk Cloud requirements.

Version 1.2.3

- Compatibility with the latest Splunk app packaging rules.
- No new features were added in this release.

Version 1.2.2

- Upgraded dashboards to version 1.1
- Added sc_admin permissions to meet Splunk Cloud requirements.
- Disabled index creation to meet Splunk Cloud requirements.
- Disabled data model acceleration to meet Splunk Cloud requirements.

Version 1.2.1

• Disabled the truncation of lines greater than 10,000 bytes.

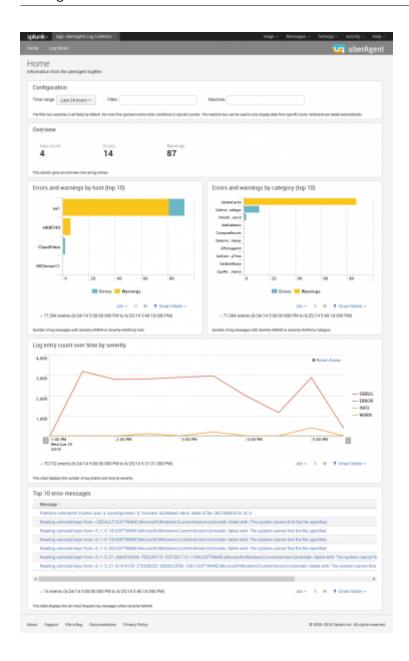
Version 1.2

- · Complete dashboard redesign including various filtering capabilities
- Changed all dashboard searches from raw to pivot
- Added support for macOS log files
- Added Splunk data model uberAgentMeta
- Added additional logfile uAInSessionHelper.log
- Added new sourcetype uberAgent: Meta: uAInSessionHelperLog
- Added additional logfile uberAgentIEExtension.log
- Added new sourcetype uberAgent:Meta:uAIEExtensionLog
- Added additional logfile uberAgentSandbox.log
- Added new sourcetype uberAgent: Meta: uASandboxLog
- Changed the default index name from uberagent_log to ua_meta_log
- Added macros.conf to centrally rename the index
- Changed the sourcetype name from uber Agent: log to uber Agent: Meta: uber Agent Log

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uberAgent maintains a very detailed and informative log file that can tell you a lot not only about uber-Agent's health but also about the machine uberAgent is running on. Naturally, the log file is stored locally on the computer uberAgent is running on which makes analysis and troubleshooting a bit difficult in large environments. But luckily it is very easy to solve that problem with Splunk!



What is it

uberAgent Log Collector is a set of associated Splunk apps that collect the data logged by uberAgent, send it to Splunk for indexing and provide dashboards for easy access.

Installation

uberAgent Log Collector consists of the Splunk app containing the dashboards and a technology addon (TA) for collecting the data with Splunk's Universal Forwarder. These two components need to be installed on the following systems:

- **App:** search head(s)
- TA: endpoints where uberAgent and the Splunk Universal Forwarder are deployed

Splunk Index

You need to create the Splunk index ua_meta_log that stores the logs.

To add the new index ua_meta_log with the CLI run splunk add index ua_meta_log. The full documentation on creating Splunk indexes is available in the Splunk docs.

Configuration

Configurable Log Path

Since uberAgent 7.3, the log path is configurable. If you set a custom log path, you have to modify the **TA** app: copy the **default**/inputs.conf to local/inputs.conf and adjust the paths accordingly.

System Requirements

The TA requires Splunk's Universal Forwarder to be installed on the same machine.

Download

The *uberAgent Log Collector* apps are available in the Splunk App Directory:

- Download uberAgent Log Collector app
- Download uberAgent Log Collector TA

uberAgent Log Syntax Highlighter for Notepad++

September 12, 2025

We put a lot of effort into making uberAgent a product that just works. Sometimes, however, you might get to a point where you want to dig deeper and need more information about the product's inner workings. In such a case, of course, uberAgent's log files are your first stop.

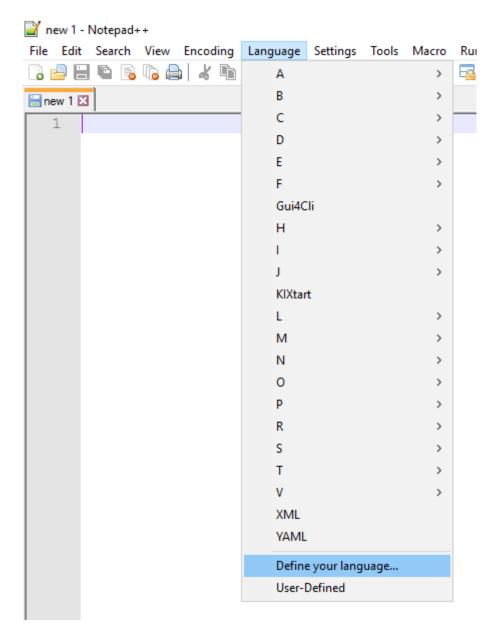
Finding The Cause More Easily

uberAgent logs all of its actions and a great number of relevant system events (e.g., process starts, or logons). That gives you the opportunity to easily identify the root causes of problems (side note: those are most often caused by configuration issues that are typically very easy to spot in the log file).

Even though we take great care to optimize the log for readability it is sometimes hard to find the needle in the haystack. That is why we created an uberAgent log syntax highlighter for Notepad++, our preferred text editor on Windows. It highlights the key information, making it easier to find what you are searching for.

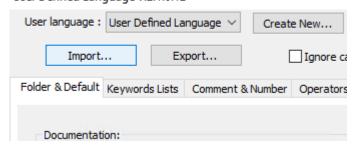
Installing The Highlighter

- 1. Download the highlighter and unpack it.
- 2. Open Notepad++ and go to Language -> Define your language...

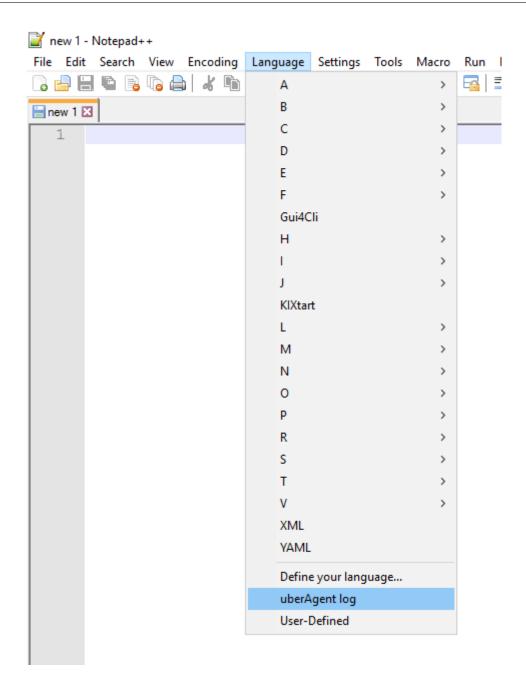


3. Click on Import... and select the unpacked XML file.

User Defined Language v.2.1.0.12



- 4. Restart Notepad++
- 5. The uberAgent Log Syntax highlighter is now available as a language in Notepad++



Using The Highlighter

The new language does the following things:

- It highlights the different severities in different colors
 - DEBUG = blue
 - INFO = green
 - WARNING = yellow
 - ERROR = red

- It colors the separators comma and equal in grey
- It highlights values enclosed in <> in red-brown

This should make troubleshooting with uberAgent's log file a lot more convenient. Enjoy!



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