citrix

Session Recording service

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Session Recording service

February 23, 2024

Note:

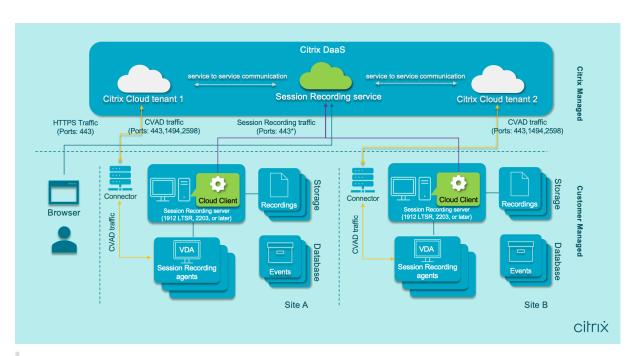
- The Session Recording service is available for provisioning in the Asia Pacific South (APS), EU, and US regions of Citrix Cloud. For more information, see Citrix Cloud Geographical Considerations.
- For information about the Session Recording service customer data storage, retention, and control, see Customer data management.
- The Session Recording service doesn't send data to Citrix Analytics for Security (CAS). Onpremises Session Recording servers can send data to CAS. For more information, see Connect to Session Recording deployment in the Citrix Analytics for Security documentation.

Overview

Session Recording is a key differentiator for security in Citrix DaaS (formerly the Citrix Virtual Apps and Desktops service). A common challenge that prevents you from benefiting from Session Recording is the solution's deployment and management complexity. The introduction of the Session Recording service provides an advanced administration experience and simplifies deployment.

The Session Recording service is a management platform that provides comprehensive automation, faster troubleshooting, and informative insights. It facilitates administrative tasks by providing a unified entry point to manage and observe the Session Recording servers across your organization.

The following diagram illustrates how the Session Recording service works.



Note:

With versions 7.40.13020.11 and later of the cloud client, you need to only open a single port (TCP port 443) for communication. With a cloud client earlier than version 7.40.13020.11, allow the outbound ports 80, 443, 8088, and 9090–9094 for session recording traffic. For more information, see **Ports**.

Video about the Session Recording service:



Service features and functionality

You can use the Session Recording service to perform the following actions:

- Connect both on-premises and cloud-deployed Session Recording servers to the Session Recording service
- Install Session Recording servers from within the cloud
- Query and play recordings from the connected Session Recording servers
- Configure settings on the connected Session Recording servers
- Configure session recording, event detection, and event response policies for a specific site
- Configure playback permissions
- Place and remove access restrictions on recordings
- Archive and delete recordings automatically on a regular schedule
- View event visualization reports and leave comments about recordings
- View data points related to each recorded session
- Gain insights into your system through the Session Recording management dashboard

Prerequisites

Prerequisites for using the Session Recording service:

- You have subscribed to Citrix DaaS.
- You have a Session Recording 1912 LTSR, 2203, or later deployment in place.

For information on how to install the Session Recording components, see the installation article.

What's new

April 26, 2024

A goal of Citrix is to deliver new features and product updates to Session Recording service customers when they're available. New releases provide more value, so there's no reason to delay updates. Updates are rolled out to the service release approximately every six weeks.

This process is transparent to you. Initial updates are applied to Citrix internal sites only, and are then applied to customer environments gradually. Delivering updates incrementally in waves helps ensure product quality and maximize availability.

April 2024

Azure Resource Manager template (ARM template) support for simplified deployment in Azure

You can now create an Azure Resource Manager template (ARM template) to deploy Session Recording resources in Azure. The ARM template is a JavaScript Object Notation (JSON) file that contains how and which resources you want to deploy. For more information, see Create and deploy a site through an ARM template.

Pure Azure Active Directory (Azure AD) deployment can now be achieved through simplified deployment

Simplified deployment refers to creating and deploying a site through a host connection or an ARM template. While doing simplified deployment, you now have an option to join the Session Recording servers you are about to deploy to an Azure AD domain where your VDAs reside. For more information, see Deploy Session Recording resources to a cloud subscription.

Community-driven event trigger templates

To help you quickly find a template that fits your business need, Cloud Software Group has created a community for all full admins of the Session Recording service to contribute towards it. You can contribute to the community by publishing templates of your organization for other customers to access for free. Cloud Software Group has also built a resource library to accommodate all event trigger templates, both from your organization and from the other community members including Cloud Software Group itself.

Note:

See the End User Agreement before submitting a template.

For more information, see Create a custom event response policy.

Recording success rates visualized on the cloud

You can now see a new widget showing the recording success rates for the current site on the upper right corner of the Session Recording management dashboard. You can see both the latest recording success rate and the recording success rates for the past 12 hours.

To facilitate identifying issues, recording success rates below 100% are displayed as an orange dot in comparison to 100% success rates that are displayed as a green dot. You can hover over an orange dot and click the link in the hint to jump to the corresponding event logged on the Activity Feed page where you can:

- view the event details including those sessions which failed to record.
- subscribe to Email notifications to get notified when a recording success rate is below 100%.

Note:

This feature is available with the cloud client versions 7.42.15010.4 and later. To use this feature, make sure that only one site has available servers and this feature is enabled on the dashboard settings page of that site.

For more information, see Management dashboard.

Fixes

- Attempts to add or modify a policy might fail if the length of users or user groups specified as the applicable scope exceeds 16 characters. [SRT-12247]
- Attempts to install a Session Recording server from within the cloud might fail. The issue occurs when you connect the Session Recording server to a cloud database but the database password you provide contains a double quote ("). [SRT-12119]

March 2024

Azure Active Directory (AD) support (preview)

You can now install the Session Recording server and agent on an Azure AD joined machine and enable Azure AD support for them. Later when you configure various policies and playback permissions from the cloud, you can specify Azure AD users and groups who launch sessions from Azure AD joined machines.

For information about installing Session Recording, see Install, upgrade, and uninstall.

For information about configuring policies and playback permissions from the cloud, see Configure session recording policies and Playback permissions.

Note:

Azure AD support is available with Session Recording version 2402 and later.

January 2024

Storage consumption forecast

A storage consumption forecast for the next 7 days can be generated based on sufficient historical consumption data of approximately one month. This feature allows you to predict resource usage

and take precautions in advance. For more information, see the Management dashboard article.

Support for sharing recordings as restricted and unrestricted links from the cloud player

You can now share recordings as restricted and unrestricted links from the cloud player. Other users can use the links to access the shared recordings directly, which obliterates the need to search among many recordings. If you share a recording as a restricted link, only users who already have playback permission can view the recording using the link. If you share a recording as an unrestricted link, anyone in your AD domain can view the recording using the link.

For unrestricted recording sharing, you can further:

- Specify whether to issue email notifications to specific recipients when an unrestricted recording link is generated. For more information, see Notifications.
- View the events related to unrestricted recording sharing on the Events tab of the activity feed.

To share recordings as links and manage unrestricted links, you must have full access to the Session Recording service. It means that you must be a Citrix Cloud administrator assigned any of the following permissions:

- Full access
- Cloud Administrator, All role
- Session Recording-FullAdmin, All role

For more information, see Share recordings as links and Types of Session Recording administrators.

October 2023

Simplified Session Recording deployment to Microsoft Azure is now generally available

You can create a site to deploy the Session Recording resources to your Azure subscription from within the Session Recording service. The feature is now generally available and enhanced to let you:

- Add resources including servers and storage to an existing site deployed on Azure.
- Change the IP addresses that are allowed to access the load balancer.

For more information, see Deploy Session Recording resources to a cloud subscription.

Introduction of event trigger templates

By event triggers in event response policies, you can specify actions in response to different events including session starts and the events detected in recorded sessions. Starting with this release, you'

re provided with event trigger templates for direct use or customization. For more information, see Configure event response policies.

Support for single-port communication

With versions 7.40.13020.11 and later of the cloud client, you need to only open a single port (TCP port 443) for communication.

Fixes

- Host connections can't be created successfully until you've onboarded at least one Session Recording server to the Session Recording service. [SRT-11065]
- Viewing the Session Recording management dashboard causes high CPU utilization on the database machine. [SRT-11190]
- Custom policies aren't available for a site containing the Session Recording server 1912. [SRT-11334]

September 2023

Administrative access to the Session Recording service is enabled for Azure Active Directory (AD) users and groups

For more information, see Add administrators from Azure AD.

Audio recording for non-optimized HDX audio (preview)

You can now enable audio recording for non-optimized HDX audio when configuring session recording policies. The audio that is handled on the VDA and delivered to/from the client where the Citrix Workspace app is installed is referred to as non-optimized HDX audio. Unlike non-optimized HDX audio, optimized HDX audio has its processing offloaded to the client, as seen in the Browser Content Redirection (BCR) and Optimization for Microsoft Teams scenarios.

For information about enabling audio recording, see Configure session recording policies.

Note:

This feature is available with Session Recording version 2308 and later.

Lossy screen recording

Lossy screen recording lets you adjust compression options to reduce the size of recording files and to accelerate navigating recorded sessions during playback.

You can enable lossy screen recording in any of the following ways:

- Activate a system-defined session recording policy that has lossy screen recording enabled.
- Create and activate a custom session recording policy, and make sure to select **Enable lossy** screen recording when creating the custom policy.
- Select **Enable lossy screen recording** when configuring an event response policy. When a monitored event is detected later, lossy screen recording is triggered.

After you enable lossy screen recording, you can adjust compression options through the **Lossy Screen** tab of Session Recording Agent Properties.

For more information, see:

- Configure session recording policies
- Configure event response policies
- Enable or disable lossy screen recording

Note:

This feature is available with Session Recording version 2308 and later.

Fast seeking through ICA screen recording

You can now enable fast seeking through ICA screen recording by configuring how often an I-Frame is generated. This feature significantly improves the playback seeking experience.

For more information, see Configure preferences and Enable fast seeking.

Note:

This feature is available with Session Recording version 2308 and later.

Fixes

• Session recording and event response policies configured from the cloud don't take effect. This issue occurs when you use Session Recording server 2305 or earlier. [SRT-10813]

July 2023

Simplified Session Recording deployment to Microsoft Azure (preview)

You can now deploy the following Session Recording resources to your Azure subscription from within the Session Recording service: the Session Recording servers, databases, storage, and load balancer. You can also obtain recommended VM and storage configurations, predict costs, and view the actual costs for using Azure from within the Session Recording service.

For more information, see Deploy Session Recording resources to a cloud subscription (preview).

Remove Session Recording servers from the cloud

You can now remove servers with the **Offline**, **Uninstalled**, and **Installation Failed** states from the cloud to display only the desired Session Recording servers.

For more information, see Server removals.

Troubleshoot Session Recording servers from the cloud

You can perform a few troubleshooting actions from the cloud for the Session Recording servers connected to the Session Recording service.

For more information, see Server troubleshooting from the cloud.

Specify players for a site

You can now specify either the cloud player, on-premises players, or both to play the recordings of a site. By default, both the cloud player and on-premises players are selected.

This feature is available with Session Recording server 2308 and later.

For more information, see Specify players for a site.

Fixes

Attempts to send storage consumption and session statistics to the Session Recording management dashboard always fail for Session Recording servers with a French operating system. [SRT-10219]

April 2023

A daemon introduced for the cloud client

This release introduces a daemon to keep the Session Recording cloud client running and to automatically repair it when it runs abnormally. The daemon is available in cloud client versions 7.38.10030.16 and later.

Activity feed

As a supplement to the Session Recording management dashboard, the Session Recording service introduces an activity feed to improve data visibility and data visualization.

The activity feed gives you information about the events and tasks that happened in the past.

For more information, see the Activity feed article.

Email notifications

To get notified about specific events and tasks through email, you can now subscribe to email notifications.

You can subscribe to be notified about:

- **Resource usage alerts**: When resource usage thresholds are exceeded
- Server status changes: When the status of a Session Recording server changes
- Storage maintenance results: A digest of the results of automated tasks for archiving and deleting recordings

For more information, see Email notifications.

Fixes

- Automated tasks for archiving and deleting recordings are terminated if the target sessions are still live. [SRT-9832]
- If you edit more than one rule of a policy in the Session Recording service, your edits might not take effect and a "**Policy adding failed**" error is logged in your web browser console. [SRT-9754]
- Attempts to edit policy rules that have a Japanese name fail. [SRT-9675]

February 2023

Support for scheduling cloud client upgrades

Previously, the Session Recording cloud client was automatically upgraded each time a new release was issued. Starting with this release, you can upgrade the Session Recording cloud client immediately or schedule automatic upgrades. For more information, see Schedule cloud client upgrades.

Cloud client enhancement

We've enhanced the Session Recording cloud client in version 7.37.9010.3. This version of the cloud client handles REST API requests and file streaming requests directly, which brings the following benefits and changes:

• Previously, to make a Session Recording server work properly in the cloud, you must install an SSL certificate on it and add a certificate binding in IIS. Versions 7.37.9010.3 and later of the cloud client don't depend on the local certificates on Session Recording servers and don't support the **CUSTOMDOMAIN** parameter.

For more information, see Connect existing Session Recording servers to the cloud or Install Session Recording servers from within the cloud.

- Versions 7.37.9010.3 and later of the cloud client obliterate the need to configure the web streaming service in IIS if you want to use the cloud player only.
- We've removed the web configuration file (Web.config) from <Session Recording server installation path>/WebSocketServer, and use the registry instead for setting the transport packet size. You can locate the registry key at HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\SessionRecordin For more information, see Increase the transport packet size.
- The cloud client enhancement increases playback speed and creates a greater playback experience.

December 2022

Server installation from within the cloud

Previously, you could connect only existing Session Recording servers to the Session Recording service. For more information, see Connect existing Session Recording servers to the cloud.

Starting with this release, you can connect any machine to the Session Recording service and then install the Session Recording server component on it from within the cloud. After installation completes successfully, the machine becomes a Session Recording server that is connected to the Session Recording service. To do so:

- Prepare a machine and install the Session Recording cloud client on it. The machine is automatically connected to the Session Recording service, appearing in the Unallocated servers list on the Server Management page.
- 2. Verify that the machine is in the **Ready to install** status, and then click the installation icon. The installation wizard appears.
- 3. Follow the wizard to install the Session Recording server component on the machine.

This new feature obliterates the need to download the Citrix Virtual Apps and Desktops installer or the SessionRecordingAdministrationx64.msi file. It also performs domain joining and certificate binding checks to prevent issues that might keep Session Recording servers from functioning after being connected.

For more information, see Install Session Recording servers from within the cloud.

Improved experience in server onboarding

To connect a Session Recording server to the cloud, you must install the cloud client on it. Previously, you had to manually enter a command to do that.

This release introduces a **Generate command** wizard where you can generate a command by providing the necessary information. The wizard also provides important reminders such as for certificate binding. To open the wizard, click **Generate command** on the **Server connection guide** page or click **Continue configuration** on the Session Recording service **Welcome** page and then click **Generate command**.

For more information, see Connect existing Session Recording servers to the cloud and Install Session Recording servers from within the cloud.

Playback justification logging

This release introduces playback justification logging and creates a **Playback Logging** page to aggregate all playback logs. With playback justification logging enabled, each time a user plays a recording, a dialog box appears, asking the user to enter a justification for playback. For more information, see Playback logging.

November 2022

Session Recording management dashboard

The Session Recording service introduces a comprehensive management dashboard that helps you gain insights into your system. The dashboard lets you monitor various aspects of your system, including:

- Server status
- Storage consumption
- Session statistics
- Client device information

For more information, see the Session Recording management dashboard.

Trace collection from cloud clients

Citrix collects traces from the cloud clients installed on on-premises Session Recording servers and uses the traces for troubleshooting.

September 2022

Support for automatically archiving and deleting recordings on a regular basis

In addition to archiving and deleting recordings manually, you can now schedule site-level tasks to automatically archive and delete recordings **on a regular basis**. For more information, see Manage recordings.

Recording access control

You can now restrict access to selected recordings from within the Session Recording service. In addition to playback permissions, this feature provides more granular access control.

Citrix Cloud administrators assigned any of the following access permissions are allowed to place access restrictions on recordings:

- Full access
- Cloud Administrator, All role
- Session Recording-FullAdmin, All role
- Session Recording-PrivilegedPlayerAdmin, All role
- Session Recording-ReadOnlyAdmin, All role

Restricted recordings aren't accessible to Session Recording read-only administrators, that is, Citrix Cloud administrators assigned **only** the **Session Recording-ReadOnlyAdmin, All** role. Session Recording read-only administrators do not have permission to access the **Restricted** page or remove access restrictions on the page. For more information, see Place access restrictions on recordings.

July 2022

Support for 1912 LTSR

Previously, using the Session Recording service required a Session Recording 2203 or later deployment. Starting with this release, you can connect Session Recording servers in a 1912 LTSR deployment to the Session Recording service.

Support for archiving and deleting recordings

You can now archive and delete recordings using the Session Recording service. When archiving recordings, you can choose to move the recording files to a different location from the one where they were originally stored. When deleting recordings, you can choose to also delete the recording files along with the database records.

For information about the archiving and deletion operations, see Manage recordings.

June 2022

Session Recording service is available in the Asia Pacific South (APS) region of Citrix Cloud

In addition to the US and EU regions, the Session Recording service is now also available for provisioning in the Asia Pacific South (APS) region of Citrix Cloud.

Load-balancing Session Recording servers across sites

You can now manage Session Recording servers by load-balancing them across multiple sites. You can also create or activate a policy for all Session Recording servers in a site at a time. For more information, see Connect existing Session Recording servers to the cloud, Configure Session Recording servers, and Configure session recording policies.

Custom domain name support for HTTPS requests

In addition to the default FQDN, a Session Recording server can now use, for HTTPS requests, a custom domain name with an SSL certificate binding. For more information, see Connect existing Session Recording servers to the cloud.

Support for configuring additional event response actions from the cloud

You can now configure, from the cloud, the following actions in response to logged events in recorded sessions:

- Lock session
- Log off session
- Disconnect session

This feature is available for Session Recording 2206 and later. For more information, see Configure event response policies.

April 2022

Session Recording service available in the EU region of Citrix Cloud

In addition to the US region, the Session Recording service is now also available for provisioning in the EU region of Citrix Cloud.

Administrator logging data available in the Session Recording service

The Session Recording service presents administrator logging data for Session Recording server 2204 and later. The data contains logs of administrator activities and of applicable policies triggering recordings. For more information, see Query administrator logging data.

Support for configuring playback permissions

By default, all Citrix Cloud administrators with the Session Recording role have permission to play all recordings. You can now limit playback permissions so that Session Recording read-only administrators can play only specific recordings on a target Session Recording server. For more information, see Configure playback permissions.

Third party notices

July 18, 2023

The Session Recording service might include third-party software licensed under the terms defined in the following document:

The Session Recording service third party notices

Known issues

April 26, 2024

- A Session Recording server might persist in maintenance status. The issue occurs when the Session Recording cloud client that you installed on the Session Recording server didn't update with the new release. As a workaround, complete the following steps:
 - 1. Remove the cloud client package (SRCloudClientService.msi) from the Session Recording server.
 - Download a new cloud client package to the Session Recording server. To download the package, navigate to Configuration > Server Management > Server connection guide and then click Download.

emium	4 e 🖌 🗸
	Downloads
Server Management	Server connection guide
Manage your Session Recording servers by load-balancing sites and configuring server settings. To add Session Recording servers, follow the <u>Server connection suide</u> .	
+ Create site C Refresh	The following steps walk you through the procedure of connecting a Session Recording server to the Session Recording service. Before you sut at, enteure that you have a Session Recording server installed in your on- premises or cloud deployment.
> 1912(EUSERVER1 TESTSERVER1)	
2209(EUSERVER2 TESTSERVER4 CloudDB)	Step 1: Download the Session Recording cloud client to the target server
> 2209(TESTSERVER3)	Step 2: Install the Session Recording cloud client on the target server Launch the cloud client, mis file and provide your Citrix Cloud credentiats. Installation Guide
AutomateTestSiteEdit (Empty) AutomateTestSiteDescriptionEdit	Step 3: Refresh
> SERVER-1	After the Session Recording cloud client completes installation, the target server is connected to the Session Recording service. Click Refreat to update the list of connected servers. It might take a few minutes for your servers to be detected.
> SERVER-2	
> SERVER-3	
> SERVER-C1 dfsdfsadfliythtyhthytry	
> SERVER-C2	
> SERVER2209 dsaddsad	
> ene 7	Close 英 J ; 简 ② 祭

3. Install the Session Recording cloud client by using a command similar to the following:

1 msiexec /i SRCloudClientService.msi CUSTOMERID="<Citrix Cloud customer ID>" CLIENTID="<secure client ID>" CLIENTSECRET="< secure client secret>" CUSTOMDOMAIN="<a custom domain name of the Session Recording server>" PROXYMODE="<set the value to 1 or 2>" PROXYSERVER="<http://proxy.example.com: proxy_port_number>" PROXYSCRIPT="<script address>" PROXYBYPASS="<entries separated by semicolons (;)>" /l*v "< log path>" /qn+ 2 <!--NeedCopy-->

Note:

Versions 7.37.9010.3 and later of the cloud client don't depend on the local certificates on Session Recording servers and don't support the **CUSTOMDOMAIN** parameter.

For information on the command variables, see Connect existing Session Recording servers to the cloud.

Get started

June 20, 2023

This section provides instructions for you to:

- Plan your deployment
 - Connectivity requirements
 - Increase the transport packet size
 - Install certificates in IIS
 - Switch to web streaming service version 2.0
- Connect existing Session Recording servers to the clouds
- Install Session Recording servers from within the cloud
- Schedule cloud client upgrades

Plan your deployment

May 24, 2024

Connectivity requirements

Session Recording cloud client

The Session Recording cloud client requires access to the following addresses:

- https://*.citrixworkspacesapi.net (provides access to Citrix Cloud APIs that the services use)
- https://*.cloud.com (provides access to the Citrix Cloud sign-in interface)

• https://*.blob.core.windows.net (provides access to Azure Blob Storage, which stores updates for the Session Recording cloud client)

The cloud player requires access to the following address over WebSocket:

• wss://*.apps.cloud.com (provides access to play back recorded session files)

Ports

With versions 7.40.13020.11 and later of the cloud client, you need to only open a single port (TCP port 443) for communication:

Source	Destination	Туре	Port	Details
Session Recording cloud client on each Session	Citrix Cloud and Microsoft Azure	TCP (HTTPS, Websocket)	443	Communication with Citrix Cloud and Microsoft Azure.
Recording server				

Cloud clients earlier than version 7.40.13020.11 require you to open more ports:

Source	Destination	Туре	Port	Details
Session Recording cloud client on each Session Recording server	Citrix Cloud and Microsoft Azure	TCP (HTTPS)	80, 443	Communication with Citrix Cloud and Microsoft Azure.
Session Recording cloud client on each Session Recording server	Session Recording service	TCP (Websocket)	8088, 9090–9094	WebSocket connection between the Session Recording cloud client and the Session Recording servic

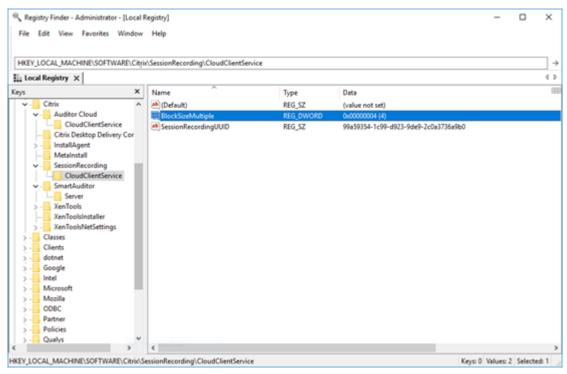
Proxy

You can set up a proxy when installing the Session Recording cloud client. For more information, see Connect existing Session Recording servers to the cloud.

Increase the transport packet size

- 1. On the Session Recording server where you installed the cloud client, browse to HKEY_LOCAL_MACHINE\SO
- 2. Edit the **BlockSizeMultiple** value.

The default value is 4 (16 KB). We recommend you set the value to 8 (32 KB).



Install certificates in IIS

Note:

If you're using version 7.37.9010.3 or later of the cloud client and want to use the cloud player only, you can skip this step.

Add an SSL binding in IIS so that:

- The Session Recording servers can connect to Citrix Cloud properly.
- You can use HTTPS to access the player.

For more information, see step 1 of HTTPS configuration.

Switch to web streaming service version 2.0

Note:

If you're using version 7.37.9010.3 or later of the cloud client and want to use the cloud player only, you can skip this step.

A fresh installation of Session Recording 2103 and later connects your web browser to the web streaming service hosted in IIS when you access the player. The web streaming service hosted in IIS is versioned 2.0, as indicated by WebSocketServerVersion under HKEY_LOCAL_MACHINE\ SOFTWARE\Citrix\SmartAuditor\Server.

Edit View Favorites Help puter\HKEY_LOCAL_MACHINE\SOFTWARE\Cit	riv) Smart Auditor) Sonior			
	Name	Туре	Data	
- 7-Zip	ab DatabaseFailoverPartner	REG SZ	butu	
Business Objects	ab DatabaseName	REG_SZ	CitrixSessionRecording2	
✓ ☐ Citrix	DeferredHashCalcFileSizeThreshold	REG DWORD	0x00200000 (2097152)	
-] Citrix Desktop Delivery Controller	DormantTimeInHours	REG DWORD	0x00000030 (48)	
> 📙 InstallAgent	BrableAnalytics	REG_DWORD	0x00000001 (1)	
- 📕 MetaInstall	EnableAzureSQLService	REG DWORD	0x00000000 (0)	
✓	BrableRecordingActionLogging	REG DWORD	0x00000001 (1)	
- 🣜 Server	BrableSRStorageLogging	REG DWORD	0x00000001 (1)	
> 📙 XenDesktop	BrableWebBasedSrPlayer	REG DWORD	0x00000001 (1)	
> 📜 XenTools	LinkEmail	REG_SZ	0,0000001(1)	
- 📜 XenToolsInstaller	ab LinkExpire	REG SZ	172800000000	
XenToolsNetSettings	ab LinkHost	REG SZ	112000000000	
> Classes	ab LinkSalt	REG SZ	kk2od974	
> Clients	B LoggingBlockState	REG DWORD	0x00000000 (0)	
DefaultUserEnvironment	ab Logging Database Failover Partner	REG SZ	0,0000000 (0)	
> 📙 dotnet	LoggingDatabaseName	REG_SZ	CitrixSessionRecordingLogging	
GitForWindows	W LoggingLoggingState	REG DWORD	0x00000001 (1)	
> Google	MaxOpenFiles	REG DWORD	0x00002710 (10000)	
> Intel	MaxBolloverFileSizeInMB	REG DWORD	0x0000012c (300)	
> JavaSoft	B PlaybackProtection	REG_DWORD	0x00000001 (1)	
- JreMetrics	PlayerUserRBACEnabledKey	REG DWORD	0x00000000 (0)	
Microsoft MozillaPlugins	PolicyFilePath	REG_DWORD	C:\Program Files\Citrix\SessionRecording\Server\\A	
> ODBC	PolicyFileRefreshPeriodInSeconds	REG DWORD	0x0000012c (300)	
> OpenSSH	RoleBasedSecurityEnabled	REG DWORD	0x0000001(1)	
> Partner	RolloverFileSizeInMB	REG_DWORD	0x00000032 (50)	
> Policies	RolloverTimeInHours	REG DWORD	0x0000000c (12)	
> Policies	BigReceiverVersionCheck	REG_DWORD	0x00000000 (12)	
> Qualys	ab SmAudDatabaseInstance	REG_DWORD	10.108.92.40	
RegisteredApplications	WebPlayerDisableAllRecording	REG DWORD	0x0000000 (0)	

An upgrade installation from an earlier version to Session Recording 2103 and later connects your web browser to the Python-based web streaming service (version 1.0). To connect to the web streaming service hosted in IIS, run the <Session Recording Server installation path>\Bin\SsRecUtils.exe -enablestreamingservice command.

Connect existing Session Recording servers to the cloud

April 26, 2024

You can connect Session Recording servers in a 1912 LTSR, 2203, or later deployment to the Session Recording service.

Before proceeding to the following steps on each server you want to connect, watch the video about connecting Session Recording servers:



Note:

Since July 2023, Microsoft has renamed Azure Active Directory (Azure AD) to Microsoft Entra ID. In this document, any reference to Azure Active Directory, Azure AD, or AAD now refers to Microsoft Entra ID.

Steps

To connect an existing Session Recording server to the Session Recording service, complete the following steps on the server:

- 1. Allow the outbound ports based on the version of your cloud client.
 - If you are using version 7.40.13020.11 or later of the cloud client, allow the outbound port 443 only.
 - If you are using a cloud client earlier than version 7.40.13020.11, allow the outbound ports 80, 443, 8088, and 9090–9094.
- 2. Download and install the Session Recording cloud client. After the Session Recording cloud client completes installation, the target server is connected to the Session Recording service.

Note:

A daemon maintaining the cloud client's running state is available for versions 7.38.10030.16 and later of the cloud client. The daemon automatically fixes the cloud

client when it runs abnormally.

- a) Sign in to Citrix Cloud.
- b) In the upper left menu, select **My Services > DaaS**.
- c) From Manage, select Session Recording.
- d) Select **Configuration > Server Management** from the left navigation of the Session Recording service.
- e) Click **Download** on the **Server connection guide** page.

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	Downloads
Server Management	Server connection guide
Manage your Session Recording servers to logit-balancing stee and configuring server settings. To add Session Recording servers, follow the Server connection matter + Create site C Refresh	The following steps walk you through the procedure of connecting a Session Recording server to the Session Recording service.
> Unallocated servers Servers that do not belong to any load-balancing site.	Step 1: Download the Session Recording cloud client to the target server
> AutoTestSite	Download
> DASHBOARD191201	Step 2: Install the Session Recording cloud client on the target server Generate a command and then use the command to install the cloud client. For more information, see the <u>Installation</u> Guide.
> DASHBOARD2203	Generate command
DASHBOARD221002	Step 3: Refresh After the Session Recording cloud client completes installation, the target server is connected to the Session Recording service. Click Refresh to update the list of connected servers. It might take a few minutes for your servers to be
> eadebaa	detected.
SERVER 1	
> SERVER-2	
SERVER-2212	
> SERVER-3	
	Close

Tip:

- The **Generate command** button for cloud client installation is unavailable for the administrators that are added through Azure AD groups.
- You can also access the **Download** and **Generate command** buttons by clicking **Continue configuration** on the Session Recording service **welcome** page:

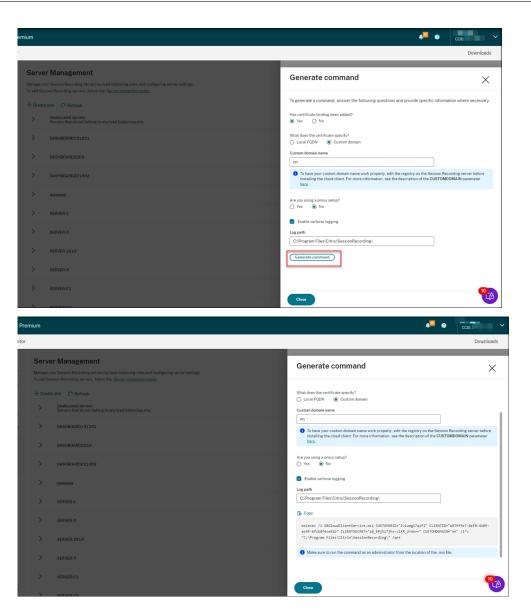
Manage 🗸 Monitor					Downl
		to Session Recording		on Recording	
	sessions for retriev		 Server connection Server settings 	The following steps walk you through the procedure of o the Session Recording service.	connecting a Session Recording server
		ession Recording service lets you connect S provides centralized management of policie	Recording policy Authorization Optional	Step 1: Download the Session Recording cloud of Download	
		0	S Summary	Generate command and then use the command to install the Installation Guide	
	Connect to Session Recording servers	Define server properties (b) Watch instruction videos		After the Session Recording cloud client completes installat Session Recording service. Click Refresh to update the list o minutes for your servers to be detected.	
			1	Connected servers	
		Continue config		Your servers are organized into load-balancing sites	
		Familiar with configuring S		Unallocated servers 10 Ser	
		Skip suide and jump to the			vers, O Available

f) Install the cloud client on the Session Recording server. To do that, run a command as an administrator from the location of the cloud client .msi file that you downloaded earlier.

You can enter a command manually or generate a command by clicking **Generate command** on the **Server connection guide** page.

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Server Management Manage your Section Recording servers by load-balancing sites and configuring server settings.	Server connection guide				
to add Second Meterolog garvers, follow the <u>Generation constrained on output</u> + Create site C Rafresh	The following steps wilk you through the procedure of connecting a Session Recording server to the Session Recording service.				
Unallocated servers Servers that do not belong to any load-balancing site.	Step 1: Download the Session Recording cloud client to the target server				
> AutoTestSite	Download Step 2: Install the Session Recording cloud client on the target server				
DASHB0AR0191201	Generate a command and then use the command to install the cloud client. For more information, see the Installation Guide.				
> DASHBOARD2203	Generate command) Step 3: Refresh				
> DASHBOARD221002	After the Session Recording cloud client completes installation, the target server is connected to the Session Recording service. Click Refresh to update the list of connected servers. It might take a few minutes for your servers to be detected.				
> qaqqaaqa	unnected.				
> SERVER-1					
> SERVER-2					
> SERVER-2212					
> SERVER-3	Close				

Answer questions and provide information where necessary on the **Generate command** page. After that, click the **Generate command** button.



If you modify the answers or provide different information after clicking the **Generate command** button, the generated command automatically updates accordingly. The **Generate command** button is available again after you sign out and sign back in to Citrix Cloud.

The command is similar to the following:

```
1 msiexec /i SRCloudClientService.msi CUSTOMERID="<Citrix Cloud
customer ID>" CLIENTID="<secure client ID>" CLIENTSECRET="<
secure client secret>" CUSTOMDOMAIN="<a custom domain name
of the Session Recording server>" PROXYMODE="<set the value
to 1 or 2>" PROXYSERVER="<http://proxy.example.com:
proxy_port_number>" PROXYSCRIPT="<script address>"
PROXYBYPASS="<entries separated by semicolons (;)>" /l*v "<
log path>" /qn+
2 <!--NeedCopy-->
```

Where:

• **SRCloudClientService.msi** installs the Session Recording cloud client that enables interaction with Citrix Cloud. Download or copy the .msi file to each Session Recording server you want to connect.

Note:

The status of a Session Recording server might not change to **Offline** after you stop the cloud client service (CitrixSsRecCloudClientService) on it. For more information, see **Configure Session Recording servers**.

Citrix collects traces from the cloud clients installed on on-premises Session Recording servers and uses the traces for troubleshooting.

 CUSTOMERID is a *required* parameter. You can find the Citrix Cloud customer ID in the upper right corner of the Citrix Cloud console. You can also find it on the Secure Clients tab (Identity and Access Management > API Access > Secure Clients). For example, see the following screen capture:

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4	Identity and Access Managem	nent						
	Authentication Administrators API Access	Domains Recovery						
	Secure Clients Product Registrations							
	Secure Clients are used to interact with Citrix Cloud APIs. Learn more about the APIs. To use a secure client in a silent Cloud Connector install or to access Citrix Cloud APIs, use zok8h8n3pizo as the customer ID parameter. Name your Secure Client Create Client							
	Name ↓ ID	Created By	Creation Date	Last Used Date	Action	3		
	1011		4:20:13 PM Mar 2, 2022		Û			
	and methods to	0.0. pr. 170 11. cm	2:02:39 PM Mar 7, 2022	5:10:29 PM Mar 7, 2022	创			
	herea and an and an and	h E ha angetta at	4:22:24 PM Feb 8, 2022	1:35:13 PM Mar 30, 2022	۵			

- **CLIENTID** is a *required* parameter. The secure client ID is a Universally Unique Identifier (UUID) automatically generated when you create the secure client. Secure clients are used to interact with Citrix Cloud APIs.
- CLIENTSECRET is a *required* parameter. The secure client secret shows only once at the client creation time. After the secure client is created, click **Download** to save both the secure client ID and the secure client secret in a file.

Secure Clients	Product Registrations			
			Secure Clients are used to interact with Citrix Cloud APIs. Learn more about the APIs.	
		To use a secu	×	D parameter.
Name	ID			Last Used Date
Name	ID			Last Used Date
			ID and Secret have been created successfully	6:57:19 PM Jan 5, 2022
			Download the ID and secret to store in a safe place. You cannot access the secret after you exit this model.	2:10:22 PM Jan 19, 2022
			ID: Copy	
			Secret: ••••• © Copy	
			Close Download	

• **CUSTOMDOMAIN** is an optional parameter. It specifies a custom domain name with an SSL certificate binding that the Session Recording server uses for HTTPS requests. If it is not specified, the FQDN is used by default.

Note:

Versions 7.37.9010.3 and later of the cloud client don't depend on the local certificates on Session Recording servers and don't support the **CUSTOMDOMAIN** parameter.

• To have the custom domain name work properly, use either of the following methods before installing the Session Recording cloud client:

(Recommended) Method 1:

- i. On the machine where you installed the Session Recording server, open Registry Editor.
- ii. Locate the following registry key: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Lsa

 $MSV1_0$

- iii. Right-click **MSV1_0** and create a multi-string value.
- iv. Set the value name to **BackConnectionHostNames** and the value data to include your custom domain name.

Note:

Type your custom domain name on a separate line.

If the **BackConnectionHostNames** registry value exists as a **REG_DWORD** type, delete it and recreate a multi-string value.

v. Exit Registry Editor.

vi. Restart the machine.

Method 2:

Note:

This method reduces security because it disables the authentication loopback check.

- i. On the machine where you installed the Session Recording server, open Registry Editor.
- ii. Locate the following registry key: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Lsa
- iii. Right-click **Lsa** and create a DWORD value.
- iv. Set the value name to **DisableLoopbackCheck** and the value data to 1.
- v. Exit Registry Editor.
- vi. Restart the machine.
- **PROXYMODE** is an optional parameter. Set the value to 1 or 2 to enable a manual or automatic proxy setup for the Session Recording service, respectively. If you leave the parameter unspecified, the default value is 0, which means the proxy is disabled.
- PROXYSERVER is an optional parameter. However, if you set PROXYMODE to 1, this
 parameter is *required*. It specifies the proxy server name or IP address and the proxy
 port number. For example, http://proxy.example.com:proxy_port_number.
- PROXYSCRIPT is an optional parameter. It specifies the proxy script address, for example, https://node-cluster143516-swg.ibosscloud.com/95rc2MBacUpwBGI/v2/pr oxy.pac. If you leave the parameter unspecified, proxy auto-detection takes effect.
- **PROXYBYPASS** is an optional parameter. Use the proxy server except for addresses that start with the entries you specify, separated by semicolons (;).
- /l*v is an optional parameter. It specifies verbose logging.
- /qn+ is a *required* parameter. It specifies a silent install with a user prompt at the end.

After the Session Recording cloud client completes installation, the target server is connected to the Session Recording service. Click **Refresh** on the **Server Management** page to update the list of connected servers. It might take a few minutes for your servers to be detected.

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Manage	ver Management your Session Recording servers by load- session Recording servers, follow the <u>Se</u>	balancing sites and configuring server setting rver connection guide.	5.			0
+ Crea	ate site C Refresh W2K16ST-DKV2QD5 (Empty)			0 server, 0 available		0
\sim	Site-1 Site-1 description			1 server, 1 available		0
	SERVER test server	Server version 22.6.0.0	Cloud client version 7.35.25251.5683	Available		۵
>	testdescriptoin (Empty) null			O server, O available		0
>	Site-4			3 servers, 0 available		0
>	Fat1912			1 server, 1 available		0
>	W2K16ST-UKISD9E (Empty) test			0 server, 0 available		0
>	WEEKLYSERVER2			1 server, 0 available		0
>	Site-2			1 server, 1 available		° 13
	TESTSERVER1					

Server management

You can manage Session Recording servers by load-balancing them across multiple sites. A site can contain multiple Session Recording servers that connect to the same Session Recording database.

After you connect a Session Recording server to the Session Recording service, the server is automatically grouped to the site connected to the same Session Recording database. If no such site is available, the server becomes a site itself and the site name is the name of the server.

You can perform the following actions for server management:

- Create and edit sites with custom names and descriptions.
- Expand sites to access Session Recording servers in them.
- Drag and drop Session Recording servers to different sites. You can also change a server's site by clicking the **Settings** icon of the server. The **Settings** icon is present only for available servers.
- Configure server settings. For more information, Configure Session Recording servers.

Install Session Recording servers from within the cloud

April 26, 2024

You can connect existing Session Recording servers to the cloud. You can also install Session Recording servers directly from within the cloud. This feature obliterates the need to download the Citrix Virtual Apps and Desktops installer or the SessionRecordingAdministrationx64.msi file. It also checks domain joining to prevent issues that might keep Session Recording servers from functioning after being connected.

This article walks you through the process of installing a Session Recording server from within the cloud and provides guidance for post-installation actions.

Note:

Since July 2023, Microsoft has renamed Azure Active Directory (Azure AD) to Microsoft Entra ID. In this document, any reference to Azure Active Directory, Azure AD, or AAD now refers to Microsoft Entra ID.

Installation steps

To install a Session Recording server from within the cloud, connect a machine to the Session Recording service and then install the Session Recording server on it from within the cloud. To do so:

- 1. Prepare a machine.
- 2. Allow the outbound ports based on the version of your cloud client.
 - If you are using version 7.40.13020.11 or later of the cloud client, allow the outbound port 443 only.
 - If you are using a cloud client earlier than version 7.40.13020.11, allow the outbound ports 80, 443, 8088, and 9090–9094.
- 3. Download and install the Session Recording cloud client on the machine.

Note:

A daemon maintaining the cloud client's running state is available for versions 7.38.10030.16 and later of the cloud client. The daemon automatically fixes the cloud client when it runs abnormally.

- a) Sign in to Citrix Cloud.
- b) In the upper left menu, select **My Services > DaaS**.
- c) From Manage, select Session Recording.
- d) Select **Configuration > Server Management** from the left navigation of the Session Recording service.
- e) Click **Download** on the **Server connection guide** page.

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	Downloads
Server Management	Server connection guide
Manage your Session Recording servers by load-balancing sites and configuring server settings. To add Session Recording servers, follow the Server contection succ.	The following steps walk you through the procedure of connecting a Session Recording server to the Session Recording service.
Unallocated servers Servers that do not belong to any load-balancing site.	Step 1: Download the Session Recording cloud client to the target server
> AutoTestSite	Download
> DASHEOARD191201	Step 2: Install the Session Recording cloud client on the target server Generate a command and then use the command to install the cloud client. For more information, see the <u>installation</u> Galds.
> DASHBOARD2203	Generate command
> DASHBOARD221002	Step 3: Refresh After the Session Recording cloud client completes installation, the target server is connected to the Session Recording service. Click Refresh to update the list of connected servers. It might take a few minutes for your servers to be
> qaqqaqaq	detected.
> SERVER-1	
> SERVER-2	
> SERVER-2212	
> SERVER-3	Cicce
> search.c1	

Tip:

- The **Generate command** button for cloud client installation is unavailable for the administrators that are added through Azure AD groups.
- You can also access the **Download** and **Generate command** buttons by clicking **Continue configuration** on the Session Recording service **welcome** page:

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Manage 🗸 Monitor					Downloads
	Welcome t	o Session Recording	Configure Sessio	n Recording	×
	Record, categorize, and archive virtual apps and desktops sessions for retrieval and playback.		Server connection	Connect to Session Recording servers	
			Server settings	The following steps walk you through the procedure of connecting a Sessio the Session Recording service.	in Recording server to
	The Se	sion Recording service lets you connect \$	3 Recording policy	Step 1: Download the Session Recording cloud client to the targ	get server
		ovides centralized management of policie	Authorization Optional	Step 2: Install the Session Recording cloud client on the target	server
		0	S Summary	Generate a command and then use the command to install the cloud client. For Installation Guide. Generate command	more information, see th
		I I I I I I I I I I I I I I I I I I I		Step 3: Refresh	
	Connect to Session Recording servers	Define server properties		After the Session Recording cloud client completes installation, the target serv Session Recording service. Click Refresh to update the list of connected server minutes for your servers to be detected.	
	Watch instruction videos	Watch instruction videos		Refresh	
		Continue config	1	Connected servers	a unur eiter latar
			1	Unallocated servers 10 Servers	e your anea tater.
		Familiar with configuring S Skip suide and jump to the		> 2019UP1 1 Servers, 0 Available	
			Next Cancel	> 2019/102 1 Canvare O Zusitabla	•

f) Install the cloud client on the machine. To do that, run a command as an administrator from the location of the cloud client .msi file that you downloaded earlier.

You can enter a command manually or generate a command by clicking **Generate command** on the **Server connection guide** page.

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Server Management	Server connection guide
Image your Session Recording servers by load-balancing sites and configuring server settings. Is and Session Recording servers, follow the Sener connection width.	The following steps walk you through the procedure of connecting a Session Recording server to the Session Recording service.
Unallocated servers Servers that do not belong to any load-balancing site.	Step 1: Download the Session Recording cloud client to the target server Coventiad
AutoTextSite DASHB0ARD191201	Step 2: Install the Session Recording cloud client on the target server Generate a command and then use the command to install the cloud client. For more information, see the <u>Installation</u> Quick.
DASHBOARD2203	Generate command
> DASHBOARD221002	After the Section Recording cloud client completes installation, the target server is connected to the Session Record service. Click Refresh to update the last of connected servers. It might take a few minutes for your servers to be detected.
y adaatada	
> SERVER-1	
> SERVER-2	
> server.2212	
2 SERVENS	Close U

Answer questions and provide information where necessary on the **Generate command** page. After that, click the **Generate command** button.

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Server Management Manage your Session Recording servers by load-balancing sites and configuring server settings. To add Session Recording servers, follow the <u>Server connection wake</u> .	Generate command X
+ Create sile 🔿 Refresh	To generate a command, answer the following questions and provide specific information where necessary. Has certificate binding been added?
Validicated every Servers that do not belong to any load hatancing site. DA9H00AR0191201	Yes No What does the certificate specify?
> DASHBOARD2203	Cuccal FQDN © Custom domain Custom domain name In
> ДА\$НВОАR0221002	To have your cuttom domain name work property, edit the registry on the Session Recording server before installing the cloud client. For more information, see the description of the CUSTOMDOMAIN parameter https://doc.org/10.1007/0000000000000000000000000000000
> aaaaaaa	Are you using a proxy setup? ⊖ Yes ● No
> SERVER 1	Enable verbose logging
> SERVER-2	Log path C:\Program Files\Citrix\SessionRecording\
SERVER 2212	Generate command
> SERVER 3	
> SERVER-C1	Close

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Manage	ver Management your Session Recording servers by load-balancing sites and configuring server settings. lesson Recording servers, follow the <u>Server connection puels</u> .	Generate command X
+ Crea	ate site C Refresh Unallocated servers Servers that do not belong to any load balancing site.	What does the certificate specify? ◯ Local FDOM ● Caston domain Custon domain a mae
>	DASH90ARD191201	nn To have your custom domain name work properly, edd the registry on the Session Recording server before installing the cloud client. For more information, see the description of the CUSTOMDOMAN parameter
> >	DASHB0ARD22002	bace. Are you using a proxy setup? ○ Yes ● No
>	0099793	Enable verbose logging Log path
>	SERVER-1	C:IProgram Files/Clirix/SessionRecording\
>	SERVER-2	La Capy msiewer // SRCloudClientService.msi (USTOWERD="2viumgTogf1" CLIENTD="AB79Ffer-def8-4109- acf-ffc8f4ce61b" CLIENTSCERT="40 EPISITIbx-CDX UNIA=" CUSTOWDARD="nn" //*
>	SERVER-2212	"C:\Program Files\Citrix\SessionRecording\" /qn+
>	SERVER-3	Make sure to run the command as an administrator from the location of the .msi file.
>	SERVER-C1	

If you modify the answers or provide different information after clicking the **Generate command** button, the generated command automatically updates accordingly. The **Generate command** button is available again after you sign out and sign back in to Citrix Cloud.

Note:

Versions 7.37.9010.3 and later of the cloud client don't depend on the local certificates on Session Recording servers and don't support the **CUSTOMDOMAIN** parameter.

To have a custom domain name work properly, use either of the following methods **before** installing the Session Recording cloud client:

(Recommended) Method 1:

- i. On the machine, open Registry Editor.
- ii. Locate the following registry key: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Lsa\ MSV1_0
- iii. Right-click **MSV1_0** and create a multi-string value.
- iv. Set the value name to **BackConnectionHostNames** and the value data to include your custom domain name.

Note:

Type your custom domain name on a separate line.

If the **BackConnectionHostNames** registry value exists as a **REG_DWORD** type, delete it and recreate a multi-string value.

- v. Exit Registry Editor.
- vi. Restart the machine.

Method 2:

Note:

This method lowers security thresholds because it disables the authentication loopback check.

- i. On the machine, open Registry Editor.
- ii. Locate the following registry key: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Lsa
- iii. Right-click **Lsa** and create a DWORD value.
- iv. Set the value name to **DisableLoopbackCheck** and the value data to 1.
- v. Exit Registry Editor.
- vi. Restart the machine.
- 4. Verify that the status of the machine shows **Ready to install**, and then click the installation icon.

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Server Management Manage your Session Recording servers by load-balancing sites and configurin To add Session Recording servers, follow the <u>Server connection guide</u> . + Create site C* Refresh	ng server settings.		0
✓ Unallocated servers Servers that do not belong to any load-balancing site.	1 server		
AUTOSERVER1 Server version	Cloud client version 7.37.8000.2	○ Ready to install	٩

5. Follow the wizard to install the Session Recording server component on the machine.

	Downloads
Install Session Recor sr-p2uyo2e-0	ding X
	Prerequisites Check Server in a valid domain Load-balancing site
2 Databases and logging	Create a new site srtest
3 Summary	Add to a non-empty site Components to install Version: 2308
	Session Recording server Session Recording broker and storage management
	Session Recording administrator logging Administrator logging captures Session Recording server configuration changes and recording activities to the session recording database
	Session Recording database Session Recording database
	Installation location Specify the location for the installation
	C:\Program Files\Citrix Check path
	Path valid
Next Cancel	

- a) On the **Overview** page, complete the following steps:
 - i. Run a check to verify that the machine is in a valid domain.

The prerequisite check is to prevent issues that might keep Session Recording servers from functioning after being connected.

- ii. Create a site for the machine or add the machine to an existing non-empty site.
- iii. Choose a server version to install.
- iv. Specify an installation path and verify that the path is valid.
- v. Click Next to proceed to the Databases page.
- b) On the **Databases** page, choose whether to use a cloud database, fill the fields accordingly, and then click **Test connection** to test the connectivity to the Session Recording database and the administrator logging database.

	¢ ^{con} ? ccid:
	Downloads
Install Session Recor CNENG5REQMKF8PX	ding X
 Overview Databases and logging Summary 	Databases We will create 2 SQL databases for recording and logging data, respectively. Specify the instance name and customize the database names as needed. Use cloud database Instance name Enter instance name Session Recording database name Enter database name Administrator logging database name Inter database name Cate database name Inter database name Cate database name Cate database name Cate database name Inter database name Cate database name Inter database name Cate database name Cate database name Cate database name Inter database name Inter database name Cate database name Inter database name
Next Back	3

Tip:

- If you allocated the machine to an existing non-empty site earlier, the fields on the **Databases** page are automatically filled.
- You can deploy the Session Recording database on the following cloud SQL database services:
 - Azure SQL Database
 - Azure SQL Managed Instance
 - SQL Server on Azure Virtual Machines (VMs)
 - AWS RDS
 - Google Cloud SQL Server

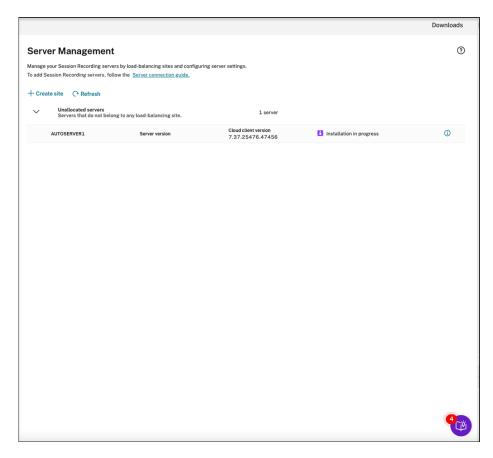
server1	/
Overview	Databases
Databases and logging	We will create 2 SQL databases for recording and logging data, respectively. Specify the instance name and customize the database names as needed.
Summary	✓ Use cloud database
	Database service type
	Azure SQL Managed Instance
	Instance name
	Enter instance name
	User name
	Enter user name
	Password
	Enter password
	Session Recording database name
	Enter database name
	Administrator logging database name
	Enter database name
	Test connection
	Administrator logging options
	✓ Enable administrator logging
	Enable or disable the administrator logging service.

- Instance name: If the database instance isn't a named instance, you can use only the computer name of the SQL Server. If you have named the instance during the instance setup, use computer-name\instance-name as the database instance name. To determine the server instance name that you are using, run select @@servername on the SQL Server. The return value is the exact database instance name. If your SQL server is configured to be listening on a custom port other than the default port 1433, set the custom listener port by appending a comma to the instance name. For example, type DXSBC-SRD-1,2433 in the Instance name text box, where 2433, following the comma, denotes the custom listener port.
- Session Recording database name: Type a custom database name. The machine must have the **sysadmin** role permission of the database. Otherwise, ask the database administrator to assign the permission. Click **Test connection** to test the connectivity to the SQL Server instance and the validity of the database name.

- Administrator logging database name: The administrator logging database name must be different from the Session Recording database name. After typing the administrator logging database name, click **Test connection** to test the connectivity to the administrator logging database.
- **Enable administration logging**: By default, the administration logging feature is enabled. You can disable it by clearing the check box.
- **Enable mandatory blocking**: By default, mandatory blocking is enabled. The normal features might be blocked if logging fails. You can disable mandatory blocking by clearing the check box.
- c) On the **Summary** page, verify your settings and click **Install**.

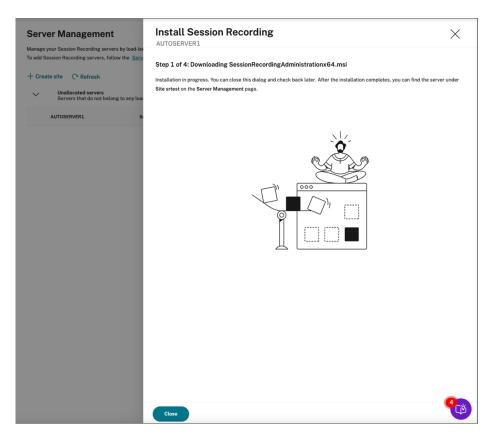
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Install Session Recon sr-p2uyo2e-0	rding	×
 Overview Databases and logging Summary 	Summary Component Session Recording server Session Recording administrator logging Session Recording database Version 2308 Installation location C:\Program Files\Citrix Databases Instance name tcp:sessionrecording-p2uyo2eunvalo.database.windows.net,1433 Session Recording database name sessionrecording Administrator logging database name sessionrecordinglogging	
Install Back		C)

d) Check the installation progress by clicking the icon next to Installation in progress.

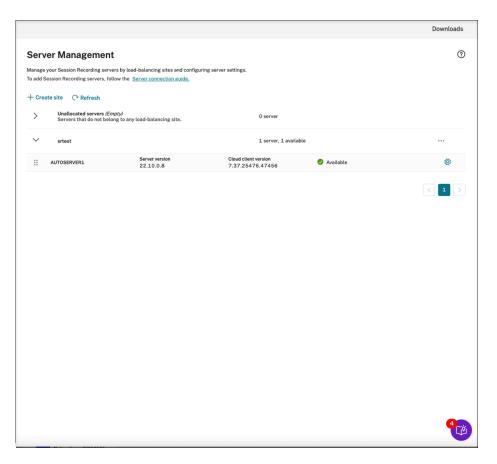


For example, the installation has progressed to the first step.

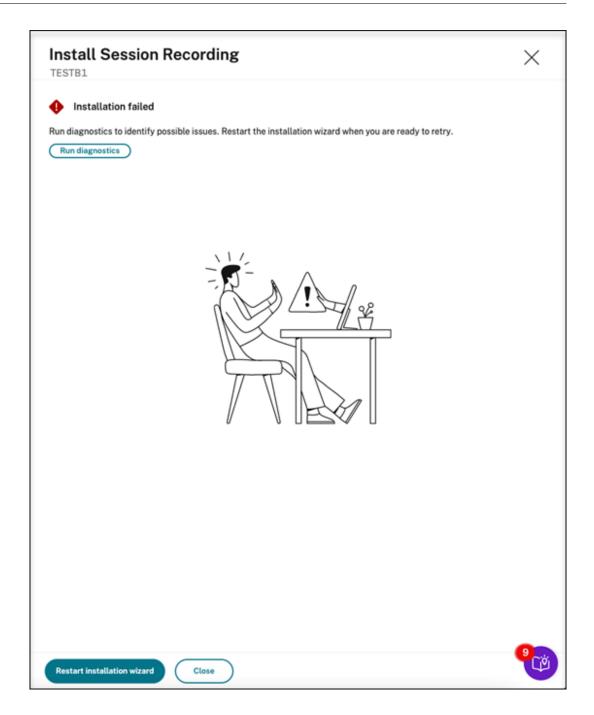
Session Recording service



After installation completes successfully, the machine becomes a Session Recording server that is connected to the Session Recording service. You can find the server under the site that you created or specified. Refresh the **Server Management** page to view all connected servers.



If the installation fails, click the icon next to **Installation failed** and run diagnostics to identify possible issues. Fix the issues if any, restart the machine, and then restart the installation wizard.



Post-installation actions

After installing a Session Recording server from within the cloud, perform the following operations:

• Connect the newly installed Session Recording server to the target Session Recording agent. Go to the target VDA or VDI machine and open **Session Recording Agent Properties**. Type the computer name of the machine where you installed the Session Recording server. Type the protocol and port information for the connection to the Session Recording server.

- Configure server settings, policies, and playback permissions based on your needs.
- Launch sessions to verify that sessions are recording.
- View administrator logging data.
- Go to the Session Recording management dashboard to gain insights into your deployment. For fresh installations, data is not immediately available on the dashboard.

Deploy Session Recording resources to a cloud subscription

June 21, 2024

This article provides information on deploying Session Recording resources to an Azure subscription.

You can deploy the following Session Recording resources to an Azure subscription from within the Session Recording service:

- Session Recording servers
- Databases
- Storage
- Load balancer

There are two ways of deploying Session Recording resources to an Azure subscription:

- Use a host connection that connects to the Azure subscription. Creating a host connection requires you to provide your subscription information. For more information, see Create and deploy a site through a host connection later in this article.
- If you do not want to provide your subscription information, create an Azure Resource Manager template (ARM template) that contains how and which resources you want to deploy. For more information, see Create and deploy a site through an ARM template later in this article.

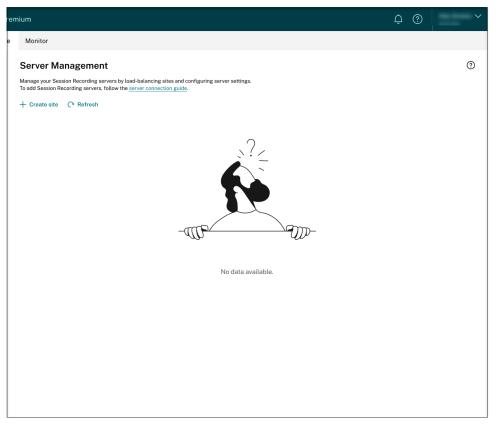
Create and deploy a site through a host connection

This section guides you through the procedure of creating and deploying a site through a host connection and the following operations that can be performed on a site deployed this way:

- Add resources to an existing site deployed on Azure
- Change the IP addresses that are allowed to access the load balancer
- View actual costs for using Azure

Create and deploy a site through a host connection

1. Select **Configuration > Server Management** from the left navigation of the Session Recording service.



2. On the Server Management page, click Create site. The Create Site page appears.

Create site	×
1 Site information	What would you like to do?
	Create and deploy a site through a host connection
	Deploy Session Recording resources using a host connection that connects to your specific cloud subscription. Learn more
	Create and deploy a site through an ARM template Create an Azure Resource Manager template (ARM template) to deploy Session Recording resources in Azure. Learn more
	Site name
	Name this site
	Description (optional) Enter description
Save)

3. Select **Create and deploy a site through a host connection**. The main steps are listed in the left navigation.

Create site	×
1 Site information	What would you like to do?
About your deployment Optional	Create an empty site
3 Network	Create a site and add servers later.
(4) Virtual machines	Create and deploy a site through a host connection
5 Domain and certificate	Deploy Session Recording resources using a host connection that connects to your specific cloud subscription. Learn more
6 Storage	Create and deploy a site through an ARM template
⑦ Databases	Create and deploy a site (infough an Arth (enplate) Create and azure Resource Manager template (ARM template) to deploy Session Recording resources in Azure. Learn more
8 Load balancer	
(9) Tags Optional	Site name
(10) Secure client	Name this site
1 Summary	Description (optional)
	Enter description
	Host Connection
	APIAutoTestTurnkey V
	Add connection
Next Cancel	9 <u>t</u>

- 4. Enter a site name and description, select a host connection that connects to your Azure subscription, and specify a region.
 - If you don't have a host connection in place, add one by referring to Add a host connection later in this article.
 - Azure Government regions aren't supported.
- 5. After completing the site information, click **Next** to continue.
- 6. (Optional) To get recommendations for VM and storage configurations, provide information about your recording needs.

You can skip this step by clicking **I'm good, skip this step** or by clicking **Next** with nothing selected.

Create site	×
Site information About your deployment Optional Network	Tell us about your recording needs, so we can provide some recommendations for your VM and storage configurations. I'm good, skip this step.
 4 Virtual machines 5 Domain and certificate 6 Storage 	The following information helps determine the recommended number of Session Recording servers. How many concurrent sessions do you have at most? 4,000-6,000 v
 ⑦ Databases ⑧ Load balancer ③ Tags 	Recommended number of servers: 3) reset
 Optional Secure client Summary 	The following information helps determine the recommended storage capacity. How much visual movement do your sessions typically have? Some, the display changes but not drastically
	How many sessions do you need to record per day? 5,000-10,000 v For how long do you need to retain each recording file?
	15-30 days v Recommended storage capacity: 30 TiB) reset
Next Cancel	er:

When you select an option from the drop-down list, a recommendation is presented according to your selection. A **reset** button is available next to the recommendation. It lets you clear your selections and the corresponding recommendation in that section.

7. Specify the virtual network and subnet for your Session Recording servers to join. If your VDAs reside in a different virtual network from the Session Recording servers or in an on-premises network, establish connectivity to ensure the Session Recording servers can communicate with your VDAs.

С	reate site	×
✓✓	Site information About your deployment Optional	Specify the virtual network and subnet for your Session Recording servers to join. Virtual network
3	Network	v
4	Virtual machines	Select a virtual network that your VDAs can connect to.
5	Domain and certificate	Subnet
6	Storage	Select a subnet that your VDAs can connect to.
7	Databases	
8	Load balancer	
9	Tags Optional	
10	Secure client	
11	Summary	
	Next Cancel	e tai

8. Create virtual machines (VMs) as your Session Recording servers.

С	reate site	×
	Site information	Create virtual machines as your Session Recording servers.
	About your deployment Optional	Session Recording server version to install: 2311 v
	Network	Image
4	Virtual machines	Windows Server 2022 Datacenter: Azure Edition - x64 Gen2 🗸
5	Domain and certificate	Size
6	Storage	Standard_D4s_v3-4vcpus, 16 GiB memory v
7	Databases	Number of VMs 3 4 9 Recommended for you: 3
8	Load balancer	
9	Tags Optional	Estimated cost (per month) \$812.16
10	Secure client	
11	Summary	Create an administrator account for the virtual machines.
		Administrator account username Set username
		Password ©
		Confirm password
	Next Cancel	1

Note:

- The **Number of VMs** field is prefilled with the recommended number if there's one. Change the number as needed.
- Estimated costs are based on standard pricing and don't take discounts into consideration. You can expect lower actual costs than estimated.
- 9. Join the Session Recording servers to the same domain with your VDAs and specify a certificate for the Session Recording servers.
 - If your VDAs connect to an Active Directory domain, select the Join servers to an Active Directory domain check box and enter the relevant information. By selecting the Join servers to an Active Directory domain check box, you are configuring the deployment for a hybrid scenario, integrating on-premises Active Directory with Azure AD.
 - If your VDAs connect to an Azure Active Directory (Azure AD) domain, clear the Join servers to an Active Directory domain check box. After you complete creating the current site, make sure to manually join the Session Recording servers to the same Azure AD domain. Notice that pure Azure AD deployment is available only for Session Recording 2402 and later.

Create site	X
Site information About your deployment Optional	 Join servers to an Active Directory domain This should be the domain where your VDAs reside.
Network Virtual machines	Domain name
5 Domain and certificate	Domain controller IP address Enter IP address
6 Storage7 Databases	Username Enter domain\username Specify a domain user with sufficient rights to join machines to the domain.
 8 Load balancer 9 Tags Optional 	Password Enter password
Optional Secure client Summary	Specify a certificate for the virtual machines to use. Only .pfx files are supported. Certificate
	Browse Certificate password Enter password
Next Cancel	

С	reate site	X
 <th>Site information About your deployment Optional Network</th><th> Join servers to an Active Directory domain Supported only on Session Recording server version 2402 or later. Please select a compatible version in the previous step. <u>Go back</u> </th>	Site information About your deployment Optional Network	 Join servers to an Active Directory domain Supported only on Session Recording server version 2402 or later. Please select a compatible version in the previous step. <u>Go back</u>
 (5) 	Virtual machines Domain and certificate	Specify a certificate for the virtual machines to use. Only .pfx files are supported. Certificate
6	Storage	Browse Certificate password
7	Databases	Enter password
8	Load balancer Tags Optional	
10	Secure client	
11	Summary	
	Next Cancel	

Note:

Since July 2023, Microsoft has renamed Azure Active Directory (Azure AD) to Microsoft Entra ID. In this document, any reference to Azure Active Directory, Azure AD, or AAD now refers to Microsoft Entra ID.

10. Configure an Azure storage account and file shares to store your recording files. For pricing information, see Azure Files pricing.

Create site	×
Site information	Configure a storage account and file shares to store your recording files. For pricing information, see <u>Azure File Pricing</u> .
Optional Optional Network	A separate storage account will be created for your archived recordings, which does not generate any cost if not used.
Virtual machines	Storage account
Domain and certificate	Performance
6 Storage	 Standard: Recommended for most scenarios (general-purpose v2 account). Premium: Recommended for scenarios that requires low latency.
⑦ Databases	Redundancy
8 Load balancer	Locally-redundant storage (LRS)
Tags Optional	
10 Secure client	File shares
(1) Summary	Tier Transaction optimized
	Maximum capacity
	5 TIB
	Number of file shares 6 A V Image: Commended for you: 6
	Estimated cost (per month)
	\$1843.2 (max.)
	\$0.06 per used GiB, actual cost depends on your usage.
Next Cancel	@

11. Create two SQL databases in Azure. One is used as the Session recording database (named **sessionrecording**) and the other as the administrator logging database (named **sessionrecordinglogging**).

Site information	Create 2 SQL databases for recording and logging data, respectively.
	Compute + storage
About your deployment Optional	
Network	Service tier General Purpose
Retwork	
Virtual machines	Compute tier Provisioned
Domain and certificate	
Demandra Continuato	Hardware configuration Standard-series (Gen5)
Storage	Up to 128 vCores, up to 625 GiB memory
Databases	vCores
Load balancer	Data max size (GiB)
Tags Optional	
Secure client	Estimated cost (per month)
Summary	\$441.3
	Database administrator
	Username
	dbadmin1
	Password
	······
	Confirm password
	······

12. Create a load balancer to distribute workload among the Session Recording servers. Enter the IP addresses or ranges of your VDAs and separate them by a comma (,) in the **Restrict access of the load balancer to only the following addresses** field. For pricing information, see Load Balancer pricing.

С	reate site		×
C Q Q Q Q Q Q Q Q Q Q Q Q Q	reate site Site information About your deployment Optional Virtual machines Domain and certificate Storage Databases Load balancer Tags Optional Secure client Summary	Create a load balancer to distribute workload among the servers. For pricing information, see Load Balancer Pricins. Azure load balancer SKU Standard Type Public Tier Regional Estimated cost (per month) \$189.6 Access Restrict access of the load balancer to only the following addresses Enter IP address or ranges	×
			8
	Next Cancel		

13. (Optional) Apply tags to the Azure resources to be created.

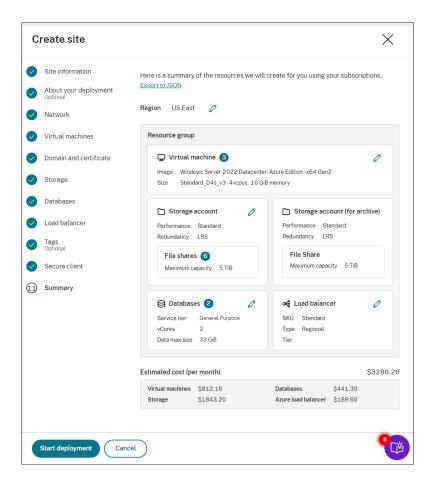
Create site X					
 Site information About your deployment Optional 		the Azure resources that will be created. , simply click Next to continue.			
Optional Network	Name	Value			
Virtual machines	+ Add				
Oomain and certificate					
Storage					
Databases					
Load balancer					
Tags Optional					
Secure client					
(1) Summary					
Next Cancel)		8 [ý		

14. Create a secure client to onboard the Session Recording servers to the Session Recording service.

Click **Create client** to let Citrix create a secure client on your behalf. Alternatively, you can create a secure client through the **Identity and Access Management > API Access** tab of the Citrix Cloud console and then fill in the information below.

С	reate site		Х
	reate site Site information About your deployment Optional Commany Summary	Create a secure client to onboard the Session Recording servers to Recording service. Click Create client and we will create a secure client on your behalf can create a secure client through the <u>identity and Access Manageme</u> the Citrix Cloud console and then fill in the information below. Create client D 6b63afdf-d048-49e1-b27d-781bffea97a2 Secret	Alternatively, you
	Next Cancel		(interview)

15. View the summary about the site to be created. Click the pencil icon to edit your settings if needed or click the button to start deployment.



The following are examples of the deployment process:

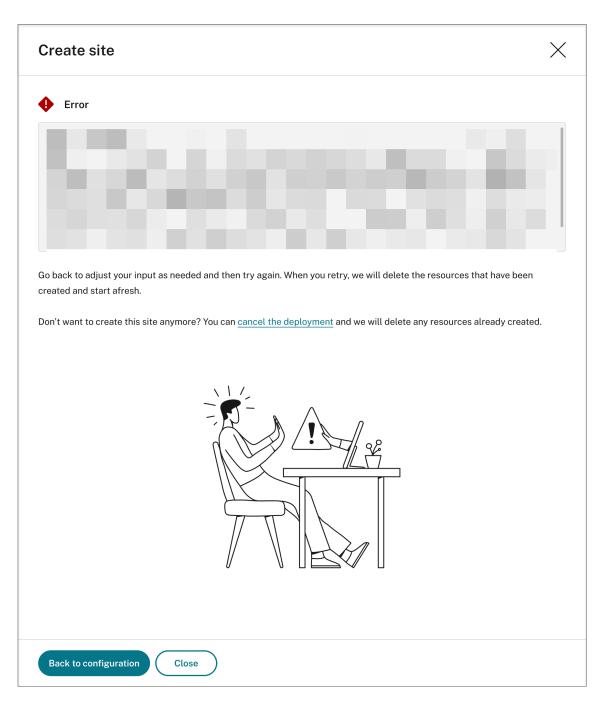
Deployment in progress:

en	nium	Ĉ	?		×
•	Monitor				
	Server Management Manage your Session Recording servers by load-balancing sites and configuring server settings. To add Session Recording servers, follow the <u>server connection guide</u> . + Create site C Refresh				0
	My test site (Some description for my test site.)		,	View status	

While a site deployment is in progress, you can click **View status** to view the progress. Deployment failed:

en	nium	¢	?		\sim
	Monitor				
	Server Management Manage your Session Recording servers by load-balancing sites and configuring server settings. To add Session Recording servers, follow the <u>server connection guide</u> . + Create site C Refresh				?
	My test site (Some description for my test site.)			View status	

If errors occur during the deployment process, click **View status** to view the error details. For an example of the error details:



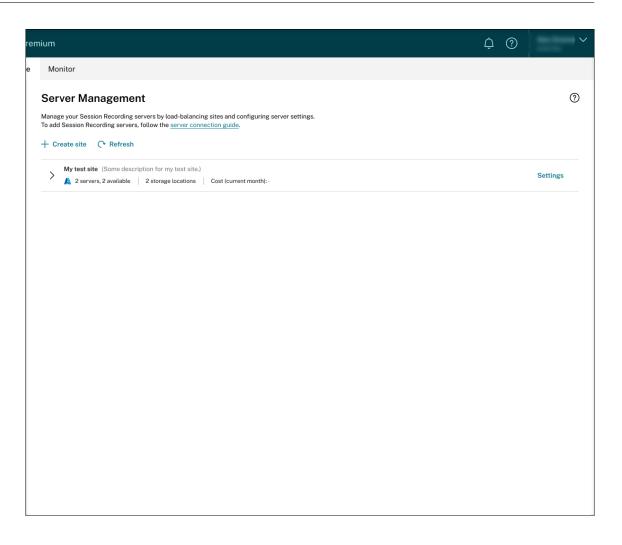
You can click **Back to configuration** or **cancel the deployment**. If you click **Back to configuration**, you're taken back to the **Create Site** page where you can alter your configurations and try again. If you're sure to cancel the deployment, follow the wizard to remove the site and the Azure resources created for the site. For example:

Cancel deployment	\times
O Deleting site and resources	
You can now close this dialog. The site will be removed once the resources are deleted.	
Close	

Deployment success:

When a site deployment is complete, you can expand the site and view and manage the resources created under it. The **View status** button changes to **Settings**. An Azure icon is available to represent sites deployed on Azure.

For information about site settings, see Site and server settings.



Add resources to an existing site deployed on Azure

For an existing site that you have deployed on Azure **through a host connection**, you can add resources including servers and storage to it. To do so, complete the following steps:

- 1. Select **Configuration > Server Management** from the left navigation of the Session Recording service.
- 2. On the **Server Management** page, locate and unfold the target site. An Azure icon is available to represent sites deployed on Azure.
- 3. Click Add resources.

emi	um					¢ ?	=	\sim
,	Mo	nitor						
-	Manag To add	ver Management ge your Session Recording servers by load-balancing sites a l Session Recording servers, follow the <u>server connection gr</u> reate site C Refresh		ttings.				?
	\sim	My test site (Some description for my test site.)	current month): <u>\$746.47</u>	Add resources			Settin	gs
		B Servers						
		srserver1 Server description goes here.	Server version 23.05.0.1	Cloud client version 7.39.16000.1	📀 Available		Q	ø
		srserver2 Server description goes here.	Server version 23.05.0.1	Cloud client version 7.39.16000.1	📀 Available		Q	
		Storage locations Storage maintenance						
		\\test.file.core.windows.net\recordings1	Maximum capacity 5 TiB					
		\\test.file.core.windows.net\recordings2	Maximum capacity 5 TiB					
		😝 Databases						
		sr-recording	Pricing tier General Purpose: Serve	rless, Gen5, 1 vCore				
		sr-logging	Pricing tier General Purpose: Serve	rless, Gen5, 1 vCore				
		🕰 Load balancer						
		sr-load-balancer						Ø
	>	Site 1 (This is the description for Site 1.) 3 servers, 1 available					Settin	gs
	>	Site 2 (This is the description for Site 2.) 1 server, 1 available					Settin	gs

4. On the **Add resources** page, click **Add server** and **Add storage** as needed.

1. 644	
+ Add server	
 + Add storage	

• To add servers, click **Add server** and then complete the following steps:

r test site		
Server Estimated cost (per month): \$83.51		⊖ 1 ↔
Image	Size	
Windows Server 2019 Datacenter - x64 Gen2	Standard_D4as_v4-4vcpus, 16	6 GiB memory
Domain	Secure client •	
test.net (10.10.10.10) Edit credentials	Create client	
Session Recording server version to install 23.05.0.1 🕢		
+	Add storage	

- a) Specify the number of servers to add.
- b) Click **Provide credentials** to join the new servers to the same domain as the existing servers.
- c) Click **Create client** to onboard the new servers to the Session Recording service.
- d) Click Start deployment.
- To add storage for storing recording files, click **Add storage** and then complete the following steps accordingly:
 - a) If your site was created with a standard storage account, you're prompted to specify the number of file shares to add. For example:

ly test site	dd resources X				
+ Add server					
File shares Estimated cost (per month	ı): \$307.20 (max.) 😰	⊙ 1 ↔			
Tier Transaction optimized	Maximum capacity 5 TiB				

b) If your site was created with a premium storage account, you can specify the number of file shares to add and customize the capacity of each file share. For example:

Add resour	dd resources				
	+ Add server				
File shares	Estimated cost (per month): \$819.20 🚱	⊙ 1 ↔			
Provisioned ca	apacity (GiB)				
Start deployme	ent Cancel				

c) Click Start deployment.

Note:

- The **Start deployment** button is available when either of the following conditions is met:
 - * At least one server has been specified and the domain and secure client have been configured.
 - * At least one file share has been specified.
- When resource deployment is in progress, the **Settings** button for the load balancer is disabled.

might not be able to remove these resour case, a prompt similar to the following is p	, , , , , , , , , , , , , , , , , , ,
Resource deployment	
• Deployment failed. Resolve the issue and try again.	

le to clean them up. Check in your Azure portal to make sure that the essary costs. Smvvzxn5 In storage account: srstoragern2olxc980b
In storage account: srstoragern2olxc980b
In storage account: srstoragern2olxc980b

Change the IP addresses that are allowed to access the load balancer

For an existing site that you have deployed on Azure **through a host connection**, you can change the IP addresses that are allowed to access the load balancer. To do so, complete the following steps:

- 1. Select Configuration > Server Management from the left navigation of the Session Recording service.
- 2. On the **Server Management** page, locate and unfold the target site. An Azure icon is available to represent sites deployed on Azure.
- 3. Click the **Settings** button in the **Load balancer** section.

en	nium					¢ (?)	×
е	Mo	nitor					
	Manag To add	ver Management er your Session Recording servers by load-balancing sites a Session Recording servers, follow the <u>server connection g</u> eate site C Refresh		ettings.			0
	\sim	My test site (Some description for my test site.)	(current month): \$746.47	Add resources			Settings
		B Servers					
		srserver1 Server description goes here.	Server version 23.05.0.1	Cloud client version 7.39.16000.1	🔗 Available		Q 🕸
		srserver2 Server description goes here.	Server version 23.05.0.1	Cloud client version 7.39.16000.1	🗸 Available		0. 🕸
		Storage locations Storage maintenance					
		\\test.file.core.windows.net\recordings1	Maximum capacity 5 TiB				
		\\test.file.core.windows.net\recordings2	Maximum capacity 5 TiB				
		😝 Databases					
		sr-recording	Pricing tier General Purpose: Serve	erless, Gen5, 1 vCore			
		sr-logging	Pricing tier General Purpose: Serve	erless, Gen5, 1 vCore			
		🔏 Load balancer					
		sr-load-balancer					-
	>	Site 1 (This is the description for Site 1.) 3 servers, 1 available					Settings
	>	Site 2 (This is the description for Site 2.) 1 server, 1 available					Settings

4. On the **Load balancer** settings page, enter the new IP addresses or ranges of your VDAs and separate them by a comma (,) in the **Restrict access of the load balancer to only the following addresses** field.

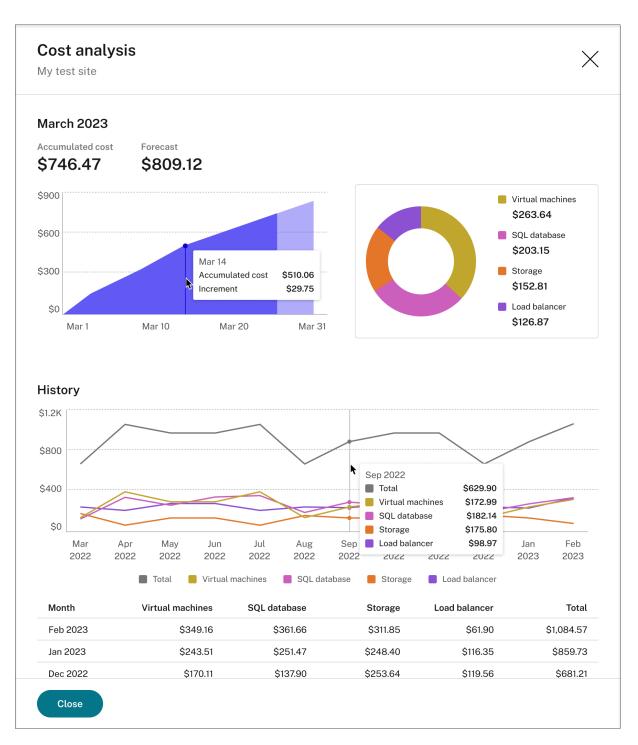
Load balancer settings	\times			
Access				
Restrict access of the load balancer to only the following addresses 📀				
192.168.99.0/24, 192.168.103.0/24				
Save (Cancel)				

5. Click Save.

View actual costs for using Azure

For an existing site that you have deployed on Azure **through a host connection**, click the cost amount to view the cost details. For example:

em	ium				¢ (?	
a	Мо	nitor				
	Manag To add	ver Management e your Session Recording servers by load-balancin Session Recording servers, follow the <u>server conn</u> sate site C Refresh				0
	\sim	My test site (Some description for my test site.) 2 servers, 2 available 2 storage locations	Cost (current month): <u>\$746.47</u>			Settings
		B Servers				
		sr-server-01 Server description goes here.	Server version 22.12.0.0	Cloud client version 7.36.25412.54733	Available	\$
		sr-server-02 Server description goes here.	Server version 22.12.0.0	Cloud client version 7.35.25358.46145	✓ Available	\$
		Storage locations Storage maintenance				
		\\test.file.core.windows.net\share1	Maximum capacity 5 TiB			
		\\test.file.core.windows.net\share2	Maximum capacity 5 TiB			
		Databases				
		sr-recording	Pricing tier General Purpose: Serverless, Ge	n5, 1 vCore		
		sr-logging	Pricing tier General Purpose: Serverless, Ge	n5, 1 vCore		
		🕰 Load balancer				
		sr-load-balancer				



Tips for viewing the actual costs:

- When you hover on the area graph for the current month, a reference line for the date and data from that day appears as an overlay.
- The history costs of different resources are represented by line graphs. Line graphs are available when there are at least two months of data. When you hover on the line graphs, a reference line and cost breakdown from the month appears as an overlay. To view the line graph of

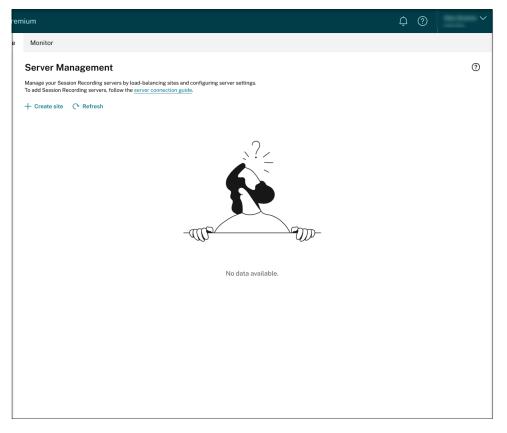
only a specific resource, hover on the resource.

Add a host connection

To add a host connection, complete the following steps:

1. Click Add connection on the Create site page with Create and deploy a site through a host connection selected. Or, click Add connection on the Host Connection page.

To access the **Create site** page, select **Configuration > Server Management** from the left navigation of the Session Recording service, and then click **Create site**.



To access the **Host Connection** page, select **Configuration > Host Connection** from the left navigation of the Session Recording service:

≡	citrıx	DaaS Pr	remium	Ĉ	?	/
	Overview	Manag	e Monitor			
Ø,,	Dashboard		Host Connection			0
Ø	Recordings		Connect to your Microsoft Azure subscription to deploy Session Recording resources with it. Learn more			
Ę	Comments		+ Add connection C Refresh			
F	Policies					
Êò	Activity Feed		. ?			
Û	Notifications					
۶	Admin Logging	>				
තු	Configuration	~				
	Server Manageme	ent				
	Host Connection					
	Playback Permiss	ions				
	Preferences		You have not added any connections.			
		~				

- 2. On the **Add connection** page, give the new host connection a name and a description (optional). Enter your Azure subscription ID and the following required information about your application registration:
 - Application (client) ID
 - Service principal object ID (ID of the service principal object associated with the application)
 - Directory (tenant) ID
 - Client secret
 - Secret expiration date

Add connection	
lame	
Name this connection	
Description (optional)	
Enter description	
Complete the following fields to add a connection. You can obta	in the information from your Azure portal.
Enter subscription ID Jse the subscription with which your VDAs are deployed.	
Enter subscription ID	
Enter subscription ID Jse the subscription with which your VDAs are deployed. Application (client) ID	
Enter subscription ID Jse the subscription with which your VDAs are deployed. Application (client) ID Enter application ID	
Enter subscription ID Jse the subscription with which your VDAs are deployed. Application (client) ID Enter application ID Service principal object ID 3	
Enter subscription ID Jse the subscription with which your VDAs are deployed. Application (client) ID Enter application ID Service principal object ID Enter service principal object ID	
Enter subscription ID Jse the subscription with which your VDAs are deployed. Application (client) ID Enter application ID Service principal object ID Enter service principal object ID Directory (tenant) ID	
Enter subscription ID Jase the subscription with which your VDAs are deployed. Application (client) ID Enter application ID Service principal object ID Enter service principal object ID Directory (tenant) ID Enter directory ID	
Enter subscription ID Use the subscription with which your VDAs are deployed. Application (client) ID Enter application ID Service principal object ID Enter service principal object ID Directory (tenant) ID Enter directory ID Client secret	

To find your Azure subscription ID, do the following:

- a) Sign in to the Azure portal.
- b) Under the Azure services section, select Subscriptions.
- c) Find your subscription in the list and copy the **Subscription ID** shown in the second column.

			services, and do	cs (G+/)			E					
												×
w eligible s	subscriptions											
Му	y role == all	Status == all +	7 Add filter									
¢↓		My role	τĻ	Current cost	Secure Score	†u P	Parent management group	r.,		Stati	as ↑↓	
		Owner				т	ienant Root Group			O A	ctive	
			↑Ļ					it group 1	it group ↑↓	it group ↑↓		t group ↑↓ Status ↑↓ ⊘ Active

To obtain the required information about your application registration, do the following:

a) (Skip this step if you already have an application registered.) Register an application with your Azure AD tenant. An application must be registered to delegate identity and access management functions to Azure AD.

There are two methods for registering an application.

Method 1:

i. Copy the following Citrix-provided script and name it, for example, **AppRegistra-tion.ps1**:

```
1 <#
2
   .SYNOPSIS
       Copyright (c) Citrix Systems, Inc. All Rights Reserved.
3
4 .DESCRIPTION
       Create Azure app registrations and give proper
5
           permissions for Citrix Session Recording service
          deployment
6 .Parameter azureTenantID
   .Parameter azureSubscriptionID
 7
   .Parameter appName
8
9
   .Parameter role
10 #>
11
12 [CmdletBinding()]
13 Param(
       [Parameter(Mandatory = $true)] [String] $tenantId,
14
       [Parameter(Mandatory = $true)] [String] $subscriptionId
       [Parameter(Mandatory = $true)] [String] $appName,
17
       [Parameter(Mandatory = $true)] [String] $role
18
   )
   if ($role -ne "Citrix Session Recording service" -and $role
       -ne "Citrix Session Recording Deployment" -and $role -
      ne "Contributor") {
       throw [System.Exception] "Invalid role '$role', only
           support 'Citrix Session Recording service', 'Citrix
          Session Recording Deployment', and 'Contributor'."
23
    }
24
25
```

```
try {
26
27
       Get-InstalledModule -Name "Az.Accounts" -ErrorAction
28
           Stop
29
    }
   catch {
       Install-Module -Name "Az.Accounts" -Scope CurrentUser -
           Repository PSGallery -SkipPublisherCheck -Force
34
    }
   try {
       Get-InstalledModule -Name "Az.Resources" -ErrorAction
           Stop
    }
40
41
   catch {
42
43
       Install-Module -Name "Az.Resources" -Scope CurrentUser
           -Repository PSGallery -SkipPublisherCheck -Force
44
    }
45
46
47
   Connect-AzAccount -TenantId $tenantId -Subscription
       $subscriptionId
48
   try {
49
51
       $azureAdApplication = Get-AzADApplication -DisplayName
           $appName
53
       if ($null -eq $azureAdApplication) {
54
55
           Write-Host "Create a new app registration for
               Citrix Session Recording" -ForegroundColor Green
            $azureAdApplication = New-AzADApplication -
               DisplayName $appName -AvailableToOtherTenants
               $false
        }
58
       else {
           Write-Host "App registration '$appName' already
61
               exists." -ForegroundColor Yellow
62
        }
63
64
        $azureAdApplicationServicePrincipal = Get-
65
           AzADServicePrincipal -DisplayName $appName
       if($null -eq $azureAdApplicationServicePrincipal) {
67
```

68		<pre>\$azureAdApplicationServicePrincipal = New- AzADServicePrincipal -AppId \$azureAdApplication. AppId</pre>
69		Write-Host "Create a service principal for app registration '\$appName'" -ForegroundColor Green
70	}	6
	else{	
71	etset	
72		
73		Write-Host "Service principal already exists for app registration '\$appName'" -ForegroundColor Yellow
74	}	
75		
76		
77	if	(\$role -eq "Citrix Session Recording service" -or
		<pre>\$role -eq "Citrix Session Recording Deployment") {</pre>
78		
79		<pre>\$rootPath = Get-Location</pre>
80		<pre>\$customRolePath = \$(Join-Path -Path \$rootPath - ChildPath "sessionrecording.json") Resolve- Path</pre>
81		<pre>\$customRoleJson = Get-Content \$customRolePath ConvertFrom-Json</pre>
82		<pre>\$customRoleJson.AssignableScopes[0] = "/ subscriptions/" + \$subscriptionId</pre>
83		<pre>\$tmpCustomRolePath = Join-Path -Path \$rootPath - ChildPath "sessionrecording_tmp.json"</pre>
84		0- 1 3
85		<pre>\$roleDef = Get-AzRoleDefinition -Name \$role</pre>
86		if (\$null -eq \$roleDef) {
87		
88		try {
89		
90		\$customRoleJson ConvertTo-Json -depth 32 Set-Content \$tmpCustomRolePath
91		Write-Host "Create a custom role '\$role'" - ForegroundColor Green
92		New-AzRoleDefinition -InputFile \$tmpCustomRolePath
93		}
94		
95		catch {
96		
97		Write-Host "Failed to create custom role,
98		error: \$_" -ForegroundColor Red throw \$Exception
99		}
100		
101		}
102		,
103		else {
104		
105		try {

106	
107	\$customRoleJson Add-Member -MemberType
	NoteProperty -Name 'id' -Value \$(
	<pre>\$roleDef.Id)</pre>
108	\$customRoleJson ConvertTo-Json -depth 32
100	
	Set-Content <pre>\$tmpCustomRolePath</pre>
109	Write-Host "Upadate the custom role '\$role'
	" -ForegroundColor Green
110	Set-AzRoleDefinition -InputFile
	<pre>\$tmpCustomRolePath</pre>
111	}
112	
113	catch {
114	
	Write West WEsiled to undete sustan vale
115	Write-Host "Failed to update custom role,
	error: \$_" -ForegroundColor Red
116	throw \$Exception
117	}
118	
119	}
120	
121	}
121	L
122	
	Śrololocianmont - Cot AzDololocianmont
124	<pre>\$roleAssignment = Get-AzRoleAssignment -</pre>
	RoleDefinitionName <pre>\$role -ObjectId \$(</pre>
	<pre>\$azureAdApplicationServicePrincipal.Id)</pre>
125	if (\$null -eq \$roleAssignment) {
126	
127	Write-Host "Assign role '\$role' to app '\$appName'"
	-ForegroundColor Green
128	New-AzRoleAssignment -RoleDefinitionName \$role -
	ApplicationId \$azureAdApplication.AppId
129	}
130	L
131	else {
132	
133	Write-Host "Role '\$role' already assigned to app '
	<pre>\$appName'" -ForegroundColor Yellow</pre>
134	}
135	
136	
137	Write-Host "Tenant ID: \$tenantId" -
1.51	ForegroundColor Green
120	
138	Write-Host "Subscription ID:
	<pre>\$subscriptionId" -ForegroundColor Green</pre>
139	Write-Host "Application ID: \$(
	<pre>\$azureAdApplication.AppId)" -ForegroundColor Green</pre>
140	Write-Host "Service principal object ID: \$(
	<pre>\$azureAdApplicationServicePrincipal.Id)" -</pre>
	ForegroundColor Green
141	}
142	,
TTT	

ii. Copy the following custom role file and name it **sessionrecording.json**. This custom role file helps to assign least permissions for the application to be registered.

1	{
2	
3	"Name": "Citrix Session Recording service",
4	"Description": "Custom role for session recording
	service",
5	"AssignableScopes": [
6	"/subscriptions/*"
7],
8	"Actions": [
9	"Microsoft.Authorization/roleAssignments/write",
10	"Microsoft.Authorization/roleDefinitions/delete",
11	"Microsoft.Authorization/roleDefinitions/write",
12	"Microsoft.Compute/availabilitySets/write",
13	"Microsoft.Compute/virtualMachines/delete",
14	"Microsoft.Compute/virtualMachines/extensions/read"
15	"Microsoft.Compute/virtualMachines/extensions/write
10	", UMieressft Compute/wirtus]Machines/readu
16 17	"Microsoft.Compute/virtualMachines/read",
	"Microsoft.Compute/virtualMachines/runCommands/read
18	, "Microsoft.Compute/virtualMachines/runCommands/
10	write",
19	"Microsoft.Compute/virtualMachines/write",
20	"Microsoft.CostManagement/forecast/read",
21	"Microsoft.CostManagement/query/read",
22	"Microsoft.KeyVault/locations/deletedVaults/purge/
	action",
23	"Microsoft.KeyVault/vaults/read",
24	"Microsoft.KeyVault/vaults/write",
25	"Microsoft.ManagedIdentity/userAssignedIdentities/
	assign/action",
26	"Microsoft.ManagedIdentity/userAssignedIdentities/
	read",
27	"Microsoft.ManagedIdentity/userAssignedIdentities/
	write",
28	"Microsoft.Network/loadBalancers/
	<pre>backendAddressPools/join/action",</pre>
29	"Microsoft.Network/loadBalancers/write",
30	"Microsoft.Network/networkInterfaces/join/action",

31	"Microsoft.Network/networkInterfaces/read",
32	"Microsoft.Network/networkInterfaces/write",
33	"Microsoft.Network/networkSecurityGroups/delete",
34	<pre>"Microsoft.Network/networkSecurityGroups/join/</pre>
35	"Microsoft.Network/networkSecurityGroups/read",
36	<pre>"Microsoft.Network/networkSecurityGroups/ securityRules/read",</pre>
37	"Microsoft.Network/networkSecurityGroups/
	securityRules/write",
38	"Microsoft.Network/networkSecurityGroups/write",
39	"Microsoft.Network/publicIPAddresses/join/action",
40	"Microsoft.Network/publicIPAddresses/read",
41	"Microsoft.Network/publicIPAddresses/write",
42	"Microsoft.Network/virtualNetworks/read",
43	<pre>"Microsoft.Network/virtualNetworks/subnets/join/</pre>
44	"Microsoft.Network/virtualNetworks/subnets/read",
45	"Microsoft.Resources/deployments/operationstatuses/ read".
46	"Microsoft.Resources/deployments/read",
47	"Microsoft.Resources/deployments/write",
48	"Microsoft.Resources/subscriptions/resourceGroups/
	delete",
49	<pre>"Microsoft.Resources/subscriptions/resourceGroups/ read",</pre>
50	"Microsoft.Resources/subscriptions/resourceGroups/
00	write",
51	"Microsoft.Sql/servers/auditingSettings/write",
52	"Microsoft.Sql/servers/databases/write",
53	"Microsoft.Sql/servers/firewallRules/write",
54	"Microsoft.Sql/servers/read",
55	"Microsoft.Sql/servers/write",
56	"Microsoft.Storage/storageAccounts/fileServices/
	shares/delete",
57	"Microsoft.Storage/storageAccounts/fileServices/
	shares/write",
58	"Microsoft.Storage/storageAccounts/listkeys/action"
59	"Microsoft.Storage/storageAccounts/read",
60	"Microsoft.Storage/storageAccounts/write"
61],
62	"NotActions": [
63	
64],
65	"DataActions": [
66	
67],
68	"NotDataActions": [
69	
70]
71 }	
72	

```
73 <!--NeedCopy-->
```

- iii. Put AppRegistration.ps1 and sessionrecording.json in the same folder.
- iv. Run either of the following commands as needed.

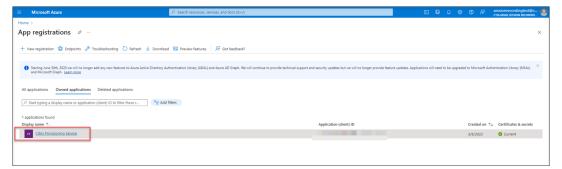
To create an application and assign it least permissions with the preceding custom role file (**sessionrecording.json**), run:

To create an application and assign it the Azure built-in **Contributor** role, run:

Method 2:

Go to the Azure portal and register an application by yourself. Grant proper permissions to the application. For the least permissions that are required, see the **sessionrecord-ing.json** file in **Method 1**.

b) Click the display name of your application.



c) On the overview page, find the application (client) ID and directory (tenant) ID. Click the link next to Managed application in local directory to find the ID of the service principal object associated with the application. Click the link next to Client credentials to find the client secret ID and its expiration date.

Microsoft Azure	,P Search resources, services, and docs (G+/)			
Home > App registrations >				
🔣 Citrix Provisioning S	ervice 🖈 …			×
	💼 Delete 🜐 Endpoints 🔣 Preview features			
Sverview				
😃 Quickstart	∧ Essentials			
💉 Integration assistant	Display name : <u>Citrix Provisioning Service</u> Application (client) ID :	Client credentials Redirect URIs	: <u>Q certificate_1_secret</u> : Add a Redirect URI	
Manage	Object ID	Application ID URI	: Add a Nedirect Uni : api://03eacdb3-8322-4854-8219-30b0526a6428/eb089a2e-52b0-4492-9e24-7bf579cff14f-zok9	
Branding & properties	Directory (tenant) ID		: Citrix Provisioning Service	
Authentication	Supported account types : All Microsoft account users	-		_
Certificates & secrets	Crastico June 20th 2020 we will an income add any new features to Anyon Artice Directory Authority	estication Strate (ADA1) and Amore AD Graph. We will continue to provide technology	nrical support and security updates but we will no longer provide feature updates. Applications will need to	×
Token configuration	be upgraded to Microsoft Authentication Library (MSAL) and Microsoft Graph. Learn more	inication closely (NDNL) and NLINE ND Graph. The Hill Continue to provide tech	mital apport and accurry optimize out ne mit to longer provide neutric optimize. Approximit mit need to	
+ API permissions				
Expose an API	A Starting November 9th, 2020 end users will no longer be able to grant consent to newly register	ed multitenant apps without verified publishers. Add MPN ID to verify publish	xr	
App roles	Get Started Documentation			
A Owners				
& Roles and administrators	Build you	r application with the Microsoft ide	entity platform	
Manifest				
Support + Troubleshooting	The Microsoft identity platform is an authentication ac	n service, open-source libraries, and application management tools. You ccess and protect APIs, and add sign-in for your users and customers.	can create modern, standards-based authentication solutions, earn morege	
Troubleshooting				
2 New support request	📥 🙈 👝 🏴 🛛		•	
		Ó 😰	ė 💐 🔒	
	🛛 🔹 🔹 🕵 🕵			
	Call APIs	Sign in users in 5 minutes	Configure for your organization	
	Build more powerful apps with rich user and business data from Microsoft services and your company's data sources.	Use our SDKs to sign in users and call APIs in a few own steps. Use the quickstarts to start a web app, mobile app. SPA, or daemon app.	Assign users and groups, apply conditional access policies, configure single sign-on, and more in Enterprise applications.	

For example, the ID of the service principal object associated with the application:

Microsoft Azure	, P Search resources, services, and docs (G+/)	9 © ®	
Home > Citrix Provisioning Service >	,		
Citrix Provisioning	Service Overview		×
	Properties		
Deployment Plan	Name O		
× Diagnose and solve problems	Citrix Provisioning Service		
Manage	Application ID		
Properties	Object ID O		
🚨 Owners	Objection O		
8 Roles and administrators	Getting Started		
Users and groups	Getting Started		
Single sign-on			
Provisioning	🔒 1. Assign users and groups 🔅 2. Provision User Accounts 😔 3. Self service		
Application proxy	Provide specific users and groups access You'll need to create user accounts in application using their Azure AD		
Self-service	Assign users and groups Learn more Get started		
 Custom security attributes (preview) 			
Security	What's New		
🖧 Permissions	What 5 New		
Token encryption	Sign in charts have moved! The new insights were shows sign in info along with other useful application data. View insights		
Activity	Delete Application has moved to Properties You can now delete your application from the Properties page. View properties		
Sign-in logs	Vou can now delete your application from the Properties page. View properties		
🕍 Usage & insights	Getting started has moved to Overview The Getting Started page has been replaced by the steps above		
Audit logs	*		

For example, the client secret ID and its expiration date:

Microsoft Azure	2.	D Search resources	; services, and docs (G+/)			2.	€ ¢	_ © () &	
Home > Citrix Provisioning Service										
Citrix Provisioning S	ervice Certificates & secret	s ☆ …								×
•										
✓ Search «	R Got feedback?									
R Overview										
Quickstart	Credentials enable confidential applications to ide scheme). For a higher level of assurance, we recom	ntify themselves to t mend using a certif	the authentication service when receiv icate (instead of a client secret) as a c	ing tokens at a web addressable location (using an HTTP redential.						
💉 Integration assistant		,,								
Manage	Application registration certificates, secrets and	I federated credential	s can be found in the tabs below.		×					
Branding & properties										
Authentication	Certificates (0) Client secrets (1) Feder	ated credentials (0								
📍 Certificates & secrets	A secret string that the application uses to prove									
Token configuration	A secret string that the application uses to prove	its identity when re	questing a token. Also can be reterred	to as application password.						
 API permissions 	+ New client secret									
Expose an API	Description	Expires	Value 🛈	Secret ID						
App roles	No description	3/9/2123	QBZ*****							
A Owners										
& Roles and administrators										
Manifest										
Support + Troubleshooting										
Troubleshooting										
New support request										

3. Click **Save** to test whether the host connection you specify is available.

If the host connection you specify is available, you're taken back to the **Host Connection** page and prompted that the host connection is added successfully.

The Session Recording service reminds you of expired and expiring client secrets using error and warning icons, respectively. You can click the corresponding host connection and click **Change secret** on the **Connection details** page to update the client secret and its expiration date.

st Connection text to your Microsoft Aure velocing to the depion greation state. Learn more text to your Microsoft Aure velocing to the depion greation state. Learn more text to your Microsoft Aure velocing to the depion greation state. Second state TEST text depion and and and and and and and and and an	
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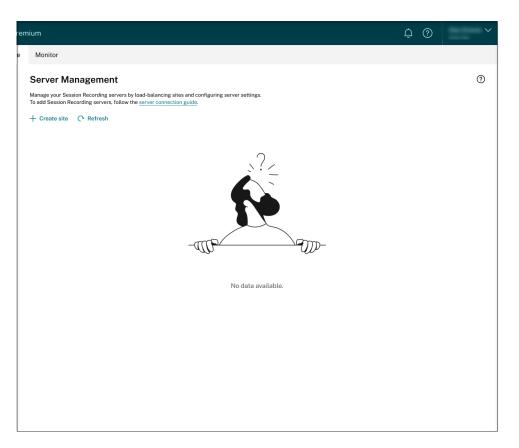
Create and deploy a site through an ARM template

You can create an Azure Resource Manager template (ARM template) to deploy Session Recording resources in Azure. The following are the main steps to achieve this goal:

- 1. Create an ARM template in the Session Recording service. The ARM template is a JavaScript Object Notation (JSON) file that contains how and which resources you want to deploy.
- 2. Download and unzip the ARM template. Run the deployment script in the unzipped template folder to start deploying the recourses specified in the template to Azure.
- 3. Check the deployment progress in Azure. After the deployment is complete, set up Session Recording to get it up and running. To set up Session Recording, you need to specify the version of the Session Recording server to install and upload the **resourceInfo.json** file.

The specific steps are as follows:

 Select Configuration > Server Management from the left navigation of the Session Recording service.



2. On the Server Management page, click Create site. The Create Site page appears.

Create site	×
1 Site information	What would you like to do?
	Create and deploy a site through a host connection
	Deploy Session Recording resources using a host connection that connects to your specific cloud subscription. Learn more
	Create and deploy a site through an ARM template Create an Azure Resource Manager template (ARM template) to deploy Session Recording resources in Azure. Learn more
	Site name
	Name this site
	Description (optional) Enter description
Save)

3. Select **Create and deploy a site through an ARM template**. The main steps are listed in the left navigation.

	Downloads
Create site	×
1 Site information	What would you like to do?
2 About your deployment Optional	Create an empty site
3 Network	Create a site and add servers later.
(4) Virtual machines	Create and deploy a site through a host connection
5 Domain and certificate	Deploy Session Recording resources using a host connection that connects to your specific cloud subscription. Learn more
6 Storage	Create and deploy a site through an ARM template
⑦ Databases	Create an Azure Resource Manager template (ARM template) to deploy Session Recording resources in Azure. Learn more
8 Load balancer	
Tags Optional	Site name
10 Secure client	Name this site
1 Summary	Description (optional)
	Enter description
	ě
	Region
	v
	All your resources will be created in this region.
	8
Next Cancel	

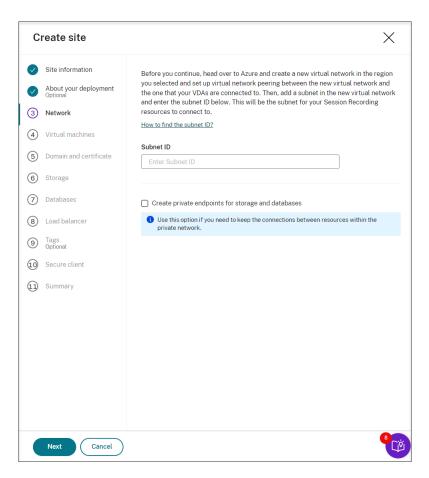
- 4. Enter a site name and description, and then click **Next**.
- 5. (Optional) To get recommendations for VM and storage configurations, provide information about your recording needs.

You can skip this step by clicking **I'm good, skip this step** or by clicking **Next** with nothing selected.

Create site	×
 Site information About your deployment Optional Network 	Tell us about your recording needs, so we can provide some recommendations for your VM and storage configurations. I'm good, skip this step.
 Virtual machines Domain and certificate Storage 	The following information helps determine the recommended number of Session Recording servers. How many concurrent sessions do you have at most? 4,000-6,000 v
 ⑦ Databases ⑧ Load balancer ○ Load 	Recommended number of servers: 3) reset
 Tags Optional Secure client Summary 	The following information helps determine the recommended storage capacity. How much visual movement do your sessions typically have? Some, the display changes but not drastically
	How many sessions do you need to record per day? 5,000-10,000 v For how long do you need to retain each recording file?
	15-30 days v Recommended storage capacity: 30 TiB *) reset
Next Cancel	

When you select an option from the drop-down list, a recommendation is presented according to your selection. A **reset** button is available next to the recommendation. It lets you clear your selections and the corresponding recommendation in that section.

6. Go to the Azure portal and create a new virtual network in the region you selected and set up virtual network peering between the new virtual network and the one that your VDAs are connected to. Then, add a subnet in the new virtual network. Find and enter the subnet ID below.



To keep the connections between resources within the private network, select the **Create pri-vate endpoints for storage and databases** check box.

After you select the **Create private endpoints for storage and databases** check box, decide on whether to enter another subnet ID by taking the following into consideration:

- If you do not plan to join your Session Recording servers to an Active Directory domain, the subnet is not needed and thus leave the subnet ID field empty.
- If you leave the subnet ID field empty, you are joining your Session Recording servers to an Azure Active Directory domain.

Create site	X
 Site information About your deployment Optional Network Virtual machines Domain and certificate Storage 	Before you continue, head over to Azure and create a new virtual network in the region you selected and set up virtual network peering between the new virtual network and the one that your VDAs are connected to. Then, add a subnet in the new virtual network and enter the subnet ID below. This will be the subnet for your Session Recording resources to connect to. How to find the subnet ID2 Subnet ID Enter Subnet ID
 Databases Load balancer Tags Optional Secure client Summary 	 Create private endpoints for storage and databases Using private endpoints requires a DNS private resolver, which needs a dedicated subnet. In the same virtual network you created, add another subnet and enter its ID below. Note: If you do not plan to join your Session Recording servers to an Active Directory domain, the subnet is not needed. Subnet ID Enter Subnet ID Estimated cost (per month) \$182.5
Next Cancel	9 (1)

7. (Skip this step if you already have an application registered.) Register an application with your Azure AD tenant. An application must be registered to delegate identity and access management functions to Azure AD.

There are two methods for registering an application.

Method 1:

a) Copy the following Citrix-provided script and name it, for example, **AppRegistration.ps1**:

```
1 <#
2 .SYNOPSIS
      Copyright (c) Citrix Systems, Inc. All Rights Reserved.
3
4 .DESCRIPTION
5
       Create Azure app registrations and give proper permissions
           for Citrix Session Recording service deployment
6 .Parameter azureTenantID
   .Parameter azureSubscriptionID
7
   .Parameter appName
8
9 .Parameter role
10 #>
11
12 [CmdletBinding()]
13 Param(
14 [Parameter(Mandatory = $true)] [String] $tenantId,
```

```
[Parameter(Mandatory = $true)] [String] $subscriptionId,
16
        [Parameter(Mandatory = $true)] [String] $appName,
        [Parameter(Mandatory = $true)] [String] $role
17
18)
19
20 if ($role -ne "Citrix Session Recording service" -and $role -
      ne "Citrix Session Recording Deployment" -and $role -ne "
      Contributor") {
21
       throw [System.Exception] "Invalid role '$role', only
22
           support 'Citrix Session Recording service', 'Citrix
           Session Recording Deployment', and 'Contributor'."
23
    }
24
25
26 try {
27
       Get-InstalledModule -Name "Az.Accounts" -ErrorAction Stop
28
29
    }
31 catch {
32
       Install-Module -Name "Az.Accounts" -Scope CurrentUser -
           Repository PSGallery -SkipPublisherCheck -Force
34
    }
36 try {
37
38
       Get-InstalledModule -Name "Az.Resources" -ErrorAction Stop
39
    }
40
41 catch {
42
43
      Install-Module -Name "Az.Resources" -Scope CurrentUser -
          Repository PSGallery -SkipPublisherCheck -Force
44
    }
45
46
  Connect-AzAccount -TenantId $tenantId -Subscription
47
       $subscriptionId
48
49 try {
51
52
       $azureAdApplication = Get-AzADApplication -DisplayName
           $appName
       if ($null -eq $azureAdApplication) {
53
54
55
           Write-Host "Create a new app registration for Citrix
               Session Recording" - ForegroundColor Green
           $azureAdApplication = New-AzADApplication -DisplayName
56
                $appName -AvailableToOtherTenants $false
57
        }
```

58	
59	else {
60	
61	Write-Host "App registration '\$appName' already exists ." -ForegroundColor Yellow
62	}
63	
64	
65	<pre>\$azureAdApplicationServicePrincipal = Get-</pre>
	AzADServicePrincipal -DisplayName \$appName
66	if (\$null -eq \$azureAdApplicationServicePrincipal) {
67 68	\$azuroAdApplicationSorvicoPrincipal - Now-
00	<pre>\$azureAdApplicationServicePrincipal = New- AzADServicePrincipal -AppId \$azureAdApplication.</pre>
	AppId AppId AppId AppId AppId AppId
69	Write-Host "Create a service principal for app
	registration '\$appName'" -ForegroundColor Green
70	}
71	else{
72	
73	Write-Host "Service principal already exists for app
	registration '\$appName'" -ForegroundColor Yellow
74	}
75	
76	if (trale, or "Citrix Cossier Decording convice", or trale
77	<pre>if (\$role -eq "Citrix Session Recording service" -or \$role -eq "Citrix Session Recording Deployment") {</pre>
78	ćurstDath - Cat Larstin
79 80	\$rootPath = Get-Location \$customRolePath = \$(Join-Path -Path \$rootPath -
00	ChildPath "sessionrecordingdeployment.json")
	Resolve-Path
81	<pre>\$customRoleJson = Get-Content \$customRolePath</pre>
	ConvertFrom-Json
82	<pre>\$customRoleJson.AssignableScopes[0] = "/subscriptions/</pre>
	" + \$subscriptionId
83	<pre>\$tmpCustomRolePath = Join-Path -Path \$rootPath -</pre>
	ChildPath "sessionrecording_tmp.json"
84	
85	<pre>\$roleDef = Get-AzRoleDefinition -Name \$role</pre>
86	if (\$null -eq \$roleDef) {
87	tere (
88 89	try {
90	\$customRoleJson ConvertTo-Json -depth 32
50	Set-Content \$tmpCustomRolePath
91	Write-Host "Create a custom role '\$role'" -
<u> </u>	ForegroundColor Green
92	New-AzRoleDefinition -InputFile
	\$tmpCustomRolePath
93	}
94	
95	catch {

<pre>96 97 97 97 97 97 97 97 97 97 97 97 97 97</pre>	97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122	<pre>error: \$_" -ForegroundColor Red throw \$Exception } else { try { \$customRoleJson Add-Member -MemberType NoteProperty -Name 'id' -Value \$(\$roleDef. Id)</pre>
<pre>error: \$_" -ForegroundColor Red throw \$Exception } } else { } else { } else { } else { } else { } else { } else { } else { } else { } else { } error: \$_" -Komeber -Member -MemberType NoteProperty -Name 'id' -Value \$(\$roleDef. Id) scustomRoleJson ConvertTo-Json -depth 32 Set-Content \$tmpCustomRolePath error: \$_mouster content is a set a</pre>	98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122	<pre>error: \$_" -ForegroundColor Red throw \$Exception } else { try { \$customRoleJson Add-Member -MemberType NoteProperty -Name 'id' -Value \$(\$roleDef. Id)</pre>
<pre>98</pre>	99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122	<pre>throw \$Exception } else { try { \$customRoleJson Add-Member -MemberType NoteProperty -Name 'id' -Value \$(\$roleDef. Id)</pre>
<pre>99 } 100 101 } 102 103 else { 104 105 try { 106 107 \$customRoleJson Add-Member -MemberType 107 NoteProperty -Name 'id' -Value \$(\$roleDef. 108 \$customRoleJson ConvertTo-Json -depth 32 108 \$customRoleJson ConvertTo-Json -depth 32 109 Write-Host "Upadate the custom role the 'srole'' - 109 ForegroundColor Green 110 Set-AzRoleDefinition -InputFile 111 } 112 \$ 113 catch { 114 115 Write-Host "Failed to update custom role, 117 } 118 119 } 119 } 120 121 } 122 123 124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName 125 if (\$null -eq \$roleAssignment) { 125 Write-Host "Assign role '\$role' to app '\$appName''' - 126 ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - 129 } 129 } 129 } </pre>	99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121	<pre>} else { try { \$customRoleJson Add-Member -MemberType NoteProperty -Name 'id' -Value \$(\$roleDef. Id)</pre>
<pre>100 101 } 102 103 else { 104 105 try { 105 try { 106</pre>	101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121	<pre>} else { try { \$customRoleJson Add-Member -MemberType NoteProperty -Name 'id' -Value \$(\$roleDef. Id)</pre>
<pre>102 103 else { 104 105 107 107 108 108 108 108 108 109 108 109 109 109 109 109 109 100 100</pre>	102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122	<pre>else { try { \$customRoleJson Add-Member -MemberType NoteProperty -Name 'id' -Value \$(\$roleDef. Id)</pre>
<pre>103 else { 104 105 try { 106 107 \$customRoleJson Add-Member -MemberType 108 NoteProperty -Name 'id' -Value \$(\$roleDef. 108 \$customRoleJson ConvertTo-Json -depth 32 109 Set-Content \$tmpCustomRolePath 109 Write-Host "Upadate the custom role '\$role'" - 100 Set-AzRoleDefinition -InputFile 111 } 112 113 catch { 114 115 Write-Host "Failed to update custom role, 117 error: \$_" -ForegroundColor Red 116 throw \$Exception 117 } 120 121 } 122 123 124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName 125 if (\$null -eq \$roleAssignment) { 126 Write-Host "Assign role '\$role' to app '\$appName'" - 127 ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 } 129 } </pre>	103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122	<pre>try { \$customRoleJson Add-Member -MemberType NoteProperty -Name 'id' -Value \$(\$roleDef. Id)</pre>
<pre>104 105 107 107 108 108 109 108 109 109 109 109 109 109 109 109 109 109</pre>	104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122	<pre>try { \$customRoleJson Add-Member -MemberType NoteProperty -Name 'id' -Value \$(\$roleDef. Id)</pre>
<pre>105 try { 106 107 \$customRoleJson Add-Member -MemberType 108 NoteProperty -Name 'id' -Value \$(\$roleDef. 108 ScustomRoleJson ConvertTo-Json -depth 32 109 Write-Host "Upadate the custom role '\$role'" - 100 Set-AzRoleDefinition -InputFile 111 } 112 catch { 114 Write-Host "Failed to update custom role, 116 error: \$_" -ForegroundColor Red 116 throw \$Exception 117 } 118 120 121 } 122 123 124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName 125 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName 126 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName 127 Write-Host "Assign role '\$role' to app '\$appName'" - 128 New-AzRoleAssignment -RoleDefinitionName \$role - 129 } 129 } 129 } 120 } 121 } 122 \$ 123 \$roleAssignment -RoleDefinitionName \$role - 128 New-AzRoleAssignment -RoleDefinitionName \$role - 129 } 129 } 129 } </pre>	105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122	\$customRoleJson Add-Member -MemberType NoteProperty -Name 'id' -Value \$(\$roleDef. Id)
<pre>106 107 \$customRoleJson Add-Member -MemberType NoteProperty -Name 'id' -Value \$(\$roleDef. Id) 108 \$customRoleJson ConvertTo-Json -depth 32 Set-Content \$tmpCustomRolePath 109 Write-Host "Update the custom role '\$role'" - ForegroundColor Green 110 Set-AzRoleDefinition -InputFile \$tmpCustomRolePath 111 } 112 catch { 113 catch { 114 Write-Host "Failed to update custom role, error: \$_" -ForegroundColor Red 116 throw \$Exception 117 } 118 119 } 120 121 } 122 123 124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName \$role -ObjectId \$(\$azureAdApplicationServicePrincipal. Id) 125 if (\$null -eq \$roleAssignment) { 126 Write-Host "Assign role '\$role' to app '\$appName'" - ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 } 129 }</pre>	106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122	\$customRoleJson Add-Member -MemberType NoteProperty -Name 'id' -Value \$(\$roleDef. Id)
<pre>107 \$customRoleJson Add-Member -MemberType NoteProperty -Name 'id' -Value \$(\$roleDef. Id) 108 \$customRoleJson ConvertTo-Json -depth 32 Set-Content \$tmpCustomRolePath 109 Write-Host "Upadate the custom role '\$role'" - ForegroundColor Green 110 Set-AzRoleDefinition -InputFile \$tmpCustomRolePath 111 } 112 catch { 113 catch { 114 Write-Host "Failed to update custom role, error: \$_" -ForegroundColor Red 116 throw \$Exception 117 } 118 119 } 120 121 } 120 121 } 122 123 124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName \$role -ObjectId \$(\$azureAdApplicationServicePrincipal. Id) 125 if (\$null -eq \$roleAssignment) { 126 Write-Host "Assign role '\$role' to app '\$appName'" - ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 } 129 }</pre>	107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122	NoteProperty -Name 'id' -Value \$(\$roleDef. Id)
NoteProperty -Name 'id' -Value \$(\$roleDef.Id)108\$customRoleJson ConvertTo-Json -depth 32 Set-Content \$tmpCustomRolePath109Write-Host "Upadate the custom role '\$role'" -ForegroundColor Green110Set-AzRoleDefinition -InputFile\$tmpCustomRolePath111}112113catch {114115Write-Host "Failed to update custom role,error: \$_" -ForegroundColor Red116throw \$Exception117}120121122123124\$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName\$role -ObjectId \$(\$azureAdApplicationServicePrincipal.Id)125if (\$null -eq \$roleAssign role '\$role' to app '\$appName'" -ForegroundColor GreenNew-AzRoleAssign role '\$role' to app '\$appName'" -ForegroundColor GreenNew-AzRoleAssignment -RoleDefinitionName \$role -ApplicationId \$azureAdApplication.AppId129}	108 109 110 111 112 113 114 115 116 117 118 119 120 121 122	NoteProperty -Name 'id' -Value \$(\$roleDef. Id)
<pre>108 \$customRoleJson ConvertTo-Json -depth 32 </pre>	109 110 111 112 113 114 115 116 117 118 119 120 121 122	
<pre>109 Write-Host "Upadate the custom role '\$role'" -</pre>	110 111 112 113 114 115 116 117 118 119 120 121 122	Set-Content <pre>\$tmpCustomRolePath</pre>
<pre>110 Set-AzRoleDefinition -InputFile</pre>	111 112 113 114 115 116 117 118 119 120 121 122	Write-Host "Upadate the custom role '\$role'" -
<pre>112 113 114 115 115 116 117 117 1 118 119 12 120 121 12 124 125 if (\$null -eq \$roleAssignment) { 125 126 127 128 129 128 129 129 129 129 129 129 129 120 129 120 121 120 121 125 12 12 12 125 12 12 12 125 1 12 125 1 12 125 1 12 125 1 12 125 1 12 125 1 12 125 1 12 125 1 12 125 1 12 125 1 12 125 1 12 125 1 12 12 12 12 12 12 12 12 12 12 12 12 1</pre>	112 113 114 115 116 117 118 119 120 121 122	Set-AzRoleDefinition -InputFile
<pre>113 catch { 114 115 Write-Host "Failed to update custom role, error: \$_" -ForegroundColor Red 116 throw \$Exception 117 } 118 119 } 120 121 } 122 123 124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName \$role -ObjectId \$(\$azureAdApplicationServicePrincipal. Id) 125 if (\$null -eq \$roleAssignment) { 126 127 Write-Host "Assign role '\$role' to app '\$appName'" - ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 }</pre>	113 114 115 116 117 118 119 120 121 122	}
<pre>114 115 Write-Host "Failed to update custom role, error: \$_" -ForegroundColor Red 116 throw \$Exception 117 } 118 119 } 120 121 } 122 123 124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName \$role -ObjectId \$(\$azureAdApplicationServicePrincipal. Id) 125 if (\$null -eq \$roleAssignment) { 126 127 Write-Host "Assign role '\$role' to app '\$appName'" - ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 } </pre>	114 115 116 117 118 119 120 121 122	
<pre>115 Write-Host "Failed to update custom role,</pre>	115 116 117 118 119 120 121 122	catch {
error: \$_" -ForegroundColor Red 116 throw \$Exception 117 } 118 119 } 120 121 } 122 123 124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName \$role -ObjectId \$(\$azureAdApplicationServicePrincipal. Id) 125 if (\$null -eq \$roleAssignment) { 126 127 Write-Host "Assign role '\$role' to app '\$appName'" - ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 }	116 117 118 119 120 121 122	Write Heat WFeiled to undeter suctor well.
<pre>117 } 118 119 } 120 121 } 122 123 124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName \$role -ObjectId \$(\$azureAdApplicationServicePrincipal. Id) 125 if (\$null -eq \$roleAssignment) { 126 127 Write-Host "Assign role '\$role' to app '\$appName'" - ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 } </pre>	117 118 119 120 121 122	error: \$_" -ForegroundColor Red
<pre>118 119 } 120 121 } 122 123 124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName \$role -ObjectId \$(\$azureAdApplicationServicePrincipal. Id) 125 if (\$null -eq \$roleAssignment) { 126 127 Write-Host "Assign role '\$role' to app '\$appName'" - ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 }</pre>	118 119 120 121] 122	
<pre>119 } 120 121 } 122 123 124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName \$role -ObjectId \$(\$azureAdApplicationServicePrincipal. Id) 125 if (\$null -eq \$roleAssignment) { 126 127 Write-Host "Assign role '\$role' to app '\$appName'" - ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 }</pre>	119 120 121] 122	}
<pre>120 121 } 122 123 124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName</pre>	120 121 122	l
<pre>121 } 122 123 124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName \$role -ObjectId \$(\$azureAdApplicationServicePrincipal. Id) 125 if (\$null -eq \$roleAssignment) { 126 127 Write-Host "Assign role '\$role' to app '\$appName'" - ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 }</pre>	121 122	ſ
<pre>122 123 124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName \$role -ObjectId \$(\$azureAdApplicationServicePrincipal. Id) 125 if (\$null -eq \$roleAssignment) { 126 127 Write-Host "Assign role '\$role' to app '\$appName'" - ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 }</pre>	122	
<pre>124 \$roleAssignment = Get-AzRoleAssignment -RoleDefinitionName \$role -ObjectId \$(\$azureAdApplicationServicePrincipal. Id) 125 if (\$null -eq \$roleAssignment) { 126 127 Write-Host "Assign role '\$role' to app '\$appName'" -</pre>		
<pre>\$role -ObjectId \$(\$azureAdApplicationServicePrincipal. Id) 125 if (\$null -eq \$roleAssignment) { 126 127 Write-Host "Assign role '\$role' to app '\$appName'" - ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 }</pre>	123	
<pre>125 if (\$null -eq \$roleAssignment) { 126 127 Write-Host "Assign role '\$role' to app '\$appName'" - ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 }</pre>	124 \$r	<pre>\$role -ObjectId \$(\$azureAdApplicationServicePrincipal.</pre>
<pre>126 127 Write-Host "Assign role '\$role' to app '\$appName'" - ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role -</pre>	125 i	•
ForegroundColor Green 128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 }		
128 New-AzRoleAssignment -RoleDefinitionName \$role - ApplicationId \$azureAdApplication.AppId 129 }	127	Write-Host "Assign role '\$role' to app '\$appName'" -
ApplicationId \$azureAdApplication.AppId 129 }		ForegroundColor Green
	128	
130	129	
131 else {		se {
132		
133 Write-Host "Role '\$role' already assigned to app ' \$appName'" -ForegroundColor Yellow		<pre>\$appName'" -ForegroundColor Yellow</pre>
134 }		
135		
100	136	

137	Write-Host "Tenant ID: \$tenantId" -
	ForegroundColor Green
138	Write-Host "Subscription ID: \$subscriptionId"
	-ForegroundColor Green
139	Write-Host "Application ID: \$(
100	
	<pre>\$azureAdApplication.AppId)" -ForegroundColor Green</pre>
140	Write-Host "Service principal object ID: \$(
	<pre>\$azureAdApplicationServicePrincipal.Id)" -</pre>
	ForegroundColor Green
141	}
142	
143	catch {
144	•
145	Write-Hest "Esiled to assign role assignment to this app
140	Write-Host "Failed to assign role assignment to this app,
	error: \$_" -ForegroundColor Red
146	Write-Host "Please make sure the current azure admin has
	permission to assign roles" -ForegroundColor Red
147	}
	L
148	
149	NeedCopy

b) Copy the following custom role file and name it **sessionrecordingdeployment.json**. This custom role file helps to assign least permissions for the application to be registered.

```
1
   {
2
       "name": "Citrix Session Recording Deployment",
3
       "description": "This role has permissions which allow
4
          users to deploy Session Recording resources using an
          Azure Resource Manager template (ARM template). ",
       "assignableScopes": [
5
         "/subscriptions/*"
6
7
       ],
8
       "actions": [
         "Microsoft.Compute/availabilitySets/write",
9
         "Microsoft.Compute/virtualMachines/extensions/read",
         "Microsoft.Compute/virtualMachines/extensions/write",
11
12
         "Microsoft.Compute/virtualMachines/read",
13
         "Microsoft.Compute/virtualMachines/runCommands/read"
14
         "Microsoft.Compute/virtualMachines/runCommands/write",
         "Microsoft.Compute/virtualMachines/write",
15
         "Microsoft.ContainerInstance/containerGroups/read",
         "Microsoft.ContainerInstance/containerGroups/write",
17
18
         "Microsoft.KeyVault/vaults/
             PrivateEndpointConnectionsApproval/action",
         "Microsoft.KeyVault/vaults/read",
19
         "Microsoft.KeyVault/vaults/secrets/read",
         "Microsoft.KeyVault/vaults/secrets/write",
21
22
         "Microsoft.KeyVault/vaults/write",
23
         "Microsoft.ManagedIdentity/userAssignedIdentities/assign
             /action",
         "Microsoft.ManagedIdentity/userAssignedIdentities/read",
24
         "Microsoft.ManagedIdentity/userAssignedIdentities/write"
25
```

	,
26	<pre>"Microsoft.Network/dnsForwardingRulesets/forwardingRules /read",</pre>
27	<pre>"Microsoft.Network/dnsForwardingRulesets/forwardingRules /write",</pre>
28	"Microsoft.Network/dnsForwardingRulesets/read",
29	"Microsoft.Network/dnsForwardingRulesets/
	virtualNetworkLinks/read",
30	"Microsoft.Network/dnsForwardingRulesets/
	virtualNetworkLinks/write",
31	"Microsoft.Network/dnsForwardingRulesets/write",
32	<pre>"Microsoft.Network/dnsResolvers/outboundEndpoints/join/</pre>
	action",
33	"Microsoft.Network/dnsResolvers/outboundEndpoints/read",
34	"Microsoft.Network/dnsResolvers/outboundEndpoints/write"
0.5	
35	"Microsoft.Network/dnsResolvers/read",
36	"Microsoft.Network/dnsResolvers/write",
37	"Microsoft.Network/loadBalancers/backendAddressPools/
~~~	join/action",
38	"Microsoft.Network/loadBalancers/write",
39	"Microsoft.Network/networkInterfaces/join/action",
40	"Microsoft.Network/networkInterfaces/read",
41	"Microsoft.Network/networkInterfaces/write",
42	"Microsoft.Network/networkSecurityGroups/join/action",
43	"Microsoft.Network/networkSecurityGroups/read",
44	<pre>"Microsoft.Network/networkSecurityGroups/securityRules/     read",</pre>
45	<pre>"Microsoft.Network/networkSecurityGroups/securityRules/ write",</pre>
46	"Microsoft.Network/networkSecurityGroups/write",
47	"Microsoft.Network/privateDnsZones/join/action",
48	"Microsoft.Network/privateDnsZones/read",
49	<pre>"Microsoft.Network/privateDnsZones/virtualNetworkLinks/</pre>
	read",
50	"Microsoft.Network/privateDnsZones/virtualNetworkLinks/
	write",
51	"Microsoft.Network/privateDnsZones/write",
52	"Microsoft.Network/privateEndpoints/privateDnsZoneGroups
	/read",
53	"Microsoft.Network/privateEndpoints/privateDnsZoneGroups
<b>F</b> 4	/write",
54	"Microsoft.Network/privateEndpoints/read",
55	"Microsoft.Network/privateEndpoints/write",
56	"Microsoft.Network/publicIPAddresses/join/action",
57	"Microsoft.Network/publicIPAddresses/read",
58	"Microsoft.Network/publicIPAddresses/write",
59	"Microsoft.Network/virtualNetworks/join/action",
60	"Microsoft.Network/virtualNetworks/read",
61	"Microsoft.Network/virtualNetworks/subnets/join/action",
62	"Microsoft.Network/virtualNetworks/subnets/read",
63	"Microsoft.Resources/deploymentScripts/read",
64	"Microsoft.Resources/deploymentScripts/write",

65	"Microsoft.Resources/deployments/operationstatuses/read"
66	, "Microsoft Decourses (deployments (read"
67	"Microsoft.Resources/deployments/read", "Microsoft.Resources/deployments/validate/action",
68	"Microsoft.Resources/deployments/write",
69	"Microsoft.Resources/subscriptions/resourceGroups/read",
70	"Microsoft.Resources/subscriptions/resourceGroups/write"
10	"Microsoft, Resources/subscriptions/resourceGroups/write"
71	, "Microsoft.Resources/templateSpecs/read",
72	"Microsoft.Resources/templateSpecs/versions/read",
73	"Microsoft.Resources/templateSpecs/versions/write",
74	"Microsoft.Resources/templateSpecs/write",
75	"Microsoft.Sql/servers/auditingSettings/write",
76	"Microsoft.Sql/servers/databases/write",
77	"Microsoft.Sql/servers/firewallRules/write",
78	"Microsoft.Sql/servers/
	<pre>privateEndpointConnectionsApproval/action",</pre>
79	"Microsoft.Sql/servers/read",
80	"Microsoft.Sql/servers/write",
81	"Microsoft.Storage/storageAccounts/
	PrivateEndpointConnectionsApproval/action",
82	"Microsoft.Storage/storageAccounts/blobServices/
	containers/read",
83	"Microsoft.Storage/storageAccounts/blobServices/
	containers/write",
84	"Microsoft.Storage/storageAccounts/fileServices/shares/
	write",
85	"Microsoft.Storage/storageAccounts/listkeys/action",
86	"Microsoft.Storage/storageAccounts/read",
87	"Microsoft.Storage/storageAccounts/write"
88	],
89	"notActions": [],
90	"dataActions": [],
91	"notDataActions": []
92	}
93	
94	NeedCopy

## c) Put AppRegistration.ps1 and sessionrecordingdeployment.json in the same folder.

d) Run either of the following commands as needed.

To create an application and assign it least permissions with the preceding custom role file (**sessionrecordingdeployment.json**), run:

```
1 .\AppRegistration.ps1 -tenantId <tenant ID> -subscriptionId <
    subscription ID> -appName <application name> -role "Citrix
    Session Recording Deployment"
2 <!--NeedCopy-->
```

To create an application and assign it the Azure built-in **Contributor** role, run:

1 .\AppRegistration.ps1 -tenantId <tenant ID> -subscriptionId <</p>

```
subscription ID> -appName <application name> -role "
Contributor"
2 <!--NeedCopy-->
```

## Method 2:

Go to the Azure portal and register an application by yourself. Grant proper permissions to the application. For the least permissions that are required, see the **sessionrecordingdeploy-ment.json** file in **Method 1**.

8. Specify configurations for your Session Recording servers to be installed later.

Create site X		
Site information	Create virtual machines as your Session Recording servers.	
Optional     Network	Windows Server 2022 Datacenter: Azure Edition - x64 Gen2 V	
4 Virtual machines	Size Standard_D4s_v3-4vcpus, 16 GiB memory V	
5 Domain and certifi	cate Number of VMs	
6 Storage	3 A Recommended for you: 3	
<ul> <li>Databases</li> </ul>	Estimated cost (per month) \$812.16	
<ul> <li>8 Load balancer</li> <li>9 Tags Optional</li> </ul>		
<ol> <li>Optional</li> <li>Secure client</li> </ol>	Create an administrator account for the virtual machines. Administrator account username	
1 Summary	Set username You will be prompted to set the password for this administrator when you run	
	tou writ be prompted to set the password for this administrator when you run the template.	
Next	incel	

# Note:

- The **Number of VMs** field is prefilled with the recommended number if there's one. Change the number as needed.
- Estimated costs are based on standard pricing and don't take discounts into consideration. You can expect lower actual costs than estimated.
- 9. Join the Session Recording servers to the same domain with your VDAs and specify a certificate for the Session Recording servers.

- If your VDAs connect to an Active Directory domain, select the **Join servers to an Active Directory domain** check box and enter the relevant information.
- If your VDAs connect to an Azure Active Directory (Azure AD) domain, clear the Join servers to an Active Directory domain check box. After you complete creating the current site, make sure to manually join the Session Recording servers to the same Azure AD domain. Notice that pure Azure AD deployment is available only for Session Recording 2402 and later.

Create site X		
<ul> <li>Site information</li> <li>About your deployment Optional</li> </ul>	Join servers to an Active Directory domain <ul> <li>This should be the domain where your VDAs reside.</li> </ul>	
<ul> <li>Network</li> <li>Virtual machines</li> </ul>	Domain name Enter domain name	
5 Domain and certificate	Domain controller IP address Enter IP address	
<ul> <li>Storage</li> <li>Databases</li> <li>Load balancer</li> <li>Tags optional</li> <li>Secure client</li> <li>Summary</li> </ul>	Username         Enter domain/username         Specify a domain user with sufficient rights to join machines to the domain.         Password         Enter password         Specify a certificate for the virtual machines to use. Onlypfx files are supported.         Certificate         Browse         Certificate password         Enter password	
Next Cancel	9 10	

Create site	X
<ul> <li>Site information</li> <li>About your deployment Optional</li> <li>Network</li> </ul>	<ul> <li>Join servers to an Active Directory domain</li> <li>Supported only on Session Recording server version 2402 or later. Please select a compatible version in the previous step. <u>Go back</u></li> </ul>
<ul><li>Virtual machines</li><li>Domain and certificate</li></ul>	Specify a certificate for the virtual machines to use. Only .pfx files are supported.
<ul><li>6 Storage</li><li>7 Databases</li></ul>	Certificate password
Load balancer	
<ul> <li>estimate</li> <li>estimate&lt;</li></ul>	
D Summary	
Next Cancel	

10. Configure an Azure storage account and file shares to store your recording files. For pricing information, see Azure Files pricing.

Create site	×
Site information     About your deployment     Optional	Configure a storage account and file shares to store your recording files. For pricing information, see <u>Azure File Pricing</u> .
Network	A separate storage account will be created for your archived recordings, which does not generate any cost if not used.
Virtual machines	Storage account
Domain and certificate	Performance
6 Storage	<ul> <li>Standard: Recommended for most scenarios (general-purpose v2 account).</li> <li>Premium: Recommended for scenarios that requires low latency.</li> </ul>
⑦ Databases	Redundancy
8 Load balancer	Locally-redundant storage (LRS)
Tags Optional	
0 Secure client	File shares
(1) Summary	Tier Transaction optimized
U Summary	Maximum capacity 5 TiB
	Number of file shares       6       V       Image: Second state sta
	Estimated cost (per month) \$1843.2 (max.) \$0.06 per used GiB, actual cost depends on your usage.
Next Cancel	<b>1</b>

11. Create two SQL databases in Azure. One is used as the Session recording database (named **sessionrecording**) and the other as the administrator logging database (named **sessionrecordinglogging**).

Create site		Х
Site information	Create 2 SQL databases for recording and logging data, respectively.	
About your deployment Optional	Compute + storage	
Network	Service tier	
Virtual machines	General Purpose Compute tier	
Oomain and certificate	Provisioned	
Storage	Hardware configuration Standard-series (Gen5)	
⑦ Databases	Up to 128 vCores, up to 625 GiB memory	
8 Load balancer	vCores	
Tags Optional	Data max size (GiB)	
10 Secure client	-O 32 A	
(1) Summary	Estimated cost (per month) \$441.3	
	Database administrator	
	Username	
	dbadmin1 You will be prompted to set the password for this administrator when you run	
	the template.	
Next Cancel		[₽] נוֹשׁ

12. Create a load balancer to distribute workload among the Session Recording servers. Enter the IP addresses or ranges of your VDAs and separate them by a comma (,) in the **Restrict access of the load balancer to only the following addresses** field. For pricing information, see Load Balancer pricing.

Site information	Create a load balancer to distribute workload among the servers. For pricing
About your deployment Optional	information, see Load Balancer Pricing.
Network	Azure load balancer
Virtual machines	SKU Standard
Domain and certificate	Туре
Storage	Public     Internal
Databases	You need to assign an IP address to the internal load balancer. Enter an unoccupied IP address in the subnet that you created for your Session Recording resources in the <b>Network</b> step.
Load balancer	Enter IP address
Tags Optional	Tier
Secure client	Regional
Summary	Estimated cost (per month) \$189.6
	Access
	Restrict access of the load balancer to only the following addresses 🔞
	192.168.99.0/24

13. (Optional) Apply tags to the Azure resources to be created.

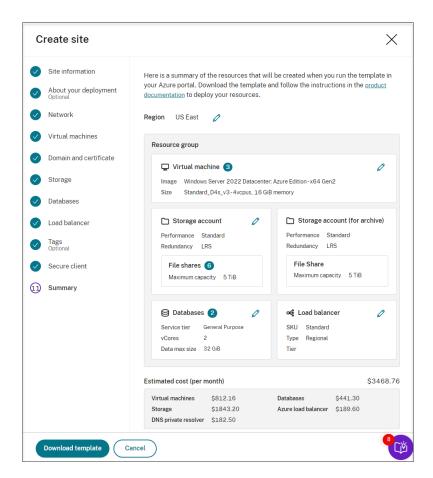
Create site			×
<ul> <li>Site information</li> <li>About your deployment Optional</li> </ul>		e Azure resources that will be created. imply click <b>Next</b> to continue.	
Optional     Network	Name	Value	
Virtual machines	+ Add		
Oomain and certificate			
Storage			
Databases			
Load balancer			
Tags Optional			
Secure client			
(1) Summary			
Next Cancel	)		⁸ CØ

14. Create a secure client to onboard the Session Recording servers to the Session Recording service.

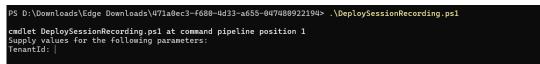
Click **Create client** to let Citrix create a secure client on your behalf. Alternatively, you can create a secure client through the **Identity and Access Management > API Access** tab of the Citrix Cloud console and then fill in the information below.

С	reate site		×
	Site information About your deployment Optional Network Virtual machines Domain and certificate Storage Databases Load balancer Tags Optional Secure client	Create a secure client to onboard the Session Recording servers to Recording service. Click Create client and we will create a secure client on your behalf, can create a secure client through the <u>identity and Access Manageme</u> the Citrix Cloud console and then fill in the information below. Create client ID 6b63afdf-d048-49e1-b27d-781bffea97a2 Secret	Alternatively, you
1)	Summary		8

15. View the summary about the resources to be created and click the pencil icon to edit your settings if needed. After that, click **Download template**. An AEM template that contains how and which resources you want to deploy is then downloaded to the **Downloads** folder on your machine. You can also see the newly created site on the **Server Management** page.



- 16. Go to the **Downloads** folder and unzip the ARM template. Open the unzipped file folder, type PowerShell in the address bar, and hit **Enter**. Wait till a PowerShell window is opened at that folder.
- 17. Run the JavaScript Object Notation (JSON) script named **DeploySessionRecording.ps1**. Provide values for the parameters prompted. The actual parameters vary depending on the settings you specified when creating the template. For example:

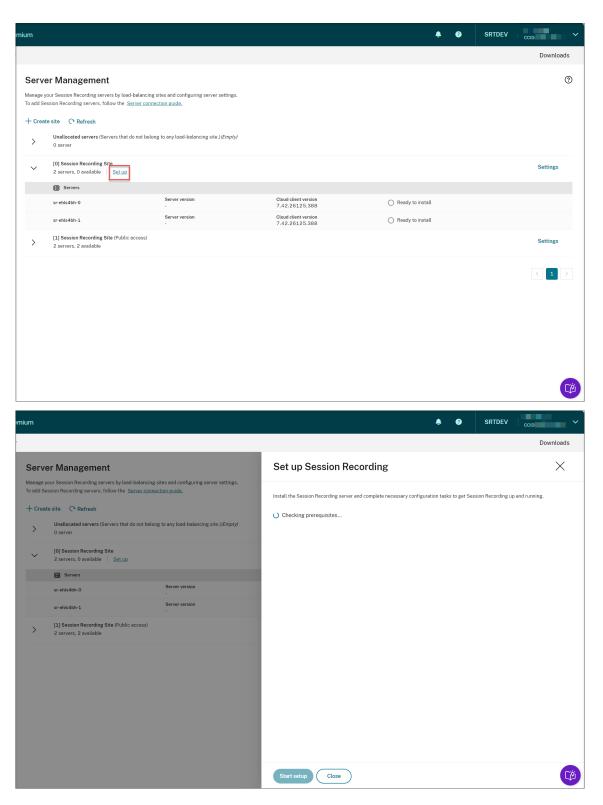


Account SubscriptionName TenantId Env iro nme 5966df48-2aeb-487b-95b8-b95c64b8c897 cvad-session-recording-tie.liu@citrix.com 03eacdb3-8322-4854-8219-30b0526a6428 Azu ResourceGroupName : a-xinzhang-rg-1 Location : eastus ProvisioningState : Succeeded	cmdlet DeploySess Supply values for TenantId: 03eacdb AzureClientId: 59 AzureClientSecret SubscriptionId: e ResourceGroupName DomainPassword: w YmAdminPassword: SqlAdminPassword: S	***************************************	₽. PRmContext.json' file found in the user	
59e6df48-2aeb-487b-95b8-b95c64b8c897 cvad-session-recording-tie.liu@citrix.com 03eacdb3-8322-4854-8219-30b0526a6428 Azu ResourceGroupName : a-xinzhang-rg-1 Location : eastus	Account	SubscriptionName	TenantId	iro nme
Tags : {admin} TagsTable : Name Value ===== ==== admin xinzh ResourceId : /subscriptions/eb089a2e-52b0-4492-9e24-7bf579cff14f/resourceGroups/a-xinzhang-rg-1	ResourceGroupName Location ProvisioningState Tags TagsTable	e : a-xinzhang-rg-1 : eastus e : Succeeded : {admin} : Name Value ===== admin xinzh	m 03eacdb3-8322-4854-8219-30b0526a6428	

18. Go to the Azure portal, locate the resource group that contains your deployment, and then check the deployment progress. Wait until the entire deployment shows **Succeeded**.

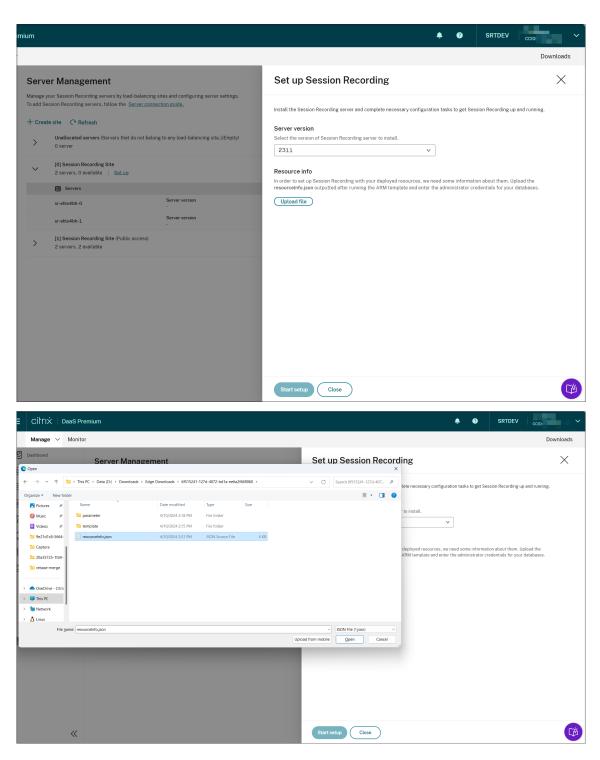
Microsoft Azure			i docs (G+/)		R 0 0 R
Home > Resource groups > a-sr-rg Resource groups « CTXLARS62 Session Recording team	a-sr-rg   Deployme				
+ Create ③ Manage view ∨ ··· Filter for any field Name ↑	Search	Netresh         Scancel         ₹         Redeploy         1         Delete         ↓           Filter by deployment name or resources in the deployment	View template		
(a) a-strip	Pix     Access control (IAAI)       Image: Tags     Access control (IAAI)       Image: Tags     Access control (IAAI)       Image: Tags     Events       Image: Tags     Events	Diployment nume           PreConfiguration_Tairlebel-a32e-4541-6eb-609           Premension_Tairlebel-a32e-4541-9eb-6095451511           Storage_Tairlebel-a32e-4541-9eb-6095451511           Database_Tairlebel-a32e-4541-9eb-6095451511           Database_Tairlebel-a32e-4541-9eb-6095451511           Networf_Tairlebel-a32e-4541-9eb-6095451511           Keylund_Tairlebel-32e-4541-9eb-6095451511           Keylund_Tairlebel-32e-4541-9eb-6095451511           Keylund_Tairlebel-32e-4541-9eb-6095451511           Keylund_Tairlebel-32e-4541-9eb-6095451511	Succeeded	Lat modified 3/20/2024, 36:569 PM 3/20/2024, 36:5348 PM 3/20/2024, 34:538 PM 3/20/2024, 34:737 PM 3/20/2024, 34:745 PM 3/20/2024, 34:146 PM 3/20/2024, 34:146 PM	Duration 2 minutes, 59 seconds, 157 millise 3 minutes, 54 seconds, 899 millise 2 minutes, 15 seconds, 898 millise 1 minute, 15 seconds, 288 millise 2 minutes, 15 seconds, 208 millise 2 minutes, 159 seconds, 151 millise 10 seconds, 351 milliseconds
citrix-session-recording-giwqgn5lgid     citrix-session-recording-nvsjufffybne     citrix-session-recording-ttkijt63352s	<ul> <li>Properties</li> <li>Locks</li> <li>Cost Management</li> </ul>	Citrix,Session,Recording	Succeeded	3/20/2024, 3:57:04 PM	17 minutes, 43 seconds, 160 millit
(e)     cloud-shell-storage-eastus        (e)     cloud-shell-storage-southeastasia        (f)     cad_sconnector        (g)     DefaulthesourceGroup-CUN        (g)     DefaulthesourceGroup-CUS        (g)     DefaulthesourceGroup-CUS	<ul> <li>Cost analysis</li> <li>Cost alerts (preview)</li> <li>Budgets</li> <li>Advisor recommendations</li> <li>Monitoring</li> </ul>				
(b)         DefaulthesourceGroup-EAD            (b)         DefaulthesourceGroup-EUS            (c)         DefaulthesourceGroup-EUS            (c)         DefaulthesourceGroup-SCUS            (c)         DefaulthesourceGroup-SCUS            (c)         DefaulthesourceGroup-SCUS            (c)         DefaulthesourceGroup-SCUS            (c)         DefaulthesourceGroup-SEA	<ul> <li>Insights (preview)</li> <li>Alerts</li> <li>Metrics</li> <li>Diagnostic settings</li> <li>Ogs</li> <li>Advisor recommendations</li> </ul>				

19. Return to the **Server Management** page of the Session Recording service. Find the newly created site, and you will see a **Set up** button available. Click **Set up** to set up Session Recording to get it up and running.



To set up Session Recording, you need to specify the version of the Session Recording server to install and upload the **resourceInfo.json** file.

#### Session Recording service



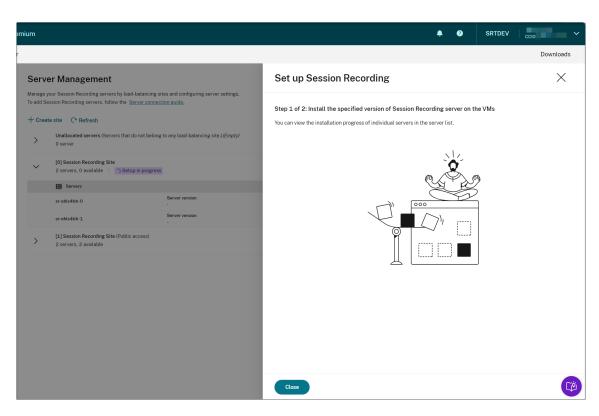
Enter the credentials for your databases.

≡	citrix i a	0aaS Pren	nium		<b>▲ @</b> \$	SRTDEV CCID.
	Manage $$	Monitor				Downloads
() ()	Dashboard	>	Server Management		Set up Session Recording	×
	Comments Policies Activity Feed Notifications	>	Create site C* Refresh     Unallocated servers (Servers that do not belong     O server     (0) Session Recording Site     2 servers, 0 available   Seture	<u>tion guide.</u>	Install the Session Recording server and complete necessary configuration tasks to get Session f Server version Select the version of Session Recording server to install. 2311 Resource infO In order to set up Session Recording with your deployed resources, we need some information ab	
ŵ	Admin Logging Configuration erver Management	~	Servers sr-ehis4bh-0 sr-ehis4bh-1	Server version - Server version	resourcelinfo juon outputted after running the ARM template and enter the administrator credent Upload file resourceInfo.json	ials for your databases.
H	ost Connection tility Settings		[1] Session Recording Site (Public access)     2 servers, 2 available		sessionrecording: 6jqtjftg4atra.database.windows.net Session Recording database name sessionrecording	
	layback Permissions Resource Library				Administrator logging database name session ecording/ogging Administrator username Xan Admin Pessword	
		«			Stert setup Close	

Click **Start startup**. You can then check the setup progress on the **Server Management** page.

mium				.≜ Ø	SRTDEV	CCID
						Downloads
Manage y	er Management our Session Recording servers by load-balancing ssion Recording servers, follow the <u>Server conne</u>					0
+ Creat	te site C Refresh Unallocated servers (Servers that do not belon 0 server	g to any load-balancing site.) <i>(Empty)</i>				
$\sim$	[0] Session Recording Site         2 servers, 0 available	s				Settings
	Servers					
	sr-ehls4bh-0	Server version	Cloud client version 7.42.26125.388	Installation in progress		٩
	sr-ehls4bh-1	Server version	Cloud client version 7.42.26125.388	O Ready to install		
>	<ol> <li>Session Recording Site (Public access)</li> <li>servers, 2 available</li> </ol>					Settings
						< 1 >
						C)

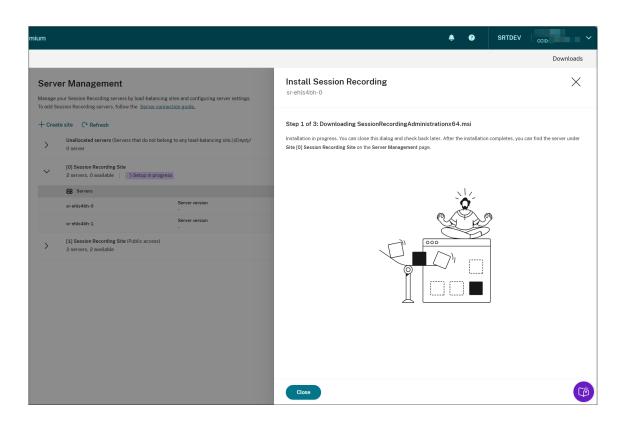
#### Session Recording service



You can view the installation progress of individual servers in the server list.

mium	SRTDEV COD
	Downloads
Server Management Manage your Session Recording servers by load-balancing sites and configuring server settings. To add Session Recording servers, follow the <u>Server connection pude</u> .	Install Session Recording X sr-ehls4bh-0
Create site C Refresh     Unallocated servers (Servers that do not belong to any load-balancing site.)(Empty)     O server	Step 1 of 3: Downloading SessionRecordingAdministrationx64.msi Installation in progress. You can close this dialog and check back later. After the installation completes, you can find the server under Site (0) Session Recording Site on the Server Management page.
[0] Session Recording Site 2 servers, 0 available     > Setup in progress       E     Servers       sr-ehts4bh-0     Server version sr-ehts4bh-1       is rever version     It is session Recording Site (Public access) 2 servers, 2 available	
	Close

When all the Session Recording servers show available in the list, your site creation is complete and the specified resources are deployed to Azure.



# Schedule cloud client upgrades

#### April 26, 2024

You install the Session Recording cloud client on each Session Recording server that you want to connect to the cloud. Citrix checks for upgrades for the Session Recording cloud client automatically. You can upgrade the cloud client immediately or specify a time to upgrade the cloud client automatically.

# Upgrade the cloud client immediately or automatically

To upgrade the cloud client immediately or automatically, choose either of the following methods:

#### Method 1: Click Cloud client version in the row of the target Session Recording server

- 1. Locate the target Session Recording server by selecting **Configuration > Server Management** from the left navigation of the Session Recording service.
- 2. Ensure that the Session Recording server is in **Available** status.

3. Click **Cloud client version** in the row of the Session Recording server.

**Cloud client version** is not clickable if the server is not in **Available** status.

mium				ŧ <mark>⊠</mark> €	ccid
					Downloads
$\sim$	SR1912			1 server, 1 available	Settings
::	SR1912	Server version 19.12.6000.24093	Cloud client version 7.37.25542.42517	🖉 Available	۵
$\sim$	SR2203			1 server, 0 available	Settings
	SR2203	Server version 22.3.2000.36	Cloud client version 7.37.25542.42517	♦ Offline	
>	SRS-7 Site description justo eget magna fermentum iacu	lis.		1 server, 1 available	Settings
$\sim$	STANDALONE2209			1 server, 1 available	Settings
	STANDALONE2209	Server version 22.9.0.1	Cloud client version 7.37.25 9.57762	🖉 Available	۵
>	W2K16ST-SRGXDEV			1 server, 1 available	Settings
>	W2K19ST-74G7GI6			1 server, 1 available	Settings
>	W2K19ST-DRV9J12			1 server, 0 available	Settings
>	W2K19ST-GA37VLG			1 server, 1 available	Settings
>	W2K19ST-VMODNLK			1 server, 0 available	Settings
>	WEEKLYSERVER2			4 servers, 1 available	Settings

4. Click Upgrade now or Configure automatic upgrade.

Gerver ver L9.12.6	rsion 000.6003		Cloud client version 7.36.25442.5699		• Upgrading
Se 22	Cloud client	version		×	1 server, 0 available O Upgrading 1 server, 1 available
Se 22	Current version Latest version () Upgrade availa	7.37.25459.8745 7.37.25542.4251 able.			<ul> <li>Available</li> <li>1 server, 1 available</li> </ul>
	Upgrade now	Configure autor	natic upgrade		1 server, 0 available 1 server, 1 available
					1 server, 1 available

• Click Upgrade now.

**Upgrade now** is not available if the version of your cloud client is already up to date. After clicking **Upgrade now**, you are not prompted to confirm the upgrade.

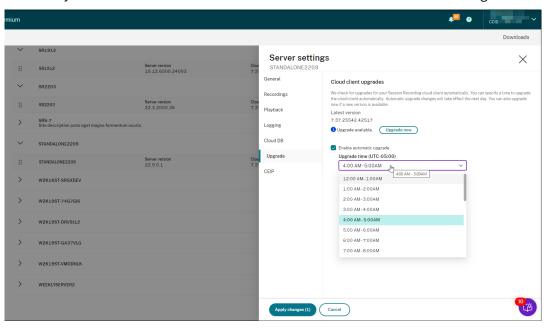
• Click Configure automatic upgrade.

After clicking **Configure automatic upgrade**, you are taken to the **Cloud client upgrades** page where you can specify a time to upgrade the cloud client automatically.

mium				
				Downloads
~	SR1912 SR1912	Server version Clo		35 ×
~	SR2203	19.12.6000.24093 7.3	General Recordings	Cloud client upgrades We check for upgrades for your Session Recording cloud client automatically. You can specify a time to upgrade the cloud client automatically. Automatic upgrade changes will take effect the next day. You can also upgrade
*	SR2203 SR5-7 Site description justo eget magna fermentum iaculis	22.3.2000.36 7.3	Playback	now if a new version is available. Latest version 7.37.25642.42517 O Upgrade available. Upgrade now
$\sim$	STANDALONE2209		Cloud DB	Enable automatic upgrade
	STANDALONE2209	Server version Clo 22.9.0.1 7.3		
>	W2K16ST-SRGXDEV			
>	W2K19ST-74G7GI6			
>	W2K19ST-DRV9J12			
>	W2K19ST-GA37VLG			
>	W2K19ST-VMODNLK			
>	WEEKLYSERVER2			
			Apply changes (0)	Cancel

By default, automatic upgrade is enabled and occurs from 2:00 AM through 3:00 AM every day. You can clear the **Enable automatic upgrade** check box to allow only manual upgrades.

If you select the **Enable automatic upgrade** check box, you can specify a custom time slot that suits your needs. The time shown here is the time on the Session Recording server.



Your automatic upgrade settings take effect the next day.

#### Method 2: Click the settings icon in the row of the target Session Recording server

- 1. Locate your target Session Recording server by selecting **Configuration > Server Management** from the left navigation of the Session Recording service.
- 2. Ensure that the Session Recording server is in **Available** status.
- 3. Click the settings icon in the row of the Session Recording server. The **Server settings** window appears.

emium				4 ²⁰ 0	CCID:
					Downloads
$\sim$	SR1912			1 server, 1 available	Settings
	SR1912	Server version 19.12.6000.24093	Cloud client version 7.37.25542.42517	🤣 Available	۲
$\sim$	SR2203			1 server, 0 available	Settings
::	SR2203	Server version 22.3.2000.36	Cloud client version 7.37.25542.42517	Offline	
>	SRS-7 Site description justo eget magna fermentum iaculi	s.		1 server, 1 available	Settings
$\sim$	STANDALONE2209			1 server, 1 available	Settings
	STANDALONE2209	Server version 22.9.0.1	Cloud client version 7.37.25499.57762	🤣 Available	<b>8</b>
>	W2K16ST-SRGXDEV			1 server, 1 available	Settings
>	W2K19ST-74G7GI6			1 server, 1 available	Settings
>	W2K19ST-DRV9J12			1 server, 0 available	Settings
>	W2K19ST-GA37VLG			1 server. 1 available	Settings
>	W2K19ST-VMODNLK			1 server. O available	Settings
>	WEEKLYSERVER2			4 servers, 1 available	Settings

4. Click **Upgrade** in the left navigation.

emi	ım					4 ²⁰ • ccib. ; (E	~
r						Downloads	
	~	SR1912			Server setting	zs X	
		SR1912	Server version 19.12.6000.24093	Clou 7.3	STANDALONE2209		_
	$\sim$	SR2203			General Recordings	Cloud client upgrades We check for upgrades for your Session Recording cloud client automatically. You can specify a time to upgrade	
		SR2203	Server version 22.3.2000.36	Clou 7.3	Playback	the cloud client automatically. Automatic upgrade changes will take effect the next day. You can also upgrade now if a new version is available. Latest version	
	>	SRS-7 Site description justo eget magna fermentum iaculis			Logging	Latest version 7:37:25542.42517 Upgrade available. Upgrade now	
	~	STANDALONE2209			Cloud DB	Enable automatic upgrade	
	:	STANDALONE2209	Server version 22.9.0.1	Clou 7.3	Upgrade		
	>	W2K16ST-SRGXDEV			GEIP		
	>	W2K19ST-74G7GI6					
	>	W2K19ST-DRV9J12					
	>	W2K19ST-GA37VLG					
	>	W2K19ST-VMODNLK					
	>	WEEKLYSERVER2					
					Apply changes (0)	Cancel	

#### 5. Click Upgrade now or set Enable automatic upgrade.

• Click Upgrade now.

**Upgrade now** is not available if the version of your cloud client is already up to date. After clicking **Upgrade now**, you are prompted to confirm the upgrade.

#### • Set Enable automatic upgrade.

nium				<b>≜</b> ⁵² <b>0</b> ccit. ► ►
				Downloads
$\sim$	SR1912		Server setting	gs X
	SR1912	Server version 19.12.6000.24093	Clou STANDALONE2209	~
$\sim$	SR2203		General	Cloud client upgrades We check for upgrades for your Session Recording cloud client automatically. You can specify a time to upgrade
	\$R2203		Recordings Clou 7.3 Dlauback	We check for upgrades for your session recording cloud cuert automatically. Tou can specify a time to upgrade the cloud client automatically. Automatic upgrade changes will take effect the next day. You can also upgrade now if a new version is available.
>	SRS-7		Proyback	Latest version 7.37.25542.42517
	Site description justo eget magna fermentum iaculi	5. -	Logging Cloud DB	Upgrade available. Upgrade now
~	STANDALONE2209		Ungrado	<ul> <li>Enable automatic upgrade</li> <li>Upgrade time (UTC-05:00)</li> </ul>
	STANDALONE2209		7.3: CEIP	4:00 AM-5:00AM V
>	W2K16ST-SRGXDEV		CEIP	12:00 AM-1:00 AM
>	W2K19ST-74G7GI6			1:00 AM-2:00AM 2:00 AM-3:00AM
				3:00 AM-4:00AM
>	W2K19ST-DRV9J12			4:00 AM - 5:00 AM 5:00 AM - 6:00 AM
>	W2K19ST-GA37VLG			6:00 AM-7:00AM
>	W2K19ST-VMODNLK			7:00 AM-8:00AM
>	WEEKLYSERVER2			
			Apply changes (1)	Cancel

#### Note:

Ensure that the time you set for automatic cloud client upgrades is earlier than the time you set for **automatic archiving and deletion of recordings**. Otherwise, automatic archiving and deletion might fail.

# Configure

June 15, 2022

This section provides instructions for you to:

- Configure Session Recording servers
- Configure policies
  - Configure session recording policies
  - Configure event detection policies
  - Configure event response policies

- Configure playback permissions
- Configure utilities

# Site and server settings

July 17, 2023

# Site settings

- 1. Select **Configuration > Server Management** from the left navigation of the Session Recording service.
- 2. Click **Settings** for the target site.

emiun		• [#]	
• •			Downloads
		0 server, 0 analiable	oortings
	>	EUSERVER2 1 server, 1 available	Settings
	>	SERVER 2305 1 server, 0 available	Settings
	>	SERVER 2305-2 1 server, 0 available	Settings
	>	SERVER-1 1 server, 0 available	Settings
		SERVER-2212 O server, O available	Settings
	>	SERVER 2305 1 server, 0 available	Settings
	>	SERVER-3 1 server, 0 available	Settings Site settings
	>	SERVER22.SIN 1 server, 1 available	Settings
	>	SERVER2206A 1 server, 1 available	Settings
	>	SR2303 1 server, 1 available	Settings
	>	SR2305 1 server, 0 available	Settings
	>	SR2308LB 2 servers, 0 available	Settings
	>	SRN1912 1 server, 0 available	Settings

An Azure icon is available to represent sites deployed on Azure.

ium		🔎 💿 cab.
/		Downloads
Manage yo To add See	er Management ywu Sesion Recording servers by load-balancing sites and configuring server settings. ession Recording servers. follow the <u>Server consection aude</u> .	¢
+ Create	tte site C Refresh Unallocated servers (Servers that do not belong to any load-balancing site.) 3 servers	
	0 server, 0 available	Settings
	0 server, 0 available	Settings
	0 server, 0 available	Settings
>	230RSRN 1 server, 1 available	Settings
>	ATEST 2 servers, 0 available	Settings
>	AutoTertApISRe202306301601 2 servers. 0 available	Settings
>	AutoTextSite202307031440 2 servers, 0 available	Settings
>	B1F4A64E3787 100 servers, 0 available	Settings
>	RDIgst TurnKeyMul ( Do Not Delete) A servers, 0 available   1 storage location   Cost (current monthi: <u>\$36.74</u>	Settings
	bettycag (test) O server, O available	Settings

3. Rename the site and give it a new description as needed.

	*	• ccib: ~
		Downloads
Site settings		×
General	Site name	
Storage maintenance	SERVER22-SIN	
Playback	Description	
	 Delete site	
Apply changes	Cancel	1

4. Schedule site-level tasks to automatically archive and delete recordings. For more information, see Manage recordings on schedule.

	• 🛤	CCID
		Downloads
Site settings		$\times$
General	Automatic archive and delete	
Starge muintenance Pinyback	Test advect to automatically archive and direct recording on a regular schedule.         I Evable exctrantic archive         Active recording softer han         T	
Apply changes	Cencel	

5. Specify either the cloud player, on-premises players, or both to play the recordings of a site. By default, both the cloud player and on-premises players are selected. The on-premises players include the Session Recording player (Windows) and the Session Recording web player. For more information, see Specify players for a site.

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		Downloads
Site settings SERVER22-SIN		$\times$
General Storage maintenance	Player selection Controls which player is available to play the recordings of this site.	
Playback	The on-premises players	
		(1)
Apply changes	Cancel	LQ.

#### **Server settings**

- Select Configuration > Server Management from the left navigation of the Session Recording service.
- 2. Expand a site to locate the target Session Recording server and then click the **Settings** icon next to it. The **Settings** icon is present only for servers in **Available** state.

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+ Create	site 🔿 Refresh					
>	Unallocated servers (Servers that do not 3 servers	t belong to any load-balancing site.)				
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>	ATEST 2 servers, 0 available		Saved to this PC			Settings
>	AutoTestApiSite202306301601 2 servers, 0 available					Settings
>	AutoTestSite202307031440 2 servers, 0 available					Setting 11

#### Note:

The status of a Session Recording server might not change to **Offline** after you stop the cloud client service (CitrixSsRecCloudClientService) on it.

3. On the **General** page, enter a description for the Session Recording server and move the server to a different site. You can also drag and drop the Session Recording server to a different site.

	4 ⁵⁰⁰ Cato	~
	Downloads	
Server settings 2308SRN	×	
General	Description	
Recordings Playback Logging Cloud DB Upgrade CEIP	Enter a description for this server.           Site           Site occonsisting your Session Recording servers by load-builancing sites. Obcores a site for this server.           Make sure that this server is convected to the database of the site you choose.           23085RM	
Apply changes (0)	Carcel	Ċ

4. On the **Recordings** and other pages, configure the server settings listed in the following table:

Server setting	Description
File storage location	Specifies where to store recorded session files.
	You can specify multiple locations to store files
	in a load-balanced manner.
Certificate	Lets you select a machine certificate to sign
	recordings. If no certificate is provided, HTTP is
	used as the communication protocol. In this
	case, ensure that: (1) Secure Sockets Layer (SSL
	is disabled in Microsoft Internet Information
	Services (IIS) on each Session Recording server.
	(2) HTTP is selected as the connection protocol
	on the Session Recording Agent. For more
	information, see Use HTTP as the
	communication protocol.
File rollover	Lets you specify two thresholds for a rollover:
	file size and recording duration.
Notification	Customizes messages sent to end users to notify
	them that their sessions are being recorded.
Restore location for archived files	Specifies a location to temporarily store
	archived session recordings and make them
	available for playback.
Live session playback	Sets whether you allow users to play ongoing
	sessions that are being recorded.
Recording file encryption	Sets whether to encrypt recording files before
	downloading to the player. Encryption prevents
	files from being copied and viewed by users
	other than the user who originally downloaded
	them. This setting applies only to the Session
	Recording player.
Citrix Workspace app version check	Sets whether you allow users to skip the Citrix
	Workspace app version check that occurs before
	the Session Recording player plays back a
	recording. This setting applies only to the
	Session Recording player.

Server setting	Description
Hiding content on the web player home page	Sets whether to prevent the web player home page from displaying any content. Recordings can be accessed only by way of their URLs. This setting applies only to the on-premises web player.
Administrator logging	Sets whether to enable the administrator logging service.
Mandatory blocking	Sets whether to block changes to policies and server settings if administrator logging fails.
Cloud SQL support	Lets you enable or disable cloud SQL.
Cloud client upgrades	Lets you specify a time to upgrade the cloud client automatically. Automatic upgrade changes take effect the next day. You can also upgrade immediately if a new version is available.
CEIP	Sets whether to join the Citrix Customer Experience Improvement Program (CEIP).

#### Server removals

The Session Recording service is a cloud platform that provides a unified entry point to manage and observe the Session Recording servers across your organization. You can remove servers with the **Offline**, **Uninstalled**, and **Installation Failed** states from the cloud to display only the desired Session Recording servers.

#### Note:

Removing a session recording server does not delete it and only hides it from the cloud user interface.

$\sim$	W2K19ST-VMODNLK 2 servers, 1 available				Settings
	Servers				
	W2K19ST-S2N3DM7	Server version 22.10.0.8	Cloud client version 7.39.25738.41023	Available	Q @
÷	W2K19ST-VMODNLK	Server version 22.9.0.2	Cloud client version 7.39.25771.65403	Offline	Ŵ
$\sim$	W2K22ST-TB81E13 1 server, 0 available				Settings
	B Servers				
	W2K22ST-TB81E13	Server version 23.5.0.0	Cloud client version 7.39.25726.60926	Offline	Ū
$\sim$	WEEKLYSERVER2 4 servers, 1 available				Settings
	Servers				
::	SR-Server	Server version 22.3.1000.5	Cloud client version 7.36.25431.20278	⊗ Uninstalled	Ū
	SR-Server2 1213	Server version 22.3.1000.5	Cloud client version 7.36.25410.34348	• Upgrading	
::	W2K19ST-GBVQ3PL	Server version 22.10.0.8	Cloud client version 7.36.25431.20278	Offline	Ū
	WEEKLYSERVER2	Server version 22.12.0.844	Cloud client version 7.36.7020.11	🤣 Available	Q Ø

- **Offline**: Session Recording servers with this state are disconnected from the Session Recording service.
- **Uninstalled**: Session Recording servers with this state are those servers that had the cloud client installed and then uninstalled.
- **Installation failed**: Session Recording servers with this state are those servers that you failed to install from within the cloud. For more information, see Install Session Recording servers from within the cloud.

# **Configure policies**

#### November 3, 2022

The Session Recording service lets you view and configure session recording, event detection, and event response policies for a specific site. Each policy you create or activate applies to all Session Recording servers of a site.

For more information, see:

- Configure session recording policies
- Configure event detection policies
- Configure event response policies

Video about configuring policies:



# **Configure session recording policies**

#### May 9, 2024

You can activate system-defined recording policies or create and activate your custom recording policies. System-defined recording policies apply a single rule to entire sessions. Custom recording policies specify which sessions are recorded.

The active recording policy determines which sessions are recorded. Only one recording policy is active at a time.

#### Note:

After you create or activate a recording policy, the policy applies to all Session Recording servers of the selected site. You can create and activate separate recording policies for different sites.

# System-defined recording policies

Session Recording provides the following system-defined recording policies:

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Policies Awsrs ~		?
Recording policy Event detection policy Event response policy		
Add policy Q Search		
Do not record This policy means no sessions will be recorded.	System-defined	
Record entire sessions excluding audio (for everyone, with notification) This policy records entire sessions (screens and events), excluding audio. Users receive recording notifications in advance.	System-defined	
Record entire sessions excluding audio (for everyone, without notification) This policy records entire sessions excluding audio (screens and events). Users do not receive recording notifications.	System-defined	
Record entire sessions excluding audio with lossy screen recording enabled (for everyone, with notification) This policy records entire sessions (screens and events) and using lossy screen recording mode to encode screens. Users receive recording notifications in advance.	System-defined	

#### Note:

Both lossy screen recording and audio recording for non-optimized HDX audio are available with Session Recording version 2308 and later.

- Do not record. The default policy. If you do not specify another policy, no sessions are recorded.
- Record entire sessions excluding audio (for everyone, with notification). This policy records entire sessions (including screens and events but excluding audio). Users receive recording notifications in advance.
- Record entire sessions excluding audio (for everyone, without notification). This policy records entire sessions (including screens and events but excluding audio). Users do not receive recording notifications.
- Record entire sessions excluding audio with lossy screen recording enabled (for everyone, with notification). This policy records entire sessions (including screens and events but excluding audio). Lossy screen recording is enabled to reduce the size of recording files. Users receive recording notifications in advance.
- Record entire sessions excluding audio with lossy screen recording enabled (for everyone, without notification). This policy records entire sessions (including screens and events but excluding audio). Lossy screen recording is enabled to reduce the size of recording files. Users do not receive recording notifications.
- **Record entire sessions including audio (for everyone, with notification)**. This policy records entire sessions (including screens, events, and audio). Users receive recording notifications in advance. You can enable audio recording for non-optimized HDX audio. Non-optimized HDX audio refers to the audio that is processed on the VDA and transmitted to/from the

client where Citrix Workspace app is installed. In contrast to non-optimized HDX audio is optimized HDX audio whose processing is offloaded to the client, such as in the Browser Content Redirection (BCR) and Optimization for Microsoft Teams scenarios.

- Record entire sessions including audio (for everyone, without notification). This policy records entire sessions (including screens, events, and audio). Users do not receive recording notifications.
- **Record only events (for everyone, with notification)**. This policy records only events that your event detection policy specifies. It does not record screens or audio. Users receive recording notifications in advance.
- **Record only events (for everyone, without notification)**. This policy records only events that your event detection policy specifies. It does not record screens or audio. Users do not receive recording notifications.

You can't modify or delete the system-defined recording policies.

# Create a custom recording policy

#### Considerations

You can record sessions of specific users or groups, published applications or desktops, delivery groups or VDA machines, and Citrix Workspace app client IP addresses. To obtain the lists of published applications or desktops and delivery groups or VDA machines, you must have the **read** permission as a site administrator. Configure the administrator **read** permission on the Delivery Controller of the site.

You can also specify smart access tags to use as scopes for a custom recording policy to apply to. This feature is available with Session Recording 2402 and later. It lets you apply policies based on the user access context including:

- The user's location
- IP address range
- Delivery group
- Device type
- Installed applications

For each rule you create, you specify a recording action and a rule scope. The recording action applies to sessions that fall into the rule scope.

For each rule, choose one recording action:

#### Session Recording service

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Manage V Monitor			Downloads
Add rule			
Name and description Rule name Enter rule name Description (poinnal) Constants land: 300		Recording action           Enable session recording with notification           Enable session recording without notification           Enable event only assion recording without notification           Enable event only assion recording without notification           Image: Control on the session recording without notification           Image: Control on the session recording without notification	
Scope			
Users and user groups	Configure		
Published applications and desktops	Configure		
Delivery groups and VDA machines	Configure		
IP addresses and IP address ranges	Configure		
C Filter	Configure		
Save			3

- Enable session recording with notification. This option records entire sessions (screens and events). Users receive recording notifications in advance. You can further select to enable audio recording or lossy screen recording.
- Enable session recording without notification. This option records entire sessions (screens and events). Users do not receive recording notifications. You can further select to enable audio recording or lossy screen recording.
- Enable event only session recording with notification. Recording only specific events helps to free up storage space. This option records throughout sessions only events that your event detection policy specifies. It does not record screens. Users receive recording notifications in advance.
- Enable event only session recording without notification. Recording only specific events helps to free up storage space. This option records throughout sessions only events that your event detection policy specifies. It does not record screens. Users do not receive recording notifications.
- **Disable session recording**. This option means that no sessions are recorded.

For each rule, choose at least one of the following items to create the rule scope. When a rule applies, both the "AND" and the "OR" logical operators are used to compute the final action. Generally speaking, the "OR" operator is used *within* a rule item, and the "AND" operator is used *between* separate rule items. If the result is true, the Session Recording policy engine takes the rule's action. Otherwise, it goes to the next rule and repeats the process.

- **Published applications and desktops**. Creates a list of published applications and desktops to which the action of the rule applies. Citrix DaaS (formerly Citrix Virtual Apps and Desktops service) sites are selected by default. Citrix Virtual Apps and Desktops sites are not supported.
- Delivery groups and VDA machines. Creates a list of delivery groups and VDA machines to

which the action of the rule applies.

- **IP addresses and IP address ranges**. Creates a list of IP addresses and ranges of IP addresses to which the action of the rule applies. The IP addresses mentioned here are the IP addresses of the Citrix Workspace apps.
- **Filter**. Creates a list of smart access tags to which the action of the rule applies. You can configure contextual access (smart access) using smart access policies on Citrix NetScaler, Citrix Device Posture service, and Adaptive access based on the user's network location.

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Sco	e e				LOCATION_UNDEFINED	Tag sent for an IP address that is not defined in the policy but is coming Locations service. Launch for these users are the same as what is define group.	through the Network ad in the resource
	Users and user groups				COMPLIANT	For compliant devices.	
	Published applications and desktops				NON-COMPLIANT	For non-compliant devices.	
	Delivery groups and VDA machines			Custon Enter yo	n tags our custom tags separated by	commas(.).	
	IP addresses and IP address ranges			Ente	r tags		
	Filter	Configure					4
	Save Cancel			Se	we Cancel		300

Contextual access (smart access) is available with Session Recording 2402 and later.

• **Users and user groups**. Creates a list of users and user groups to which the action of the rule applies. Both Azure Active Directory (Azure AD) and Active Directory identity types are supported. For an example user group scenario, see Use user groups and white list users.

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## Note:

Azure AD support is a preview feature. It is available with Session Recording version 2402 and later.

Preview features might not be fully localized and are recommended for use in non-production environments. Citrix Technical Support doesn't support issues found with preview features.

# To fully enable Azure AD identity support for configuring various policies and playback permissions from the cloud, complete the following steps and then restart the VDA:

- Use the Citrix Virtual Apps and Desktops installer to install the Session Recording agent on an Azure AD joined machine. Select **Enable Azure AD support** during the installation.

For a Session Recording agent that you've installed otherwise, set the following registry values under **HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\SmartAuditor\Agent** to enable Azure AD support:

- * Set CommunicationProtocalToggle to 1 (0 means .net remoting. 1 means Websocket).
- * Set **AuthType** to **1** (**0** means Active Directory. **1** means Citrix Cloud authentication).
- * Set **SmAudIdpEnabled** to **1** (**0** means disabled. **1** means enabled)
- Use the MSI package to install the Session Recording server on an Azure AD joined machine as well. Select **Enable Azure AD support** during the MSI installation.
- Connect Citrix Cloud to Azure AD.
- Go to the home page for the Full Configuration interface and enable the SessionRecordingSupportAAD and Send User Identity Info In Prepare Session toggles under the Preview features section. To access the home page for the Full Configuration interface, complete the following steps:
  - 1. Sign in to Citrix Cloud.
  - 2. In the upper left menu, select **My Services > DaaS**. By default, the home page for the Full Configuration interface appears.

When you create more than one rule in a recording policy, some sessions might match the criteria for more than one rule. In these cases, the rule with the highest priority is applied to the sessions.

The recording action of a rule determines its priority:

- Rules with the **Disable session recording** action have the highest priority.
- Rules with the **Enable session recording with notification** action have the second-to-highest priority.

- Rules with the **Enable session recording without notification** action have the second-to-lowest priority.
- Rules with the **Enable event only session recording with notification** action have the medium priority.
- Rules with the **Enable event only session recording without notification** action have the lowest priority.

Some sessions might not meet any rule in a recording policy. For these sessions, the action of the policy fallback rule applies. The action of the fallback rule is always **Disable session recording**. You cannot modify or delete the fallback rule.

#### Steps

- 1. Sign in to Citrix Cloud.
- 2. In the upper left menu, select **My Services > DaaS**.
- 3. From Manage, select Session Recording.
- 4. Select **Policies** from the left navigation of the Session Recording service page.
- 5. Select a target site. The **Recording policy** tab is displayed by default.
- 6. Click Add policy.
- 7. Enter a name and description for the new policy, and then click **Add rule**.
- 8. Enter a name and description for the rule. Specify a recording action and choose at least one of the following items to create the rule scope.

For each rule, specify a recording action:

- Enable session recording with notification
- Enable session recording without notification
- Enable event only session recording with notification
- Enable event only session recording without notification
- Disable session recording

For each rule, choose at least one of the following items to create the rule scope.

- Published applications and desktops
- Users and user groups
- Delivery groups and VDA machines
- IP addresses and IP address ranges
- Filter
- 9. After the new policy is created, find it on the **Recording policy** tab and turn the toggle on to activate the policy.

#### Use user groups

Session Recording allows you to use user groups when creating policies. Using user groups instead of individual users simplifies the creation and management of rules and policies. For example, if users in your company's finance department are contained in an Active Directory group called **Finance**, you can create a rule that applies to all the group members by selecting the **Finance** group in the **Rules** wizard.

## White list users

You can create Session Recording policies ensuring that the sessions of some users in your organization are never recorded. This case is called

*white listing* these users. White listing is useful for users who handle privacy-related information or when your organization does not want to record the sessions of a certain class of employees.

For example, if all managers in your company are members of an Active Directory group called **Exec-utive**, you can ensure that sessions of these users are never recorded by creating a rule that disables session recording for the **Executive** group. While the policy containing this rule is active, no sessions of members of the Executive group are recorded. The sessions of other members of your organization are sessions recorded based on other rules in the active policy.

# **Understand rollover behavior**

When you activate a policy, the previously active policy remains in effect until the session being recorded ends or the session recording file rolls over. Files roll over when they have reached the maximum size. For more information about the maximum file size for recordings, see Specify file size for recordings.

The following table details what happens when you apply a new recording policy while a session is being recorded and a rollover occurs:

If the previous recording policy		After a rollover, the recording
was	And the new recording policy is	policy will be
Do not record	Any other policy	No change. The new policy takes effect only when the user
Record without notification	Do not record	logs on to a new session. The recording stops.
Record without notification	Record with notification	The recording continues and a notification message appears.

If the previous recording policy	And the new recording policy is	After a rollover, the recording
was	And the new recording policy is	policy will be
Record with notification	Do not record	The recording stops.
Record with notification	Record without notification	The recording continues. No
		message appears the next time
		a user logs on.

# Video about configuring policies



# **Configure event detection policies**

#### June 24, 2024

You can configure event detection policies through the Session Recording service to log target events in recorded sessions. **Do not detect** is the system-defined event detection policy. It's inactive by default. When it's active, no events are logged.

Note:

An event detection policy applies to all Session Recording servers of a specific site. You can create

#### Session Recording service

and activate separate event detection policies for different sites.

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Policies Site-1 ~ Recording policy Event detection policy Event response policy		0
Add policy Q Search		
Do not detect System-defined This policy will disable logging of all events.		

## Events that can be detected

Session Recording detects target events and tags those events in recordings for later search and playback. You can search for events of interest from large amounts of recordings and locate those events during playback.

#### System-defined events

Session Recording can detect and log the following system-defined events that occur during recorded sessions:

- Insertion of USB mass storage devices
- Application starts and ends
- App failures
- App installs and uninstalls
- File renaming, creation, deletion, and moving operations within sessions
- File transfers between session hosts (VDAs) and client devices (including mapped client drives and generic redirected mass storage devices)
- Web browsing activities
- Topmost window events
- Clipboard activities
- Windows registry modifications
- User account modifications
- RDP connections

- Performance data (data points related to the recorded session)
- Popup window events

For more information about the various events, see the counterpart of the on-premises Session Recording documentation.

When you create a custom event detection policy, you can add rules to select target events to monitor.

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≡ CİİTIX   DaaS Premium	4 0	CCID:
Manage V Monitor V		Downloads
Name and description	Events to log	
Rule name Enter rule name Description (optional) Character limit: 300	App start events     App end events     App end events     App ond events     Clipboard operation     Gravity and events     For motioning list_Enter the process names of target apps. Separate the names with semicolons().     Glipboard operation     Gravity and the events     For motioning list_Enter the exhibitive paths of target files. Separate the paths with semicolons().     Glipboard operation     App end events     A	
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Users and user groups Configur	<ul> <li>Web browsing activities</li> <li>App installs and uninstalls</li> </ul>	
Published applications and desktops     Configure     Delivery groups and VDA machines     Configure	Performance data     DP Connections	
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Save Cancel		<b>1</b>

Similar to creating a custom recording policy, you can choose one or more rule criteria. For more information, see the instructions in the Create a custom recording policy section.

# Video about configuring policies



# **Configure event response policies**

#### April 25, 2024

Event response policies let you configure event-triggered actions so that you can:

- Send an email alert when a session start event is detected.
- Take action (any combination of the following actions) when events are detected in recorded sessions:
  - Send email alerts
  - Start screen recording immediately (with or without lossy screen recording enabled)
  - Lock session
  - Log off session
  - Disconnect session

The only system-defined event response policy is **Do not respond**. You can create custom event response policies as needed. Only one event response policy can be active at a time. By default, there's no active event response policy.

# Note:

After you create or activate an event response policy, the policy applies to all Session Recording servers of the selected site. You can create and activate separate event response policies for different sites.

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Policies Site-1 ~ Recording policy Event detection policy Event response policy			3
Add policy Q Search			
Do not respond System-defined This policy will disable all alert notifications.			

# System-defined event response policy

Session Recording provides one system-defined event response policy:

• **Do not respond**. By default, no action is taken in response to logged events in your recordings.

# Create a custom event response policy

- 1. Click Add policy.
- 2. On the **Add event response policy** page, enter a name and description for your new policy.

Add event response policy	×
Name Enter policy name	
Description (optional) Enter description	
Rules	
No rules configured.	
+ Add rule	
Save Cancel	

- 3. Click Add Rule.
- 4. Enter the rule name and description.

Add rule		
Name and description Rule name Extra for larme Description (optional) Character lines 200 Scope		Events and responses Event triggers Configure event trigger actions when certain events are detected. Configure
Users and user groups	Configure	
Published applications and desktops	Configure	
Delivery groups and VDA machines	Configure	
IP addresses and IP address ranges	Configure	
C Filter	Configure	
Save Cancel		<b>69</b>

- 5. In the **Event triggers** section, click **Configure** to configure event-triggered actions so that you can:
  - Send an email alert when a session start event is detected.

- Take action (any combination of the following actions) when events are detected in recorded sessions
  - Send email alert
  - Start screen recording immediately (with or without lossy screen recording enabled)
  - Lock session
  - Log off session
  - Disconnect session

Click **Add event triggers** to create event triggers from scratch. Or, click **Browse templates** to select existing event trigger templates to use directly or customize.

Configure event triggers and responses
For each event trigger, select a session event, configure additional conditions as needed, and specify the action to take when the event is detected.
+ Add event trigger 🔚 Browse templates □, Save as template
No event triggers configured.
Save Cancel

Each time you click **Add event triggers**, a new event trigger is created in the pane below. You can also click the **Duplicate** button to make duplicates of an existing event trigger.

r each event trigger, select a session e event is detected.	n event, configure addtional conditions as needed, and	I specify the action to take whe
Add event trigger 📰 Browse	templates []. Save as template	
If event type is Select	v	0 0
Then 🗹 Send email alert 🛛 and	None v	
Description: Enter description (or	otional)	
If event type is Select	v	0 1
Then Send email alert and	Start screen recording V	
Description: Enter description (or	None	
	Start screen recording	
	Log off session	
	Disconnect session	
	Lock session	

When you finish creating at least one event trigger, click **Save as template** to save your event triggers as a template. You can then find the new template on the **My organization** tab of the **Event trigger templates** page.

To access the **Event trigger templates** page, click **Browse Template** or click **Resource Library** from the left navigation pane of the Session Recording service page.

Vent trigger templates							×
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Use selected Cancel							0

The **Event trigger templates** page accommodates all event trigger templates, both from your organization and from the other community members including Cloud Software Group itself.

On the **My organization** tab of the **Event trigger templates** page, you can publish your templates to the community for the other customers to access for free.

#### Session Recording service

Publish template	×	inity							
							<u>Submi</u>	ssior	n his
Publishing your template allows other Session Recording administrato use it in their configuration.	rs to view and	Created	i by 🗸						
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Enter template summary		lication				Security Productivity Application			
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"Feedback" in accordance with the <u>End User Agreement</u> , with all rights and obliga associated therewith.	tions					Security Productivity USB			
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Submit Cancel									
								1	
Screen record									

Note:

See the End User Agreement before submitting a template.

On the **My organization** or **Community** tab of the **Event trigger templates** page, you can search for target event trigger templates by keyword, theme, event category, and contributor. You can also bookmark or give likes to the templates of your interest.

You can select multiple event trigger templates at a time. The templates you select appear on the **Add event triggers** page where you can customize as needed.

Click **Save** to save your settings. You are taken back to the **Events and responses** page where the event triggers you specify are listed.Click **Configure** to further adjust your event triggers. If you select the **Send email alert** or **Start screen recording** action for any of your event triggers, follow the GUI to configure email settings and recording options.

Consisting a weak trigger action when cartain events are detected.     Feet type Enal later     Cleant drive mapping Pvs     App and Pvs   App start   App ord Pvs   Start screen recording   App attr No   Start screen recording   App attr No   Start screen recording   App ord Pvs   Start screen recording   App ord Pvs   Start screen recording   App ord Pvs   Start screen recording   App ord Pvs   Start screen recording   App ord Pvs   Start screen recording   App ord Pvs   Start screen recording action:   Compare the enal addresses separated by semicolons ()   Inter enal addresses separated by semicolons ()   App ord Pvs   Start screen recording matching (screen recording action:   Screen recording time span after an event is detected (sec) (* * * * * * * * * * * * * * * * * * *	Events and responses									
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	Applicable to the log off session, disconnect	Applicable to the log off session, disconnect session, and lock session actions.								

#### Note:

You must select the event types that the active event detection policy logs.

You can define your event triggers on the **Description** row or leave the row empty. Your defined description of an event trigger is provided in the alert emails if you have **Send email** selected and events of the type are logged. If you have **Start screen recording** selected, set the relevant parameters as illustrated later in this article. After that, dynamic screen recording automatically starts when certain events occur during an event-only recording.

For a complete list of supported event types, see the following table.

Event type	Dimension	Option
App Start		
	App name	Includes, Equals, Matches
	Full command line	Includes, Equals, Matches
App End		
	App name	Includes, Equals, Matches
Top Most		
	App name	Includes, Equals, Matches
	Windows title	Includes, Equals, Matches
Web Browsing		
	URL	Includes, Equals, Matches
	Tab title	Includes, Equals, Matches
	Browser name	Includes, Equals, Matches
File Create		
	Path	Includes, Equals, Matches
	File size (MB)	Greater than, Between, Smaller than
File Rename		
	Path	Includes, Equals, Matches
	Name	Includes, Equals, Matches
File Move		
	Source path	Includes, Equals, Matches
	Destination path	Includes, Equals, Matches
	File size (MB)	Greater than, Between, Smaller than
File Delete		
	Path	Includes, Equals, Matches
	File size (MB)	Greater than, Between, Smaller than
CDM USB		ulali
	Drive letter	Equals

Event type	Dimension	Option
Generic USB		
	Device name	Includes, Equals, Matches
Idle		
	idle duration (Hrs)	Greater than
File Transfer		
	File source	Equals ("host"or "client")
	File size (MB)	Greater than
	File name	Includes, Equals, Matches
Registry Create		
	Key name	Includes, Equals, Matches
Registry Delete		
	Key name	Includes, Equals, Matches
Registry Set Value		
	Key name	Includes, Equals, Matches
	Value name	Includes, Equals, Matches
Registry Delete Value		
	Key name	Includes, Equals, Matches
	Value name	Includes, Equals, Matches
Registry Rename		
	Key name	Includes, Equals, Matches
User Account Modification		
	User name	Includes, Equals, Matches
Unexpected App Exit		
	App name	Includes, Equals, Matches
App Not Responding		
	App name	Includes, Equals, Matches
New App Installed		
	App name	Includes, Equals, Matches
App Uninstalled		

Event type	Dimension	Option
	App name	Includes, Equals, Matches
RDP Connection		
	IP address	Includes, Equals, Matches
Popup Window		
	Process name	Includes, Matches
	Window content	Includes, Equals, Matches
Performance Data		
	CPU usage (%)	Greater than
	Memory usage (%)	Greater than
	Net send (MB)	Greater than
	Net receive (MB)	Greater than
	RTT (ms)	Greater than
Clipboard Operation		
	Data type	Equals (Text, File, Bitmap)
	Process name	Includes, Equals, Matches
	Content	Includes, Equals, Matches

6. (Optional) Email settings are available after you choose Send email alert in your event triggers.For an example email alert, see the following screen capture:

int to do
ost was detected. VDAMachine: AWTSVDA-0002;
[CAUTION - EXTERNAL EMAIL] DO NOT
otify you that a <b>TopMost</b> was detected:
administrator X8X7E
11/9/2020 3:15:06 AM
Rds Desktop And AppGroup
###Desktop.
###Desktop,
###Desktop, https://///webplayer/#/player/
###Desktop,

## Tip:

Clicking the playback URL opens the playback page of the recorded session in the on-premises web player. Clicking **here** opens the **All recordings** page in the on-premises web player.

To send email alerts in response to detected events, complete the following settings:

- a) In the **Recipients** section of the **Events and responses** page, enter email addresses for the target recipients.
- b) On the **Email alerts** page of your **Site settings**, specify the email sender and content.

Site settings				×
	SMTP server			
General	bd			
Storage maintenance	Port			
Email alerts	25	Enable SSL		
	Display name			
	d			
	Email address			
	i@citrix.com			
	Password			
			0	
	Email subject	Email body		
	🗸 User name	User name		
	🔽 Domain name	🔽 Domain name		
	Start Time	🗹 Start Time		
	Delivery group	Delivery group		
	Application	Application		
	VDA machine	VDA machine		
		Recording URL		
Apply changes	Cancel			8

c) Edit registry for accessing the on-premises web player.

To make the playback URLs in your alert emails work as expected, browse to the registry key at HKEY_LOCAL_MACHINE\SOFTWARE\Citrix\SmartAuditor\Server and do the following:

- Set the value data of LinkHost to the URL of the domain that you use to access the on-premises web player. For example, to access an on-premises web player at https ://example.com/webplayer/#/player/, set the value data of LinkHost to https://example.com.
- Add a value called **EmailThreshold**, and set its value data to a number in the range of 1 through 100. The value data determines the maximum number of alert emails that an email sending account sends within a second. This setting helps slow down the number of emails that are being sent and thus reduces the CPU usage. If you leave the value data unspecified or set it to a number out of range, the value data falls back to 25.

Note:

• Your email server might treat an email sending account as a spam bot and thus

prevent it from sending emails. Before an account is allowed to send emails, an email client such as Outlook might request you to verify that the account is used by a human user.

- There's a limit for sending emails within a given period. For example, when the daily limit is reached, you can't send emails until the start of the next day. In this case, ensure that the limit is more than the number of sessions being recorded within the period.
- 7. (Optional) To start screen recording immediately when certain events occur during an eventonly recording, set the following options for dynamic screen recording in the **Recording options** section:
  - Screen recording time span after an event is detected (min): You can configure the time duration (minutes) that you want to record the screen after events are detected. If you leave the value unspecified, screen recording continues until the recorded sessions end.
  - Screen recording time span before an event is detected (sec): You can configure the time duration (seconds) of the screen recording you want to keep before events are detected. The value ranges from 1 to 120. Setting the value to any of 1 through 10 makes the value 10 effective. If you leave the value unspecified, the feature does not take effect. The actual length of the screen recording that Session Recording keeps might be a little longer than your configuration.
  - **Enable lossy screen recording**: You can specify whether to enable lossy screen recording when a session event is detected. Lossy screen recording lets you adjust compression options to reduce the size of recording files and to accelerate navigating recorded sessions during playback. This feature is available with Session Recording 2308 and later. For more information, see Enable or disable lossy screen recording.
- 8. (Optional) Specify delay before session operations begin (sec). If you specify any of the following actions in response to logged events in recorded sessions, you can notify users of the actions in advance:
  - Lock session
  - Log off session
  - Disconnect session

For example:

			Downlo
Event type	Email alert	Action	
App end	⊘ No	Start screen recording	
App not responding	⊘ No	Log off session	
Decending entires			
Recording options	ding action		
Applicable to the start screen record			
Applicable to the start screen record Screen recording time span afte			
Applicable to the start screen record Screen recording time span after 0 2	r an event is detected (min) 🔞		
Applicable to the start screen record Screen recording time span afte 0 2 Screen recording time span before			
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Applicable to the start screen record Screen recording time span afte O Screen recording time span befor C Enable lossy screen recordin Session operation options	r an event is detected (min) 🔞 ore an event is detected (sec) 🚳		
Applicable to the start screen record Screen recording time span afte Screen recording time span befor Enable lossy screen recording Session operation options Applicable to the log off session, dis	r an event is detected (min) re an event is detected (sec)		
Applicable to the start screen record Screen recording time span afte O Screen recording time span befor C Enable lossy screen recordin Session operation options	r an event is detected (min) re an event is detected (sec)		

### Note:

If you set the value to 0, it means that users aren't notified when you lock, log off, or disconnect them from their virtual sessions. To notify users, set an appropriate value.

### For an example notice, see the following screen capture:

Session Recording	
For security, your session will be disconnected in 30 seconds. Please contact your system administrator.	
Reason:	
You moved the file "ClipboardOperation.PNG" from C:\Test to C:\Program Files\Citrix \SessionRecording\Agent\Bin\en on Thursday, January 12, 2023 at 1:39 AM.	
ОК	
ОК	

9. Select and edit the rule scope.

In a way similar to when you create a custom recording policy, you can choose at least one of the following items to create the rule scope:

• **Users and user groups**. Creates a list of users and groups to which the responses of the rule apply. Both Azure Active Directory (Azure AD) and Active Directory identity types are supported. For more information, see the instructions in the Create a custom recording policy section.

- **Published applications and desktops**. Creates a list of published applications and desktops to which the responses of the rule apply.
- **Delivery groups and VDA machines**. Creates a list of delivery groups and VDA machines to which the responses of the rule apply.
- **IP addresses and IP address ranges**. Creates a list of IP addresses and ranges of IP addresses to which the responses of the rule apply. The IP addresses mentioned here are the IP addresses of the Citrix Workspace apps.
- **Filter**. Creates a list of smart access tags to which the rule applies. You can configure contextual access (smart access) using smart access policies on Citrix NetScaler, Citrix Device Posture service, and Adaptive access based on the user's network location.

≡	CİTTIX   Daas Premium						CCID
	Manage Y Monitor						Downloads
Ad	d rule			Sele	ect tags		$\times$
Rule	ne and description name ter nile name		Recording act	tags. T		e rule applies to based on session tags. Select from the Citrix-define efined tags and their definition, see the <u>product documentation</u> .	d tags or enter custom
	ription (optional)		Enable event (			Description	
			Disable sessic	0	LOCATION_INTERNAL	Tag sent by default when the network connectivity type is set as INTE	
					LOCATION_EXTERNAL	Tag sent by default when the network connectivity type is set as EXTE	
Sco	pe				LOCATION_UNDEFINED	Tag sent for an IP address that is not defined in the policy but is comin Locations service. Launch for these users are the same as what is defi group.	
	Users and user groups				COMPLIANT	For compliant devices.	
	Published applications and desktops				NON-COMPLIANT	For non-compliant devices.	
	Delivery groups and VDA machines			Custon Enter ye	n tags our custom tags separated by	commas(.).	
	IP addresses and IP address ranges			Ente	ir tags		
	Filter	Configure					h
	Save			Se	are Cancel		<b>1</b>

### Contextual access (smart access) is available with Session Recording 2402 and later.

It lets you apply policies based on the user access context including:

- The user's location
- IP address range
- Delivery group
- Device type
- Installed applications

### Note:

When a session or an event meets more than one rule in a single event response policy, the oldest rule takes effect.

### 10. Follow the wizard to complete the configuration.

### 11. Activate the new event response policy.

## Video about configuring policies



# **Playback permissions**

February 19, 2024

## Session Recording administrators and their playback permissions

Session Recording administrators are Citrix Cloud administrators assigned a permission to access the Session Recording service. For an overview of Session Recording administrators and their playback permissions, see the following table:

Type of Session Recording		
administrator	Playback permission	Remarks
Citrix Cloud administrator	Can play all recordings	Shows as a full admin on the
assigned full access		Playback Permissions page of
		the Session Recording service
Citrix Cloud administrator	Can play all recordings	Shows as a full admin on the
assigned the <b>Cloud</b>		Playback Permissions page of
Administrator, All role		the Session Recording service

Type of Session Recording		
administrator	Playback permission	Remarks
Citrix Cloud administrator	Can play all recordings	Shows as a full admin on the
assigned the <b>Session</b>		Playback Permissions page of
Recording-FullAdmin, All role		the Session Recording service
Citrix Cloud administrator	Can play all recordings	Shows as a privileged player on
assigned the <b>Session</b>		the Playback Permissions
Recording-		page of the Session Recording
PrivilegedPlayerAdmin, All		service
role		
Citrix Cloud administrator	Can play all recordings except	Shows as a full admin on the
assigned <b>only</b> the <b>Session</b>	restricted recordings by default,	Playback Permissions page of
Recording-ReadOnlyAdmin,	or can play only recordings that	the Session Recording service
All role	originate from users and	by default, or shows as a
	groups, published applications	read-only admin on the
	and desktops, and delivery	Playback Permissions page of
	groups and VDAs you specify.	the Session Recording service when you specify the scope.

- For information about restricted recordings, see Place access restrictions on recordings.
- Citrix Cloud administrators assigned only the **Session Recording-ReadOnlyAdmin, All** role are called Session Recording read-only administrators later in this article. For more information, see Types of Session Recording administrators. You can limit playback permissions so that Session Recording read-only administrators can play only specific recordings from a target site.

## Limit the playback permission of a Session Recording read-only administrator

To limit the playback permission of a Session Recording read-only administrator, complete the following steps:

1. Select **Configuration > Playback Permissions** from the left navigation of the Session Recording service.

Note:

- The **Playback Permissions** menu in the left navigation of the Session Recording service is invisible for the administrators that are added through Azure AD groups. It is also invisible for Session Recording read-only administrators.
- All Session Recording administrators are listed on the **Playback Permissions** page.

h			4 ⁴⁴ 📀	CCID:
Monitor				Downloads
Playback Permissions	SERVER 🗸			0
View, grant, and edit permissions to play recorded a To manage authorized users, go to <u>Identity and Ac</u>				
C Refresh				
Name 🌲	Туре 🌲	Role 🍦	Playback Permission 🍦	
torong Tra	User	Read-only Admin	Full	0
and there	User	Full Admin	Full	
No. 1	User	Full Admin	Full	
	User	Full Admin	Full	
No. Mag	User	Full Admin	Full	
The lat	User	Full Admin	Full	
10.10 (BR)	User	Full Admin	Full	
101-104	User	Full Admin	Full	
in the	User	Full Admin	Full	
- pro 1986)	User	Full Admin	Full	-

- 2. Select a target site.
- 3. Target an administrator on the **Playback Permissions** page. To make the administrator a Session Recording read-only administrator, complete the following steps:
  - a) Go to the **Identity and Access Management > Administrators** tab of the Citrix Cloud console.
  - b) Locate the target administrator, click the ellipsis button, and select **Edit** access.

CitriX Identity and Access Authentication Administrator					* ^{#1}	CCID:
Select an identity provider Add administrators from	✓ C Refresh				Bulk Actio	ns v
□ Туре↓	Display Name	Email	Status	Access	Identity Provider	
User	Second Sec.		Active	Custom	Citrix Cloud	
User	1000		Active	Full	Citrix Cloud	
User	1000 C		Active	Full	Citrix Cloud	
User User	100 Te (100 F)		Active	Full	Citrix Cloud	ţ
User	1000	100000	Active	Full	Citrix Cloud	Copy Email Address Delete Administrator
User			Active	Full	Citrix Cloud	EdipAccess
User		10100	Active	Full	Citrix Cloud	
User	100.000		Active	Full	Citrix Cloud	
			Antino	Eul	Citrix Claud	

c) Select Custom access.

≡	citrix	 8	CCID:	~
4	Edit access for @citrix.com			
	Save Cancel			
	Full access     Full access allows administrators management control of Citrix Cloud and its services, as well as adding or removing other administrators.			
	Custom access Custom access allows you to determine the exact part of Citrix Cloud your administrators can manage.     Switching to custom access will remove management access to certain services.     Deselect All			
	General   All roles selected		>	
	✓ xaxd-xaccp1New   All roles selected		>	

- d) Click the angle bracket to expand all roles.
- e) Clear the check marks next to Cloud Administrator, All, Session Recording-FullAdmin, All, and Session Recording-PrivilegedPlayerAdmin,All. Select the check mark next to Session Recording-ReadOnlyAdmin, All.

С	Full access Full access allows administrators management control of Citrix Cloud and its services, as well as adding or removing other administrators.	
C	Custom access	
	Custom access allows you to determine the exact part of Citrix Cloud your administrators can manage. Ø Switching to custom access will remove management access to certain services.	
	Select all Deselect All	
	General   All roles selected	>
	zaxd-xaccp1New 9 of 11 roles selected	~
	Cloud Administrator, All	
	Delivery Group Administrator, All	
	Full Monitor Administrator, All-Access to 'Monitor' tab only	
	Help Desk Administrator, All-Access to 'Monitor' tab only	
	🗹 Host Administrator, All	
	Machine Catalog Administrator, All	
	Probe Agent Administrator, All	
	Read Only Administrator, All	
	Session Administrator, All - Access to 'Monitor' tab only	
	SessionRecording-FullAdmin, All	
	SessionRecording-ReadOnlyAdmin, All	

- f) Click Save.
- g) Return to and refresh the **Playback Permissions** page of the Session Recording service. The Citrix Cloud administrator you edited shows as a Session Recording read-only administrator.

			_	
mium			¢≝ 0	CCID:
✓ Monitor				Downloads
Playback Permissions	SERVER -			(?)
View, grant, and edit permissions to play recorded To manage authorized users, go to <u>Identity and Ac</u>				
C Refresh				
Name 🍦	Туре 🌲	Role 崇	Playback Permission 🍦	
torong Tex	User	Read-only Admin	Full	0
100.000	User	Full Admin	Full	
Number of Control of C	User	Full Admin	Full	
417.005	User	Read-only Admin	Full	Im
	User	Full Admin	Full	4
The last	User	Full Admin	Full	
10-10 (BR)	User	Full Admin	Full	

4. Click the **Edit** icon in the row of the Session Recording read-only administrator.

### Tip:

A Session Recording read-only administrator can have **full** permission to play all recordings, **limited** permission to play only specific recordings, or **no** permission to play any recordings. Unless otherwise specified, a Session Recording read-only administrator has full permission to play all recordings.

 To limit the recordings that the Session Recording read-only administrator can play, choose Limited on the Edit Playback Permission page. The Scope section appears on the Edit Playback Permission page.

	. <mark></mark> 244 ₿	CCID:
		Downloads
Edit Playback Permission		×
Playback Permission         Full         Limited         None         Scope         Playback is allowed if a recording meets any of the following criteria.		
Users and groups		Configure
Published applications and desktops		Configure
Delivery groups and VDA machines		Configure
Save		3

- 6. Click **Configure** to specify the scope of recordings that the Session Recording read-only administrator can play. Playback is allowed if a recording meets any of the following criteria.
  - **Users and user groups**. Sets that the Session Recording read-only administrator can replay only the sessions that are opened by specific users and user groups. Both Azure Active Directory (Azure AD) and Active Directory identity types are supported.

Ξ CİİΓIX   DaaS Premium			<b>≜</b> ≊ 0	CCID:
Manage V Monitor V				Downloads
Add rule				~
		Add users and groups		×
Name and description				
Rule name		Identity Type Azure Active Directory		
		Active Directory		
Description (optional) Character limit: 300		Azure Active Directory		
		Bd X		
		BD × BD1011 ×	D	
Scope				
Users and user groups	Configur			
Published applications and desktops	Configur			
				7
Save Cancel		Add users and groups Cancel		

### Note:

- The Azure AD identity support for configuring playback permissions is avail-

able with Session Recording server 2402 and later. It is a preview feature. Preview features might not be fully localized and are recommended for use in non-production environments. Citrix Technical Support doesn't support issues found with preview features.

- The corresponding identity type is displayed only when the site is connected to AD or Azure AD through Citrix Cloud's Identity and Access Management (IAM). You can check it on the **Authentication** tab of Citrix Cloud's IAM.
- **Published applications and desktops**. Sets that the Session Recording read-only administrator can replay only specific application and desktop sessions.
- **Delivery groups and VDA machines**. Sets that the Session Recording read-only administrator can replay only the sessions of specific delivery groups and VDAs.

Your settings might not show on the **Playback Permissions** page. The issue occurs after you upgrade to Session Recording 2204 or the initial release of Session Recording 2203 LTSR. As a workaround, run the following script in SQL Server Management Studio (SSMS) that corresponds to your Session Recording database:

```
1 ALTER procedure [dbo]. [EnumPlayerUserDeliveryGroupPoliciesOnCloud]
2 as
3 begin
4 set nocount on
5
6 select 3 as RoleType,
7 a.ID as RoleAccountID,
8 h.principleName as PrincipleName,
9 a.IsEnabled as IsEnabled,
10 e.name as PolicyType,
11 d.DeliveryGroupID as AccountMemberAccountID,
12 g.Name as AccountMemberName
13
14 from PlayerUserCloudAccountRoleConfigure a,
15 PlayerUserPolicyConfigSetMember b,
16 PlayerUserPolicyDeliveryGroupSetMember d,
17 PlayerUserPolicyType e,
18 DeliveryGroup g,
19 PlayerUserCloudAccount h
20 where e.id=5
21 and b.PlayerUserPolicyTypeID = e.ID
22 and a.PlayerUserPolicyConfigSetID = b.PlayerUserPolicyConfigSetID
23 and b.PolicySetID = d.PlayerUserPolicyDeliveryGroupSetID
24 and g.ID=d.DeliveryGroupID
25 and h.ID=a.CloudAccountID
26
27 end
28 <!--NeedCopy-->
```

[SRT-8028]

# **Administrator permissions**

March 27, 2024

### Assign administrative permissions

To assign permissions to administrators, go to the **Administrators** tab on the **Identity and Access Management** page of Citrix Cloud.

Video about assigning permissions to administrators:

cilrix	

## **Types of Session Recording cloud administrators**

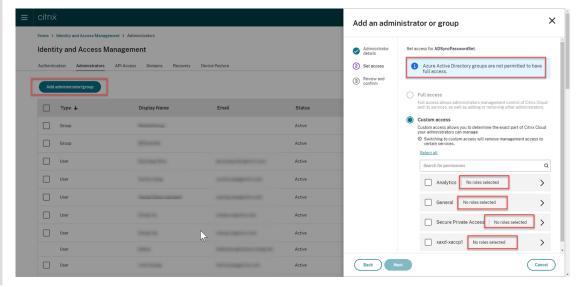
For the Session Recording service specifically, there are three types of cloud administrators, which are achieved by assigning different roles:

Type of Session Recording cloud administrator	Description
Full admin	Refers to a Citrix Cloud administrator assigned
	Full access, the Cloud Administrator, All role,
	or the Session Recording-FullAdmin, All role.

Type of Session Recording cloud administrator	Description
Privileged player admin	Refers to a Citrix Cloud administrator assigned
	only the Session
	Recording-PrivilegedPlayerAdmin, All role, or
	assigned the <b>Session</b>
	Recording-PrivilegedPlayerAdmin, All and the
	Session Recording-ReadOnlyAdmin, All roles.
Read-only admin	Refers to a Citrix Cloud administrator assigned
	only the Session Recording-ReadOnlyAdmin,
	All role.

### Note:

The administrators that you add through Azure AD groups don't have any permissions initially. To assign them permissions, specify custom access that aligns with the administrators'roles in your organization.



## Add administrators from Azure AD

Administrative access to the Session Recording service is enabled for Azure Active Directory (AD) users and groups.

A general workflow to use the feature is as follows:

1. Connect your Citrix Cloud account to your Azure AD. For more information, see Connect Citrix Cloud to Azure AD.

2. Add administrators to Citrix Cloud from Azure AD.

Citrix Cloud supports adding administrators either individually or as Azure AD groups.

- To add individual administrators from Azure AD, see Add new administrators. When you add an administrator, Citrix sends them an invitation email. Before the administrator can sign in, they must accept the invitation.
- To add Azure AD administrator groups to Citrix Cloud, see Add an administrator group to Citrix Cloud. Administrators that you add through Azure AD groups don't receive invitations and can sign in to Citrix Cloud immediately after you add them.
- 3. Specify permissions for the administrators that you add.

For Session Recording specifically, there are three types of administrators, which are achieved by assigning different roles. For more information, see Types of Session Recording administrators.

Note:

• The administrators that you add through Azure AD groups don't have any permissions initially. To assign them permissions, specify custom access that aligns with the administrators'roles in your organization.

≡	citrix				Add an administrator or group
[	Home > Identity and Access Managemen Identity and Access Man Authentication Administrators A Add administrator/group		Device Posture		Administrator     details     Set access for ADSyncPesswordSet.     Set access     Arure Active Directory groups are not permitted to have     full access.
	Type ↓	Display Name	Email	Status	<ul> <li>Full access</li> <li>Full access administrators management centrel of Citrix Cloud and its services, as well as adding or removing other administrators.</li> </ul>
	Group	Second and		Active	Custom access Custom access allows you to determine the exact part of Citrix Cloud your administrators can manage.
	Group			Active	<ul> <li>Switching to custom access will remove management access to certain services.</li> </ul>
	User			Active	Select all Search for permissions Q
	User			Active	Analytics No roles selected
	User	from the second		Active	General Noroles selected
	User			Active	Secure Private Access No roles selected
	User		▶	Active	xaxd-xaccp1 No roles selected
	User			Active	AcAd-XdcCpi No roles selected
	User			Active	Back Next Cancel

- The **Playback Permissions** menu in the left navigation of the Session Recording service is invisible for the administrators that are added through Azure AD groups.
- The **Generate command** button for cloud client installation is unavailable for the administrators that are added through Azure AD groups.

## **Permissions of Session Recording administrators**

For the permissions of Session Recording administrators, see the following table:

		Full admin	Privileged player admin	Read-only admin
1	Access the	Enabled	Disabled	Disabled
I	Dashboard page			
	Configure server settings	Enabled	Disabled	Disabled
	Configure policies	Enabled	Disabled	Disabled
I	Place access restrictions on recordings	Enabled	Enabled	Enabled
I	Remove access restrictions on recordings	Enabled	Enabled	Disabled
(	Archive and delete recordings manually	Enabled	Enabled	Disabled
(	Archive and delete recordings automatically	Enabled	Disabled	Disabled
I	Configure playback permissions	Enabled	Disabled	Disabled

For information on configuring permissions for Session Recording read-only administrators, see Configure playback permissions.

# **Configure preferences**

September 6, 2023

To configure your preferences for Session Recording, select **Configuration > Utility Settings** from the left navigation.

	Download
ility Settings your preferences for Session Recording.	C
Player cache Set the cache size you want the player to use for playback MB 25MB 50MB 75MB 100MB 32 W MB	
Seek options  Enable fast seek Select this check box to improve the seek performance during playback.	

You can configure the following preferences for Session Recording:

- Player cache. Drag the slider to set the cache size you want the player to use for playback.
- **Fast seek**. You can enable fast seeking through ICA screen recording by configuring how often an I-Frame is generated. This feature significantly improves the playback seeking experience and is available with Session Recording 2308 and later.

## **View recordings**

June 11, 2024

If sessions are recorded with the live playback feature enabled, you can view sessions that are in progress, with a delay of 1-2 seconds.

Sessions that have a longer duration or larger file size than the limits configured appear in more than one session file.

Note:

Grant users the right to access the recorded sessions of VDAs.

# **Search for recordings**

September 12, 2022

## **Search for recordings**

On each subpage of **Recordings**, you can search for recordings by specifying:

- A specific time period. The options include **Today**, **Last 7 days**, **Last 30 days**, **Last 90 days**, **All time**, and **Custom**.
- One or more sites.
- Filters include Host name, Client name, User name, Application, Client IP address, Event text, Event type, and duration.
- Advanced search criteria.

					[	Download
All time 🗸 2206	~			Q Search by host, user and	so on	
Today				🔓 Host name	A User name	lay
Last 7 days	Recording Site	User 🌲	Host 🌲	C Application	Client name	
Last 90 days )22 10:49 AM	2206	administrator	AAGENTFORSTG	C Client IP address	Event text	
All time )22 10:01 AM	2206	administrator	AAGENTFORSTG	A	O Duration	
Custom April 13, 2022 9:47 AM	2206	administrator	AAGENTFORSTG	A Q. Advanced search	O Duration	
April 13, 2022 9:33 AM	2206	administrator	AAGENTFORSTG	A		
April 12, 2022 7:11 PM	2206	administrator	AAGENTFORSTG	AGENTFORPRO	0	
April 12, 2022 6:56 PM	2206	administrator	AAGENTFORSTG	AGENTFORPRO	0	
March 23, 2022 11:27 AM	2206	administrator	AGENT	CNENGKFZNAXM4XD	28	
March 23, 2022 11:18 AM	2206	administrator	AGENT	CNENGKFZNAXM4XD	5	
March 23, 2022 11:15 AM	2206	administrator	AGENT	CNENGKFZNAXM4XD	2	
March 23, 2022 11:10 AM	2206	administrator	AGENT	CNENGKFZNAXM4XD	4	

### You can also specify **Columns to display**.

					Downloa
ll time 🗸 2206	~			Q Search by host, user and so o	Colugns to displa
Start Time 🍦	Recording Site	User 🤤	Host 👙	Client ≑	Columns to display
April 13, 2022 10:49 AM	2206	administrator	AAGENTFORSTG	CNENG4UH1YUMWOD	Start Time
April 13, 2022 10:01 AM	2206	administrator	AAGENTFORSTG	AGENTFORPRO	<ul> <li>Recording Site</li> <li>User</li> </ul>
April 13, 2022 9:47 AM	2206	administrator	AAGENTFORSTG	AGENTFORPRO	<ul> <li>Host</li> <li>Client</li> </ul>
April 13, 2022 9:33 AM	2206	administrator	AAGENTFORSTG	AGENTFORPRO	Events Events Only
April 12, 2022 7:11 PM	2206	administrator	AAGENTFORSTG	AGENTFORPRO	Recording server
April 12, 2022 6:56 PM	2206	administrator	AAGENTFORSTG	AGENTFORPRO	Duration
March 23, 2022 11:27 AM	2206	administrator	AGENT	CNENGKFZNAXM4XD	28
March 23, 2022 11:18 AM	2206	administrator	AGENT	CNENGKFZNAXM4XD	5
March 23, 2022 11:15 AM	2206	administrator	AGENT	CNENGKFZNAXM4XD	2
March 23, 2022 11:10 AM	2206	administrator	AGENT	CNENGKFZNAXM4XD	4

### Show all recordings of a session

You can select a recording and click the **Follow up** button to show all recordings of the recorded session.

mium							<b>*</b> ] 0	11	~
								Do	wnloads
All time 🗸 2206	~		ecordings of session starts from Ap						$\times$
Start Time	Recording Site	User 💲	Start Time 👙	User 👙	Host 💲	Client 🌲	Events 🌐	Duration 👙	Action
April 13, 2022 10:49 AM	2206	administrator	April 13, 2022 10:49 AM	administrator	AAGENTFORSTG	CNENG4UH1YUMWOD	0	00:09:54	$\triangleright$
April 13. 2022 10:01 AM	2206	administrator							
April 13, 2022 9:47 AM	2206	administrator							
April 13, 2022 9:33 AM	2206	administrator							
April 12, 2022 7:11 PM	2206	administrator							
April 12, 2022 6:56 PM	2206	administrator							
March 23, 2022 11:27 AM	2206	administrator							
March 23, 2022 11:18 AM	2206	administrator							
March 23, 2022 11:15 AM	2206	administrator							
March 23, 2022 11:10 AM	2206	administrator							
									8
			Close						Ű

# **Place access restrictions on recordings**

November 17, 2022

### Overview

You can restrict access to selected recordings from within the Session Recording service. In addition to playback permissions, this feature provides more granular access control.

Citrix Cloud administrators assigned any of the following access permissions are allowed to place access restrictions on recordings:

- Full access
- Cloud Administrator, All role
- Session Recording-FullAdmin, All role
- Session Recording-PrivilegedPlayerAdmin, All role
- Session Recording-ReadOnlyAdmin, All role

Restricted recordings are not accessible to Session Recording read-only administrators, that is, Citrix Cloud administrators assigned **only** the **Session Recording-ReadOnlyAdmin, All** role. Session

# Recording read-only administrators do not have permission to access the **Restricted** page or remove access restrictions on the page.

Note:

- This feature requires Session Recording server 2209 or later.
- Placing access restrictions on live recordings is not supported.

### Place and remove access restrictions on target recordings

- 1. Select **Recordings > All Recordings** from the left navigation of the Session Recording service.
- 2. Select a site consisting of Session Recording server 2209 or later.

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	time  2209(TESTSER   Columns to displa SERVER-C1 (dfsdfsadfhyth SERVER-3	<u>·</u>					Q Search by host, user ar	id so on	0 selected
	Start Time  SERVER-2 February 22, 2(	Jser ‡	Host 🌲	Client 🌲	Events ≑	Events Only 🍦	Recording server 👙	Duration 🌐	Action
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	February 21, 209(TESTSERVER3) 8:26 PM	dministrator	0.000		0	False	TESTSERVER3	00:03:03	ightarrow
	February 20, 20 5:01 PM	dministrator			0	False	TESTSERVER3	00:10:39	ightarrow
	February 20, 20 SRS-7 4:55 PM	dministrator			0	False	TESTSERVER3	00:02:54	ightarrow
	February 20, 2022 2209(TESTSERVER3) 4:38 PM	administrator			0	False	TESTSERVER3	00:15:46	ightarrow
	February 20, 2022 2209(TESTSERVER3) 4:18 PM	administrator		and the second s	0	False	TESTSERVER3	00:17:09	lacksquare
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	February 17, 2022 2209(TESTSERVER3) 2:33 PM	administrator	1.000		0	False	TESTSERVER3	00:12:50	ightarrow
							1-10 of 22	items < 1 2 3	3 > 10/page v

3. On the **All Recordings** page, select one or more target recordings.

### Note:

We recommend you select no more than 40 recordings at a time. Otherwise, access restrictions can fail.

### 4. Click Place access restrictions.

### Session Recording service

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	Columns to display (	🖻 Follow up 🔒 Place	access restrictions	🖻 Archive 🛛 🗑 Delete						2 selec
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	February 20, 2022 4:38 PM	2209(TESTSERVER3)	administrator		1000 B	0	False	TESTSERVER3	00:15:46	$\mathbf{eta}$
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	February 18, 2022 10:37 AM	2209(TESTSERVER3)	administrator	10.00		0	False	TESTSERVER3	00:16:14	ightarrow
	February 17, 2022 2:33 PM	2209(TESTSERVER3)	administrator	A110.00		0	False	TESTSERVER3	00:12:50	$\mathbf{eta}$

5. Read the prompt and then click **Confirm**.

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ll time 🗸 🛛 220	9(TESTSER			Q Search by host, user a		
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February 22, 2022 10:16 AM	2209(TESTSERVER3)	A Place access restrictions	False	TESTSERVER3	00:14:11	$\triangleright$
February 21, 2022 8:26 PM	2209(TESTSERVER3)	Are you sure you want to restrict access to the selected recordings?	False	TESTSERVER3	00:03:03	lacksquare
February 20, 2022 5:01 PM	2209(TESTSERVER3)	Restricted recordings are accessible only to privileged players. Note: A single recorded session can produce more than one recording. If	False	TESTSERVER3	00:10:39	ightarrow
February 20, 2022 4:55 PM	2209(TESTSERVER3)	you select any recording of a session, the access restrictions apply to all other recordings of the same session.	False	TESTSERVER3	00:02:54	$\triangleright$
February 20, 2022 4:38 PM	2209(TESTSERVER3)	other recordings of the same session.	False	TESTSERVER3	00:15:46	$\triangleright$
February 20, 2022 4:18 PM	2209(TESTSERVER3)	Confirm	False	TESTSERVER3	00:17:09	$\triangleright$
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February 18, 2022 10:37 AM	2209(TESTSERVER3)	administrator 0	False	TESTSERVER3	00:16:14	$\triangleright$
February 17, 2022 2:33 PM	2209(TESTSERVER3)	administrator 0	False	TESTSERVER3	00:12:50	$\triangleright$

- 6. Verify that the selected recordings on which you placed access restrictions are moved from the **All Recordings** page to the **Restricted** page.
- 7. On the **Restricted** page, remove access restrictions as needed. With access restrictions removed, recordings are moved back to the **All Recordings** page.

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۵	Columns to display	🕑 Follow up 🛛 🕞 Re	emove access restrictio	ons 📵 Delete							1 select
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~	March 22, 2022 10:37 AM	2209(TESTSERVER3 )	administrator			24	False	TESTSERVER3	00:38:32	100	
	March 18, 2022 5:10 PM	2209(TESTSERVER3 )	administrator	1000		19	False	TESTSERVER3	12:03:55	1000	
	March 18, 2022 3:47 PM	2209(TESTSERVER3 )	administrator	1000	1000	6	False	TESTSERVER3	00:02:39	100	
	February 22, 2022 2:46 PM	2209(TESTSERVER3 )	administrator			34	False	TESTSERVER3	00:06:31		
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# **Open and play recordings**

January 30, 2024

## **Open and play recordings**

You can play live and completed recordings. On the **All Recordings** and **Archived** pages, each recording has a play button on the right side, next to the **Duration** item.

Tip:

Use a machine with a GPU for a better playback experience on it.

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↓ ↓		Session info View playlist & User name: & Host name:
		Clent name      Recording 1/1     JA     Ala 23, 204 2040 57     00:03:18 • 0 events      View: All      ✓
		Q Search ♥ ■ 0000014 curry bagetink com bd  v
	🕨 📣 —— 🔶 000000000338 🖾 Comments 🔀 Share X1 😥 Show stats 💥 FULL SCREEN	<b>9</b>

Click the play button. The playback page appears. Playback starts after memory caching.

### Tip:

- Clicking the session progress time lets you switch to the absolute date and time the session was recorded.
- For an event-only recording, the play icon in the upper left corner is unavailable.

## **Player controls**

For a description of the player controls, see the following table:

Player Control	Description
Play button	Plays the selected recording file.
Mute/unmute button	Determines whether to remove audio during playback.
Progress bar	You can drag the progress bar during playback. Idle periods of recorded sessions are highlighted during playback.
Current position of recording playback	Indicates the current position of the recording playback and the total recording duration. The time format is HH:MM:SS.
Comments	Lets you click and leave a comment about the recording being played.
Share	Lets you share the recording as restricted and unrestricted links.
Show stats	Shows the overlay that features data points related to the recorded session.
Hide stats	Hides the session data overlay.
Playback speed	Indicates the current speed of playback. Click the icon to switch between options including X0.5, X1, X2, and X4.
Full screen	Displays the playback in full screen.
Exit full screen button	Displays the playback within the webpage.

In the right pane of the playback page, the **Events** and **Comments** filters, quick search box, and some recording data are available:

### Session Recording service

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	0 ms 0 Kops 0 Kops 0 % 0/0 MB (0%) Last 10 mins Entire data manunce data' is checked in the Policy Console.		JUN 13, 2022 19:06:05 00:03:04 / 18 Events & User name: administrator & Host name: Client name
			View: All All Events Comments _{it} Windowszelorer, 11424
			00:02:05 File Create:11424:           C:\Users\administrator           Image: State of the state
			Seamless Hos
• 00:00:0	0/00:03:04 🔁 Comments	X 1 Hide stats 💆 FULL SCREEN	C:\Users\administrator

- The date and time on the player machine. In this example, **JUN 13, 2022** and **19:11:02**.
- The duration of the recording in playback. In this example, **00:03:04**.
- The number of events in the recording. In this example, **18 EVENTS**.
- The name of the user whose session was recorded.
- The host name of the VDA where the recorded session was hosted.
- The name of the client device where the session was running.
- Options for sorting search results: Select All, Events, or Comments to sort search results.
- Event filters. You can select more than one filter to search for events in the current recording.

Click the icon to expand display of events. For example:



- Event list. Clicking an event on the list takes you to the position of the event in the recording.
- Quick search box. The **search events** quick search box helps to quickly narrow down a list of events in the current recording.

# Share recordings as links

January 30, 2024

### Overview

You can share recordings as restricted and unrestricted links from the cloud player. Other users can use the links to access the shared recordings directly, which obliterates the need to search among many recordings. If you share a recording as a restricted link, only users who already have playback permission can view the recording using the link. If you share a recording as an unrestricted link, anyone in your AD domain can view the recording using the link.

For unrestricted recording sharing, you can further:

- Specify whether to issue email notifications to specific recipients when an unrestricted recording link is generated. For more information, see Notifications.
- View the events related to unrestricted recording sharing on the **Events** tab of the activity feed.

To facilitate managing unrestricted links, the Session Recording service lets you:

- Set a validity period for each of the links.
- (Optional) Enter a justification when generating the links.
- Get an overview of which recordings have been shared as unrestricted links.
- View all unrestricted links of a specific recording.
- Know which users have accessed an unrestricted link.
- Revoke unrestricted links that haven't expired.
- Clear invalid links that have expired or revoked.

To share recordings as links and manage unrestricted links, you **must** have full access to the Session Recording service. It means that you must be a Citrix Cloud administrator assigned any of the following permissions:

- Full access
- Cloud Administrator, All role
- Session Recording-FullAdmin, All role

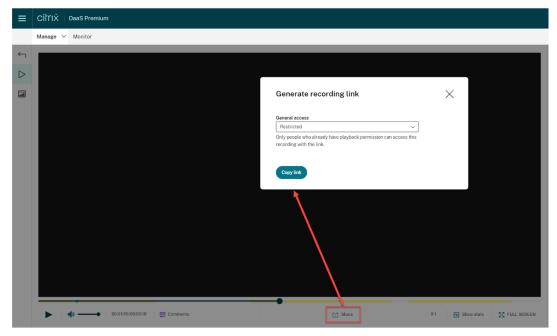
### Note:

• To view a recording using an unrestricted link, users must enter a justification.

## Share recordings as restricted links

To share recordings as restricted links, complete the following steps:

- 1. In the cloud player, open and play the recording that you want to share.
- 2. Click **Share** on the playback page of the recording. The **Generate recording link** dialog appears.



- 3. Select **Restricted** from the **General access** drop-down.
- 4. Click Copy link.

After you click **Copy link**, either of the following messages appears, indicating a successful or failed operation respectively:

- The URL to the shared recording has been copied to the clipboard
- Sharing the recording URL failed
- 5. Share the generated URL link with users who already have playback permission.

Pasting the link in the address bar lets you jump to the location where the link was copied.

### Share recordings as unrestricted links

To share recordings as unrestricted links, complete the following steps:

- 1. In the cloud player, open and play the recording that you want to share.
- 2. Click **Share** on the playback page of the recording. The **Generate recording link** dialog appears.
- 3. Select **Unrestricted** from the **General access** drop-down.

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	Generate recording link ×	
	General access	
	Unrestricted ~	
	Anyone in the AD domain who has installed the Session Recording web player can access this recording with the link.	I
	Justification	
	Enter justification for generating the link	
	$ \begin{array}{c c} \text{Link valid for (hours)} \\ \hline 2 & \swarrow \end{array} \\ \hline \end{array} $	
	Copy link Manage links	
	🕨 🚽 🛶 000000/0000318 🗐 Comments 🔀 FULL SCREE	4

- 4. (Optional) Enter your justification for sharing the recording.
- 5. Set an expiration period for the link to be generated.
- 6. Click Copy link.

After you click **Copy link**, either of the following messages appears, indicating a successful or failed operation respectively:

- The URL to the shared recording has been copied to the clipboard
- Sharing the recording URL failed
- 7. Share the generated URL link with anyone in your AD domain.

Pasting the link in the address bar lets you jump to the location where the URL link was copied.

Note:

- To view a recording using an unrestricted link, users must enter a justification.
- The actions of generating unrestricted links are logged on the **Events** tab of the activity feed.
- For unrestricted recording sharing, you can specify whether to issue email notifications to specific recipients when an unrestricted recording link is generated. For more information, see Notifications.

# Manage unrestricted links

### View which recordings have been shared as unrestricted links

To get an overview of which recordings have been shared as unrestricted links, check the **Links** column on the **All Recordings** page. If the **Links** column doesn't show up, click **Columns to display** and then select **Links**.

All time V BDSE	ERVER2311	~								a ocarcinoyi	host, user and so on		0 select
Columns to display	Site	Recording ÷	User 🌲	User Principal 💠 Name	Host 🔶	Client ≑	Events ≑	Events only	Audio recording	Lossy screen recording	Duration 🚖	Links	Action
Start time Site User	RVER2311		BD1011				0	False	Enabled	False	00:03:18	c® 1	D
User Principal Name	RVER2311		BD1011				0	False	Enabled	False	00:03:02		
Host Client	RVER2311		BD1011				0	False	Enabled	False	00:03:49		
Events Events only	RVER2311		BD1011				0	False	Enabled	False	00:16:54		
Audio recording Lossy screen recording	RVER2311		BD1011				0	False	Enabled	False	00:01:28		
Recording server	RVER2311		BD1011				0	False	Enabled	False	00:01:59		
Application Links	RVER2311		BDTest1010				0	False	Enabled	False	00:03:35		
Duration	RVER2311		BD1011		E		0	False	Enabled	False	00:01:24		
January 19, BI 2024 10:26 AM BI	DSERVER2311		BDTest1010				0	False	Disabled	False	00:02:01		D
January 19, BE 2024 10:22 AM	DSERVER2311		BDTest1010				0	False	Disabled	False	00:03:52		
											1-10 of 24 items <	123>	10/page

After you click the link icon corresponding to a recording, the details about unrestricted links generated for the current recording appear, for example:

		<b>≜</b> ²⁴⁴ <b>?</b>	CCID:
			Downloads
Manage unrestricted links			×
View and manage unrestricted links generate	d for this recording. Expand each roo	w to view details.	
Generated at (UTC+08:00) $\stackrel{\diamond}{\Rightarrow}$	Generated by	Justification	Status
Jan 24, 2024 5:39:31 PM	@citrix.com	test	Expired
Jan 25, 2024 2:45:45 PM	,, @citrix.com	a	Revoked
Jan 24, 2024 5:30:54 PM	@citrix.com		Expired

### View and manage unrestricted links of a specific recording

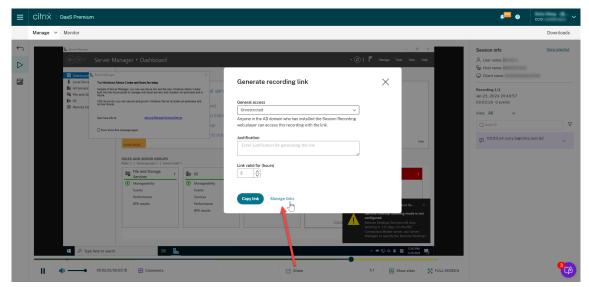
1. Open the Manage unrestricted links page.

Method 1: On the **All Recordings** page, click the link icon in the **Links** column next to a specific recording.

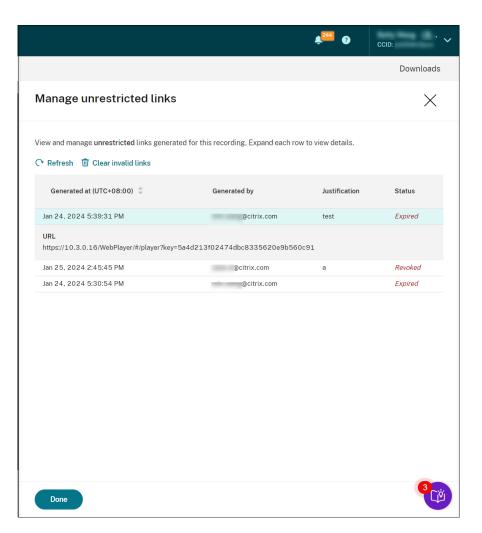
### Session Recording service

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	Start time 🐥	Site	Recording ÷	User 🌲	User Principal ≑ Name	Host 🤤	Client 🌲	Events 🌐	Events ÷	Audio recording	Lossy screen recording	Duration 🗘	Links	Action
0	January 23, 2024 8:40 PM	BDSERVER2311	BDServer2311	-				0	False	Enabled	False	00:03:18	ø ⁰ 3	D
	January 23, 2024 2:44 PM	BDSERVER2311	BDServer2311	-				0	False	Enabled	False	00:03:02	•	
	January 23, 2024 2:38 PM	BDSERVER2311	BDServer2311	-				0	False	Enabled	False	00:03:49	6 ⁹ 1	D
	January 22, 2024 9:30 PM	BDSERVER2311	BDServer2311	-				0	False	Enabled	False	00:16:54		D
D	January 22, 2024 9:28 PM	BDSERVER2311	BDServer2311	-			10	0	False	Enabled	False	00:01:28		D
C	January 22, 2024 9:25 PM	BDSERVER2311	BDServer2311	-				0	False	Enabled	False	00:01:59		D
C	January 22, 2024 9:15 PM	BDSERVER2311	BDServer2311	10000			10	0	False	Enabled	False	00:03:35		D
כ	January 19, 2024 7:36 PM	BDSERVER2311	BDServer2311	-		E		0	False	Enabled	False	00:01:24	÷	D
	January 19, 2024 10:26 AM	BDSERVER2311	BDServer2311			-	10	0	False	Disabled	False	00:02:01	÷	D
)	January 19, 2024 10:22 AM	BDSERVER2311	BDServer2311			-		0	False	Disabled	False	00:03:52		D

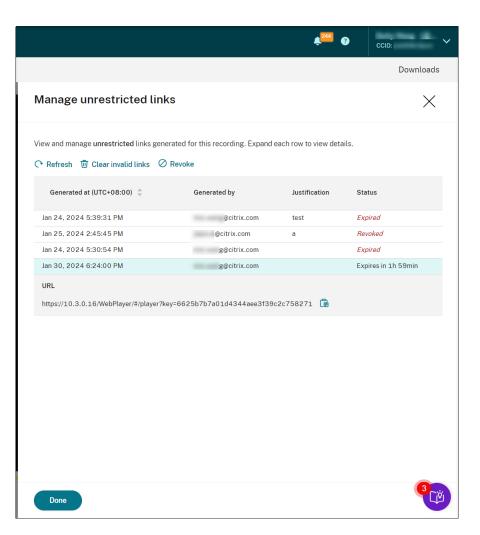
Method 2: Click Manage Links in the Generate recording link dialog.



2. On the **Manage unrestricted links** page, expand each row to view details about the unrestricted links that are generated for the specific recording.



3. (Optional) To revoke a link, select it and then click **Revoke** that appears.



After you click **Revoke**, you are prompted to confirm the action.

A Revoke link						
If you revoke this link, people can no longer access the recording with it. This will not affect anyone who already had the page open. Are you sure you want to continue?						
Continue Cancel						

4. (Optional) To remove the links that have expired or revoked, click **Clear invalid links**.

# Specify players for a site

July 17, 2023

## Overview

You can now specify either the cloud player, on-premises players, or both to play the recordings of a site. By default, both the cloud player and on-premises players are selected.

Note:

This feature is available for Session Recording server 2308 and later only.

The on-premises players include the Session Recording player (Windows) and the Session Recording web player.

## Configuration

To specify players available to play the recordings of a site, complete the following steps:

- 1. Select **Configuration > Server Management** from the left navigation of the Session Recording service.
- 2. Click **Settings** for the target site. The **Site settings** page appears.

emium		• 📮 •	CCID:
r ¥			Downloads
	0 server, 0 available		
>	EUSERVER2 1 server, 1 available		Settings
>	SERVER 2305 1 server. 0 available		Settings
>	SERVER 2305-2 1 server, 0 available		Settings
>	SERVER-1 1 server, 0 available		Settings
	SERVER-2212 O server, O available		Settings
>	SERVER-2305 1 server, 0 available		Settings
>	SERVER-3 1 server, 0 available		Settings Site settings
>	SERVER22-SIN 1 server, 1 available		Settings
>	SERVER2206A 1 server, 1 available		Settings
>	SR2303 1 server, 1 available		Settings
>	SR2305 1 server, 0 available		Settings
>	SR2308LB 2 servers, 0 available		Settings
>	SRN1912 1 server, 0 available		Settings

3. On the **Site settings** page, select the **Playback** menu. The player selection page appears. By default, both options are selected.

	•=	• con: · · ·
		Downloads
Site settings		×
General Storage maintenance	Player selection Controls which player is available to play the recordings of this site. The cloud player	
Playback	The on-premises players	
Apply changes	Cancel	10

4. Select at least one option as needed and then click **Apply changes**. For example, select only the on-premises players:

		<b>≜</b> ¹⁶²	9	CCID:
				Downloads
Site settings				×
General Storage maintenance	Player selection Controls which player is available to play the recordings of this site. The cloud player			
Playback	The on-premises players			
				(1)
Apply changes	Cancel			

## What if a player is disabled (not selected)

• If the cloud player is disabled for recording playback of a site, the play button for recordings from the site is unavailable with a tooltip on hover.

							Downloads
II time 🔍 SERVER22-SI	v ~				٩	Search by host, user and so on	0
Columns to display							0 selecte
Start Time 💠	Recording Site	User ≑	Host ≑	Client ≑	Events ≑	Duration ≑	Action
July 14, 2023 11:24 AM	SERVER22-SIN	administrator	WIN10EN-4PVEICQ	NKGWYUCHUNJ01	0	00:00:59	
July 14, 2023 11:14 AM	SERVER22-SIN	administrator	WIN10EN-4PVEICQ	NKGWYUCHUNJ01	0	Recordings from this site of played from the cloud.	an't be
July 14, 2023 11:09 AM	SERVER22-SIN	administrator	WIN10EN-4PVEICQ	NKGWYUCHUNJ01	0	00:04:45	Ď
July 14, 2023 11:03 AM	SERVER22-SIN	administrator	WIN10EN-4PVEICQ	NKGWYUCHUNJ01	0	00:00:41	ightarrow
July 14, 2023 10:48 AM	SERVER22-SIN	administrator	WIN10EN-4PVEICQ	NKGWYUCHUNJ01	0	00:01:04	$\mathbf{\mathbf{b}}$
July 14, 2023 10:40 AM	SERVER22-SIN	administrator	WIN10EN-4PVEICQ	NKGWYUCHUNJO1	0	00:02:20	$\mathbf{\mathbf{b}}$
July 14, 2023 10:30 AM	SERVER22-SIN	administrator	WIN10EN-4PVEICQ	NKGWYUCHUNJ01	0	00:05:44	$\triangleright$
July 14, 2023 10:06 AM	SERVER22-SIN	administrator	WIN10EN-4PVEICQ	NKGWYUCHUNJO1	0	00:23:54	$\triangleright$
July 14, 2023 9:45 AM	SERVER22-SIN	administrator	WIN10EN-4PVEICQ	NKGWYUCHUNJ01	0	00:11:08	$\mathbf{b}$
July 14, 2023 9:22 AM	SERVER22-SIN	administrator	AWTSVDA-0001	NKGWYUCHUNJ01	4	00:16:28	$\mathbf{b}$
						µ-10 of 58 items < 1 2 3 4	5 6 > 10/page

 If the on-premises players are disabled for recording playback of a site, you are prompted when selecting recordings the site. The prompt message reads "Recording playback has been disabled for this server in the current player."For an example of the prompt message in the onpremises Session Recording web player:

CİTIX   Session Rec	cording	Search by host r	name, user, start t	ime, and so on			$\sim$		_
Recordings     All Recordings	<ol> <li>Recording playback has been disab</li> </ol>	led for this server in t	ne current player.	]					
Restricted									Manage link
Comments 👻	Start Time 🍦	User 🌲	Host 🌲	Client ≑	Events ≑	Events Only 👙	Audio Recording 👙	Recording Server 👙	Duration 👙
Administrator Logging 🗸	Jul 10, 2023 11:07:18 AM	administrator	SR2308VDA	APACENGVSUIATH8	0	False	Enabled	NewTest	00:03:27
Configuration 🗸	Jul 10, 2023 10:47:11 AM	administrator	SR2308VDA	APACENGVSUIATH8	0	False	Enabled	NewTest	00:03:23
	Jul 10, 2023 10:45:15 AM	administrator	SR2308VDA	APACENGVSUIATH8	0	False	Enabled	NewTest	00:01:37
	Jul 10, 2023 10:32:41 AM	administrator	SR2308VDA	APACENGVSUIATH8	0	False	Enabled	NewTest	00:07:59
	Jul 10, 2023 10:23:15 AM	administrator	SR2308VDA	APACENGVSUIATH8	0	False	Enabled	NewTest	00:01:18
	Jul 10, 2023 10:13:52 AM	administrator	SR2308VDA	APACENGVSUIATH8	0	False	Enabled	NewTest	00:02:59
	Jul 7, 2023 6:31:45 PM	administrator	SR2308VDA	APACENGVSUIATH8	0	False	Disabled	NewTest	00:09:27
	Jul 7, 2023 6:17:55 PM	administrator	SR2308VDA	APACENGVSUIATH8	0	False	Disabled	NewTest	00:09:38
	Jul 7, 2023 4:26:46 PM	administrator	SR2308VDA	APACENGVSUIATH8	0	True	Disabled	NewTest	00:02:10
	Jul 7, 2023 4:01:46 PM	administrator	SR2308VDA	APACENGVSUIATH8	0	True	Disabled	NewTest	00:03:10
	Jul 6, 2023 8:14:34 PM	administrator	SR2308VDA	APACENGVSUIATH8	0	True	Disabled	NewTest	00:04:00
	Jul 6, 2023 8:12:04 PM	administrator	SR2308VDA	APACENGVSUIATH8	8	True	Disabled	Activate Window NewTestettings to activ	
	Jul 6. 2023 8:09:00 PM	administrator	SR2308VDA	APACENGVSUIATH8	31	True	Disabled	NewTest	00:02:32

Meanwhile, if any recording of the site was shared as a link earlier, the **Playback unavailable** message appears when the viewer opens the link to access the recording.

# Highlight idle periods

### June 13, 2022

Session Recording can record idle events and highlight idle periods in the player.

To customize the idle event feature, set the following registry keys at HKEY_LOCAL_MACHINE\ SOFTWARE\Citrix\SmartAuditor\SessionEvents.

Registry key	Default value	Description
DisableIdleEvent	0	To disable the idle event
		feature, set the value to <b>1</b> . To
		enable the idle event feature,
		set the value to <b>0</b> .
IdleEventThrottle	30 seconds	If there is no user activity
		(including graphics changes
		and keyboard/mouse inputs)
		longer than the time threshold
		set by the registry key, an idle
		event is recorded. The idle
		period is highlighted when the
		recorded session plays back on
		the Session Recording web
		player.
IdleEventActiveThrottle	2 seconds	Only a specified number of
		graphics changes within a
		specified amount of time
		qualify as user activities. By
		default, at least three packets
		within 2 seconds can qualify as
		user activities.
IdleEventActivePktNumThrottle	3 packets	Only a specified number of
		graphics changes within a
		specified amount of time
		qualify as user activities. By
		default, at least three packets
		within 2 seconds can qualify as
		user activities.

Registry key	Default value	Description
IdleEventActivePktSizeThrottle	300 bytes	Graphics packets smaller than the key value are ignored and the relevant time duration is regarded as idle.

### **Use events and comments**

### June 13, 2022

In the right pane of the playback page, the **Events** and **Comments** filters are available. You can use events and comments to help you navigate through recorded sessions in the web player.

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	Overview Manage V Monitor	Downloads
$\leftarrow$	Player 🗰 🗙	
No dat	Reund frip time     O ma       Network (sective)     0 Ktops       Network (sective)     0 Ktops       CPU usage     0 %       Memory usage     0 %       Latt 30 mms     Latt 30 mms       Latt 30 mms     Latt 30 mms	JUN 13, 2022 19:06:05: 00:03:04 · 18 Events & User name: administrator & Host name: Client name
		View: All V All V Events Comments the V windowexplorer, 11424 V
		00:02:05 File Create:11424:     ~       C/Usersladministrator     ~       00:02:06 Top-nock     ~       window/WTShell, ICA     ~       Seamless Hos     ~
		№ 00:02:07 Top-most window:explorer, , 11424
	► 00:00:00/00:03:04	© 00:02:12 File Delete:11424: C:\Users\administrator

### **Comment on recordings**

When a recorded session is being played, you can click the **Comments** player control to leave comments and set comment severities. Severities include **Normal**, **Medium**, and **Severe**. Severe and Medium comments are indicated with red and orange dots, respectively. During session playback, you can view all comments about a recording. To delete a comment that you left, refresh your webpage, expand the comment, and then click **Delete**.

### Session Recording service

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	Overview	Manage V Monitor	Downloads
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		Set up comment priority X Normal Severe Back Comment	JUN 13, 2022         19:15:32 - 00:03:04 - 18 Events         V User name: administrator         User name: administrator         Image: Client name         Image: Client name         View: All         Q Search         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client name         Image: Object of the client nam
	•	00:00:00/00:03:04 🔁 Comments	X 1 🖸 Show stats 🔀 FULL SCREEN

Clicking a comment lets you jump to the location where the comment was given. You can view all your comments on the **My comments** page.

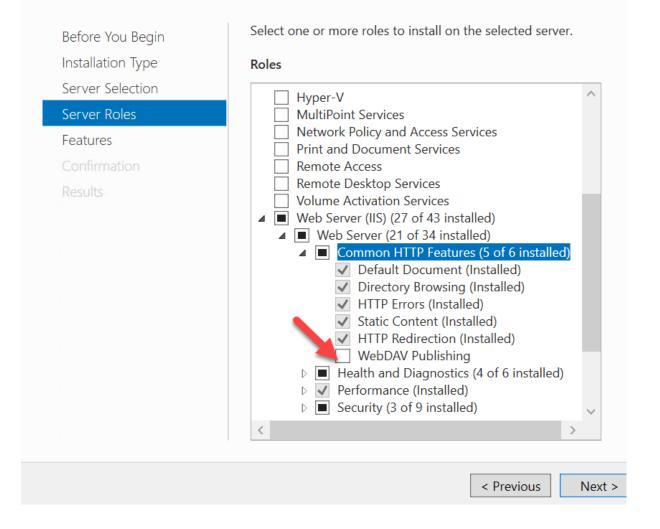
≡	citrix	DaaS Pre	emium					۴	?	CCID:	~
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### **Not

To make the comment feature work as expected, clear the **WebDAV Publishing** check box in the **Add Roles and Features** wizard of Server Manager on the Session Recording Server.

### 📥 Add Roles and Features Wizard

# Select server roles



## View graphical event statistics

### November 11, 2022

Event data visualization is available for each recording. It provides graphical event statistics for you to quickly comprehend the events inserted in recordings.

To view graphical event statistics, complete the following steps:

1. Open and play a recording.

2.	In the upper left	corner of the playback	page, click the statistics icon.
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	Overview	Manage V Monitor					Downl	oads
< <u> </u>	Player							
			•			JUN 13, 202           19:00:21:00:03(0)           Q User name: admit           Q Host name:           Q Client name:           Q Client name:           Q Search           Q 00:00:02 Topic           Windowsexplot           Q 00:00:03 File           Q 00:00:03 File           Q 00:00:03 File           Q 00:00:03 File           Windowsexplot           Q 00:00:18 Top           Windowsexplot	-most er, 11424 Create:11424 Create:11424: -most -most -most -most	<ul> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li><!--</td--></li></ul>
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3. Switch between the **Screen time**, **File transfers**, **Commands**, and **Events** tabs to view statistics from different perspectives.

### Screen time

The **Screen time** tab lets you know the cumulative time an application window is in focus (active window).

$\leftarrow$	Player			
$\triangleright$	Screen time File transfers	Commands Ev	ents	
	XenDesktopVdaSetup			00:20:52
	explorer			00:19:14
	chrome			00:16:52
	firefox		00:11:55	
	CSTSS		00:10:30	
	ConfigurationWizard		00:07:46	
	powershell	00:03:00		
	cmd	00:02:58		
	mmc	00:00:35		
	iexplore	00:00:35		
	Contract Taskmgr	00:00:16		
	JonasAgentSystray	00:00:15		
	sessionmsg	00:00:14		
	setup_wm	00:00:12		
	WfShell	00:00:11		
	wmplayer	00:00:10		
	CitrixFiles	00:00:07		

There is a horizontal time bar next to each application. Click the bar to view the start time and duration each time an application becomes and stays in focus, respectively. You can

←	Player	
	Screen time File transfer	s Commands Events powershell as the top-most window
600		All >20 minutes 5-20 minutes <5 minutes
		Start time Duration
	XenDesktopVdaSetup	00:20:52
	explorer	00:19:14 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:04 0010:50 00:00:00:00:00:00:000:00:00:00:00:00:0
	chrome	00:16:52 00:28:25 00:00:15
	firefox	00:11:55 0030.04 00.00.03
	csrss	00:10:30 00:30:20 00:00:02
	ConfigurationWizard	00:07:46 00:00:02
	powershell	00:03:00 00:04 00:00:02
	cmd	00:02:58 003105 00:004
	mmc	00:00:35 00:31:49 00:00:01
	iexplore	00:33:36 00:00:08
	Taskmgr	00:00:35 00:00:09 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:00 00:000
		00.00.10
		00.37.20 00.00.11
	sessionmsg	00:00:14 00:37:42 00:00:02 •
	setup_wm	00:00:12 00:42:38 00:00:21 00:1331 00:01:17
	WfShell	00:00:11
	wmplayer	00:00:10
	CitrixFiles	00:00:07
	OpenWith	00:00:06
	mspaint 🔍	00:00:05
	msedgewebview2	00:00:05 -

narrow down your search range by specifying a duration range other than the default **All** option. For example:

#### • File transfers

The **File transfers** tab provides graphical statistics about bidirectional file transfers between the VDA hosting the recorded session and the client device where the session runs. You can customize the visualization by using the following settings:

- Time granularity: Per 1 minute, Per 10 minutes, Per hour
- File transfer destination: All transfers, Transfer from host to client, Transfer from client to host
- Number or size (Bytes or MB) of transferred files

The X axis represents the absolute time in the 24-hour system.

Υ	Player
$\triangleright$	Screen time File transfers Commands Events
	Per 1 minute V All transfers V
	Number of files
	Number of files File size (Bytes) Z
	File size (MB) 6 -
	5 - 5 - 4 -
	4 - 3 - 3 -
	2 - 2 -
	10.25 10.50 10.55 10.40 10.45 10.55 10.55 11.05 11.15 11.20 11.25 11.50
	Transfer from host to client Transfer from client to host

#### • Commands

The **Commands** tab shows CMD and PowerShell commands that are run during the recorded session. You can customize the data display by typing your custom search in **Custom search** or selecting a saved search from **Saved search**. The "OR"logical operator is used to compute the final action.

Υ	Player			
$\triangleright$	Screen time	File trans	fers Comm	ands Events
		Custom search	h	Type a search string or use a regular expression
		Saved search		Select a saved search
	15/15Com	mands		IPv4 Address
	00:01:14	cmd	powershell: power CDFTraceTask.ps:	E-mail Address
	00:01:23	powershell	logman: "C:\Windo	taskmør
	00:28:16	cmd	mspaint: mspaint	mmc winver
	00:28:38	cmd	control: "C:\Windo	control
	00:28:49	cmd	netsh: netsh	
	00:29:39	cmd	control: "C:\Windo	ws\System32\control.exe""C\Windows\system32\sysdm.cpl",
	00:30:37	cmd	mmc: "C:\Windows	s\system32\mmc.exe" "C:\Windows\system32\lusrmgr.msc"

• Events



The **Events** tab shows the proportions and numbers of all types of events in the recorded session.

## View performance data points

### April 26, 2024

During playback, you can click the **Show stats** control to view, on an overlay, the following data points related to the recorded session:

- Round trip time
- Network (send)
- Network (receive)
- CPU usage
- Memory usage

### Session Recording service

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	Network (ser Network (receiv CPU usa Memory usa Las	nd) O Kbps Ivvo) O Kbps age O % age O/O MB (0%) et 30 mins Lest 10 mins Entire data		19:06:05 · 00:03:04 · 18 Events A User name: administrator Host name: Client name View: All All Events Comments t Windowexplorer, 11424 0:00:20:6 File Create: 11424: CUSers Jadministrator

### Note:

- Session Recording collects round trip time every 15 seconds and the rest of the data points every second.
- Theoretically, Session Recording refreshes data on round trip times every five seconds. However, round trip time data actually refreshes every 15 seconds because of the collection cycle.
- Session recording refreshes the rest of the data points every 5 seconds and presents their average values on the overlay.

The overlay is semitransparent. You can relocate and hide it.

- To relocate the overlay, hover your mouse over the eight dots and then do a drag and drop.
- To hide the overlay, click **Hide stats**.

You can enable the overlay by selecting **Log performance data** when creating your event detection policy. For more information, see Configure event detection policies.

### Manage recordings

### November 17, 2022

This section provides instructions for you to:

Manage selected recordings

- Archive recordings manually
- Delete recordings manually
- Manage recordings on schedule
  - Archive and delete recordings on schedule

### Manage selected recordings

November 11, 2022

You can select target recordings to archive and delete manually.

### Archive recordings manually

To archive recordings manually:

- 1. Select **Recordings > All Recordings** from the left navigation of the Session Recording service.
- 2. Select one or more target recordings.
- 3. Click Archive.

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							Downloads
All time 🗸 SERVER-3 🗸					Q Search by host, user a	nd so on	0
Columns to display P Follow up 🖨 Place access restrictions	TArchive 🔟 Delete						2 selected
Start Time 💠 Recording Site User ≑	Host ‡	Client 🌲	Events 🌐	Events Only 🍦	Recording server $\mbox{$\stackrel{\circ}{=}$}$	Duration 👙	Action
September 7, 2022 SERVER-3 administrator			0	False	Server-3	00:03:08	ightarrow
September 6, 2022 SERVER-3 administrator 9:25 AM		1000	0	False	Server-3	00:00:32	ightarrow
September 6, 2022 SERVER-3 administrator			0	False	Server-3	00:01:41	ightarrow
September 6, 2022 SERVER-3 administrator	1000	1000	0	False	Server-3	00:02:06	$\triangleright$
September 5, 2022 SERVER-3 administrator			0	False	Server-3	00:02:16	ightarrow
September 5, 2022 SERVER-3 administrator			0	False	Server-3	00:02:02	$\triangleright$
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September 5, 2022 SERVER-3 administrator			0	False	Server-3	00:02:19	ightarrow
September 5, 2022 SERVER-3 administrator			0	False	Server-3	00:02:19	ightarrow
					1-10 of 26	items < 1 2	3 > 10/page v

### Note:

Only Citrix Cloud administrators of the following roles can archive recordings:

- Full access
- The Cloud Administrator, All role

- The Session Recording-FullAdmin, All role
- The Session Recording-PrivilegedPlayerAdmin, All role

If archiving a recording does not complete successfully, the recording is not available for playback or deletion for the first 24 hours following the archiving operation.

A single session can produce multiple recordings. Only recordings of sessions recorded in their entirety can be archived.

If you select any recording of a session, all other recordings of the same session are archived as well.

You can select one or more recordings to archive at a time. When archiving recordings, you can choose to move the recording files to a different location from the one where they were originally stored.

- If you move the recording files to a different location on the same Session Recording server, grant permissions for the System and Network Service accounts to read and write the archived recordings.
- If you move the recording files to a UNC path, grant permissions for all computer accounts in your site to read and write the archived recordings.

### Delete recordings manually

To delete recordings manually:

- 1. Select **Recordings** from the left navigation of the Session Recording service.
- 2. Find one or more target recordings on any of the **All Recordings**, **Archived**, or **Restricted** pages.
- 3. Click Delete.

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Manage 🗸 M	Monitor								Downloads
Recordings	~	All time 🗸 SERVER-3	~				Q Sear	ch by host, user and so on	0
All Recordings		Columns to display 🕑 Follo	ow up 🚹 Remove ac	cess restrictions 🔟 Delete					2 selected
Archived		Start Time ≑	Recording Site	User 👙 🖑	Host 👙	Client ≑	Events ≑	Events Only 👙	Recording serve
Restricted		September 6, 2022 4:30 PM	SERVER-3	administrator			0	False	Server-3
Comments	>	September 6, 2022 3:40 PM	SERVER-3	administrator			0	Fatse	Server-3
Policies		September 6, 2022 10:44 AN	I SERVER-3	administrator	1000	10000	0	False	Server-3
Admin Logging	>	September 6, 2022 10:38 AN	SERVER-3	administrator		a second second	0	False	Server-3
Configuration	>	September 1, 2022 3:57 PM	SERVER-3	administrator			0	False	Server-3
		September 1, 2022 3:27 PM	SERVER-3	administrator	1000		0	False	Server-3
								1-6 of 6 items <	1 > 10/page v

### Note:

Only Citrix Cloud administrators of the following roles can delete recordings:

- Full access
- The Cloud Administrator, All role

- The Session Recording-FullAdmin, All role
- The Session Recording-PrivilegedPlayerAdmin, All role

A single session can produce multiple recordings. Only recordings of sessions recorded in their entirety can be deleted.

If you select any recording of a session, all other recordings of the same session are deleted as well.

You can select one or more recordings to delete at a time. When deleting recordings, you can choose to also delete the recording files along with the database records.

### Manage recordings on schedule

### April 28, 2023

You can schedule site-level tasks to automatically archive and delete recordings **on a regular basis**.

Note:

Only Citrix Cloud administrators of the following roles can schedule the tasks:

- Full access
- The Cloud Administrator, All role
- The Session Recording-FullAdmin, All role

### Archive and delete recordings on schedule

- 1. Select **Configuration > Server Management** from the left navigation of the Session Recording service.
- 2. Click the ellipsis (...) next to a target site.

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			Downloads
Serve	er Management		0
	our Session Recording servers by load-balancing sites and configuring server settings. ssion Recording servers, follow the <u>Server connection guide</u> .		
+ Creat	e site C Refresh		Site settings
>	1912(EUSERVER1 TESTSERVER1)	2 servers, 2 available	£m
>	2209(EUSERVER2 TESTSERVER4 CloudDB)	2 servers, 2 available	
>	2209(TESTSERVER3)	1 server, 1 available	
>	AutomateTestSiteEdit <i>(Empty)</i> AutomateTestSiteDescriptionEdit	0 server, 0 available	
>	SERVER-1	1 server, 1 available	
>	SERVER-2	1 server, 1 available	
>	SERVER-3	1 server. 1 available	
>	SERVER-C1 dfsdfsadfhythtyhthytry	1 server. 1 available	
>	SERVER-C2	1 server. 1 available	

3. On the Site settings page, select Storage maintenance.

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		Downloads
Site settings SERVER22-SIN		$\times$
General General Storage maintenance Playback	Automatic archive and delate         Sets where is automically writeward delate recording on a regular schedule.         If being automatic archive         Archive recording allow han (7 ) only only         Archive recording allow han (7 ) only only         Archive recording allow han (7 ) only only         Archive recording allow han (7 ) only only         More recording files to adflerent location         Brains automatic delate         Device scored and than (7 ) only only         Brains automatic delate         Device scored and than (7 ) only only         Archive recording files         Device scored and the material only only only         Archive recording files	
Apply changes	Cancel	<b>11</b>

4. Schedule tasks as needed and then click **Apply changes**.

### Note:

The time you set for automatic archiving and deletion must be later than the time you set for **automatic cloud client upgrades**. Otherwise, automatic archiving and deletion might fail.

# **Administrator logging**

### April 27, 2023

Using Session Recording server 2204 or later, you can query administrator logging data through the Session Recording service.

### Note:

If you install SQL Server on the same machine with the Session Recording server, the administrator logging data might not be available and a "**No data available**" message is displayed. To ensure that you can view the administrator logging data, add the **NT AUTHORITY\SYSTEM** user to your Session Recording databases and assign it the **db_owner** permission.

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							Downloads
-	uration Logging strator activities.	SERVER2209 V					0
All time	✓ Category ∨ A	Action $ \bigtriangledown $ Action taken by $ \lor $					
ID ‡	Name	Logging time	Category	Action	Action taken by	Authorized	
409	SERVER2209	12/6/2022 2:29:00 PM	Policy change	Save policy document	SRCloudUser/curry.bi@citrix.com	True	
408	SERVER2209	12/6/2022 2:29:00 PM	Policy change	Save policy document	SRCloudUser/curry.bi@citrix.com	True	
407	SERVER2209	12/6/2022 2:28:00 PM	Policy change	Set active policy document	SRCloudUser/curry.bi@citrix.com	True	
406	SERVER2209	12/6/2022 2:27:00 PM	Policy change	Save policy document	SRCloudUser/curry.bi@citrix.com	True	
405	SERVER2209	12/6/2022 2:27:00 PM	Policy change	Save policy document	SRCloudUser/curry.bi@citrix.com	True	
404	SERVER2209	12/6/2022 2:26:00 PM	Policy change	Save policy document	SRCloudUser/curry.bigcitrix.com	True	
403	SERVER2209	12/6/2022 2:26:00 PM	Policy change	Save policy document	SRCloudUser/curry.bi@citrix.com	True	
402	SERVER2209	12/6/2022 2:26:00 PM	Policy change	Save policy document	SRCloudUser/curry.bi@citrix.com	True	
401	SERVER2209	12/6/2022 2:26:00 PM	Policy change	New policy document	SRCloudUser/curry.bigcitrix.com	True	
400	SERVER2209	12/1/2022 5:41:00 PM	Policy change	Save policy document	SRCloudUser/huiru.wang@citrix.com	True	
					1-10 of 80 < 1	2 3 4 5 6	7 8 >

An administrator with **Full** access can view administrator logging. To grant the **Full** access permission, go to **Identity and Access Management** in Citrix Cloud.

If you select a site that contains a Session Recording server earlier than version 2204, the following banner appears, and no data is available.

### Session Recording service

remium			4 ⁴⁴ 0	CCID:
✓ Monitor				Downloads
Configuration Logging	W2K16ST-UKISD 🔻			0
To use the administrator logging featu	ire through the Session Recording service, up	grade the selected Session Recording servers to version 2204 or later.		
	Ą	V       V         V       V         V       V         V       V         V       V         V       V         V       V         V       V         V       V         V       V         V       V         V       V         V       V         V       V         V       V         V       V         V       V         V       V         V       V		<b>e</b>

## Logging data overview

Administrator logging data consists of:

- Configuration logging
- Recording reason logging
- Playback logging

You can select more than one Session Recording site to view logs.

Manage 🗸 Monitor	r							Downloads
Dashboard	Configu	ration Logging	UPDATE1.SERV V					G
Recordings	Log of admini	strator activities.	UPDATE1					
Comments >	All time	✓ Category √ Ad	<ul> <li>✓ SERVER2209</li> <li>Cti ✓ test_しいサイトを作成する</li> </ul>					
Policies	ID ‡	Name	AUTOINSTALL2     UPDATE5	Category	Action	Action taken by	Authorized	
Admin Logging ~	409	SERVER2209	AUTOINSTALL3	Policy change	Save policy document	SRCloudUser/curry.bigcitrix.com	True	
Configuration Logging	408	SERVER2209	UPDATE4	Policy change	Save policy document	SRCloudUser/curry.bi@citrix.com	True	
Playback Logging	407	SERVER2209	12/6/2022 2:28:00 PM	Policy change	Set active policy document	SRCloudUser/curry.bi@citrix.com	True	
Configuration >	406	SERVER2209	12/6/2022 2:27:00 PM	Policy change	Save policy document	SRCloudUser/curry.bigcitrix.com	True	
, annighteren ,	405	SERVER2209	12/6/2022 2:27:00 PM	Policy change	Save policy document	SRCloudUser/curry.bi@citrix.com	True	
	404	SERVER2209	12/6/2022 2:26:00 PM	Policy change	Save policy document	SRCloudUser/curry.bigcitrix.com	True	
	403	SERVER2209	12/6/2022 2:26:00 PM	Policy change	Save policy document	SRCloudUser/curry.bigcitrix.com	True	
	402	SERVER2209	12/6/2022 2:26:00 PM	Policy change	Save policy document	SRCloudUser/curry.bi@citrix.com	True	
	401	SERVER2209	12/6/2022 2:26:00 PM	Policy change	New policy document	SRCloudUser/curry.bi@citrix.com	True	
	400	SERVER2209	12/1/2022 5:41:00 PM	Policy change	Save policy document	SRCloudUser/huiru.wang@citrix.com	True	
						1-10 of 80 < 1	2 3 4 5 6 3	7 8

Click the three dots (ellipsis) to view details about each log.

### **Configuration logging**

This part logs the following administrator activities:

- Policy change Changes to policies on the Session Recording policy console or Citrix Director
- Server configuration change Changes in Session Recording Server Properties
- Log reading Unauthorized attempts to access the administrator logging data

You can use the **Logging time**, **Category**, **Action**, and **Action taken by** filters to narrow your search. The "AND" operator is used between the filters to compute the search action.

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							Downloads
	ration Logging trator activities.	UPDATE1.SERV V	]				0
ID ‡	V Log reading	time	Category	Action	Action taken by	Authorized	
96	SI Server configuration	hange )22 2:41:00 PM	Policy change	Set active policy document	SRCloudUser/curry.bigcitrix.com	True	
95	SI Apply Clear	)22 2:41:00 PM	Policy change	Set active policy document	SRCloudUser/curry.bi@citrix.com	True	
94	SERVER2209	10/8/2022 2:41:00 PM	Policy change	Set active policy document	SRCloudUser/curry.bigcitrix.com	True	
93	SERVER2209	10/8/2022 2:41:00 PM	Policy change	Save policy document	SRCloudUser/curry.bigcitrix.com	True	
92	SERVER2209	10/8/2022 2:41:00 PM	Policy change	Save policy document	SRCloudUser/curry.bigcitrix.com	True	
91	SERVER2209	10/8/2022 2:41:00 PM	Policy change	New policy document	SRCloudUser/curry.bigcitrix.com	True	
90	SERVER2209	10/8/2022 2:41:00 PM	Policy change	Set active policy document	SRCloudUser/curry.bi@citrix.com	True	
89	SERVER2209	10/8/2022 2:41:00 PM	Policy change	Set active policy document	SRCloudUser/curry.bigcitrix.com	True	
2	SERVER2209	9/28/2022 3:27:00 PM	Policy change	Set active policy document	SRCloudUser/curry.bigcitrix.com	True	
1	SERVER2209	9/28/2022 2:41:00 PM	Log reading		RB2VC/Administrator	True	
					71-80 of 80 < 1 2	3 4 5 6	7 8

To log administrator activities, complete the following steps to enable administrator logging on your Session Recording servers.

- 1. Select **Configuration > Server Management** from the left navigation of the Session Recording service.
- 2. Find your Session Recording servers.
- 3. Click the gear icon corresponding to each Session Recording server.
- 4. On the **Server Settings** page, select **Logging** from the left navigation and then select **Enable administrator logging**.

If you select **Enable mandatory blocking**, the following activities are blocked if logging fails. A system event is also logged with an Event ID 6001:

• Changes to recording policies on the Session Recording Policy Console or Citrix Director

### Changes in Session Recording Server Properties

The mandatory blocking setting does not impact the recording of sessions.

### Tip:

You can enable administrator logging both through the Session Recording service and through Session Recording Server Properties. For information on enabling administrator logging through **Session Recording Server Properties**, see Disable or enable administrator logging.

You can also configure an administrator logging service account to enhance security.

### **Recording reason logging**

This part logs which policies have triggered recordings.

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	eason Logging UPD policies triggering recordings.	NATE1,SERV V				0
All time $\sim$	Applicable policy 🗸 Rec	orded user 🗸				
ID \$	Event detection reason     Recording reason	Logging time	Applicable policy	Recorded user	Authorized	
50	Apply Clear	11/28/2022 2:53:00 PM	Event detection reason	RB2VC/Administrator	True	
49	SERVER2209	11/28/2022 2:53:00 PM	Recording reason	RB2VC/Administrator	True	
48	SERVER2209	11/24/2022 9:47:00 AM	Event detection reason	RB2VC/Administrator	True	
47	SERVER2209	11/24/2022 9:47:00 AM	Recording reason	RB2VC/Administrator	True	
46	SERVER2209	11/9/2022 12:18:00 PM	Event detection reason	RB2VC/Administrator	True	
45	SERVER2209	11/9/2022 12:18:00 PM	Recording reason	RB2VC/Administrator	True	
44	SERVER2209	11/2/2022 2:15:00 PM	Recording reason	RB2VC/Administrator	True	
43	SERVER2209	11/1/2022 10:58:00 AM	Recording reason	RB2VC/user0	True	
42	SERVER2209	11/1/2022 10:57:00 AM	Recording reason	RB2VC/user0	True	
41	SERVER2209	11/1/2022 10:55:00 AM	Recording reason	RB2VC/user0	True	
					1-10 of 50 < 1 2 3	4 5 >

To enable the feature, enable both administrator logging and recording reason logging on your Session Recording servers. If **Enable administrator logging** is not selected, enabling recording reason logging does not take effect.

For information on enabling the recording reason logging, see Disable or enable the recording reason logging.

### **Playback logging**

This part logs playback-related actions. Click the three dots (ellipsis) to view details about each log.

### Session Recording service

Manage 🗸 Monitor							Do	ownloads
Deshboard     Recordings     Comments		ack Logging	UPDATE1.SERV	~				0
Policies	All time	<ul> <li>✓ Action ✓</li> <li>Name</li> </ul>	Action taken by $\checkmark$ File ID	Q. File ID	Action	Action taken by	Authorized	
Admin cogging	396	SERVER2209	12/1/2022 5:03:00 PM	3c2c06bc-2bc1-4953-a782-5d895d7bec8c	Query session file path and size	SRCloudUser/huiru.wang@citrix.com	True	
Configuration Logging Record Reason Logging	395	SERVER2209	12/1/2022 5:03:00 PM	3c2c06bc-2bc1-4953-a782-5d895d7bec8c	Enter playback justification	NT AUTHORITY/SYSTEM	True	
Playback Logging	394	SERVER2209	12/1/2022 2:39:00 PM	76630fba-5f90-4b7a-9843-443a55d0e0f1	Release file access	SRCloudUser/btest01@linshiyouxiang.net	True	
Configuration	393	SERVER2209	11/30/2022 6:28:00 PM	80c4a522-3399-4e5a-b1f7-727faf80963b	Query session file path and size	SRCloudUser/curry.bigcitrix.com	True	
	392	SERVER2209	11/17/2022 1:05:00 PM	3c2c06bc-2bc1-4953-a782-5d895d7bec8c	Query session file path and size	RB2VC/guhao	True	
	391	SERVER2209	11/17/2022 1:05:00 PM	3c2c06bc-2bc1-4953-a782-5d895d7bec8c	Query session file path and size	RB2VC/guhao	True	
	390	SERVER2209	11/17/2022 11:51:00 AM	3c2c06bc-2bc1-4953-a782-5d895d7bec8c	Query session file path and size	RB2VC/guhao	True	
	389	SERVER2209	11/17/2022 11:51:00 AM	3c2c06bc-2bc1-4953-a782-5d895d7bec8c	Query session file path and size	RB2VC/guhao	True	
	388	SERVER2209	11/17/2022 11:48:00 AM	3c2c06bc-2bc1-4953-a782-5d895d7bec8c	Query session file path and size	RB2VC/guhao	True	
	387	SERVER2209	11/17/2022 10:50:00 AM	3c2c06bc-2bc1-4953-a782-5d895d7bec8c	Query session file path and size	RB2VC/guhao	True	
						1-10 of 329 < 1 2 3	3 4 5 …	33 >

To log playback justifications, enable both administrator logging and playback justification logging on your Session Recording servers. If administrator logging is disabled, enabling playback justification logging does not take effect.

Note:

Playback justification logging is available for Session Recording server 2212 and later only. If you select a site that contains a Session Recording server earlier than version 2212, the playback justification logging enabler isn't available for any server in the site.

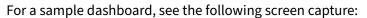
### **Management dashboard**

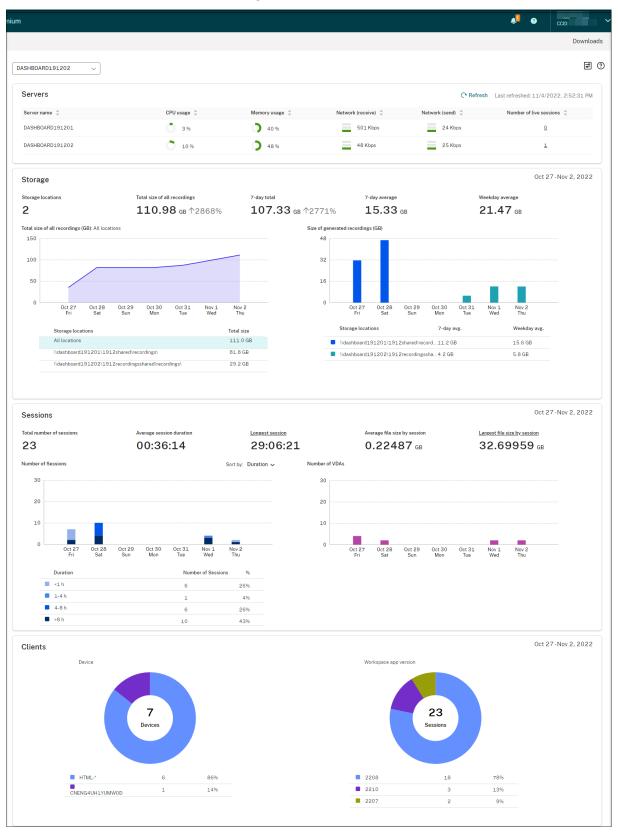
April 25, 2024

### Overview

The Session Recording management dashboard helps you gain insights into your system. It lets you monitor various aspects of your system, including:

- Server status
- Recording success rate
- Storage consumption
- Session statistics
- Client device information





### Note:

The recording success rate widget can be shown next to the **Servers** section if the following conditions are met:

- You are using the cloud client version 7.42.15010.4 or later.
- You have only one site that has available servers and you have turned on the feature toggle on the dashboard settings page of that site.

For example:

≡	citrix	DaaS Prem	ium						¢ (?)
	Overview	Manage	Monitor						
<b>0</b> ;,	Dashboard		Site 1	~					10 10 10 10 10 10 10 10 10 10 10 10 10
$\bigcirc$	Recordings								
Ę	Comments		Servers			C Refresh	Last refreshed: Sep 8,	2023, 11:45:53 AM	Recording success rate
F	Policies		Server name ↑	CPU usage	Memory usage	Network (send)	Network	Number of liv	C Refresh
Ē	Activity Feed		server1	80%	65%	680 kbps	980 kbps	<u>13</u>	Latest: Sep 8, 2023, 4:00 PM
Ċ	Notifications		server3	56%	26%	321 kbps	749 kbps	<u>15</u>	Sessions recorded: 5/5
R	Admin Logging	>	server4	20%	18%	825 kbps	1,142 kbps	<u>10</u>	Last 12 hours
තු	Configuration	>	server2 (Offline)	•		•		•	4:00 AM 10:00 AM 4:00 PM
									4:00 AM 10:00 AM 4:00 PM

### Tips for using the dashboard

- The dashboard is the new home page for the Session Recording service console. It is available only for Citrix Cloud administrators assigned any of the following roles:
  - Full access
  - Cloud Administrator, All role
  - Session Recording-FullAdmin, All role
- The dashboard presents data relevant to the site that you select from the drop-down menu in the upper-left corner.

						Downl
ASHBOARD191202 V						٩¢
Servers				C* R	efresh Last refreshed: 11/4/2022, 2:5	2:31 PN
Server name 🍦	CPU usage 🍦	Memory usage 👙	Network (receive) 👙	Network (send) 🍦	Number of live sessions $\mitsignament{line}$	
DASHBOARD191201	<b>3</b> %	40 %	501 Kbps	24 Kbps	<u>0</u>	
DASHBOARD191202	10 %	48 %	48 Kbps	25 Kbps	1	
Storage					Oct 27-Nov 2	2, 202
	Total size of all recordings	7-day total	7-day average		Weekday average	
Storage locations						

• The **Servers** section refreshes data automatically every 120 seconds. Immediate data refreshes occur when you open the dashboard page, select a site, or click **Refresh**. The next data refresh does not start until the previous refresh completes. Thus, if you click **Refresh** during a data refresh, a popup window appears asking you to try again later.

1					🔎 💿 ccib.
ASHBOARD191202 V					3
Servers				C• Re	fresh Last refreshed: 11/4/2022, 2:52:31 P
Server name 🌐	CPU usage 🍦	Memory usage 🌐	Network (receive) 🌐	Network (send) 🌲	Number of live sessions 💲
DASHBOARD191201	3 %	40 %	501 Kbps	24 Kbps	<u>0</u>
DASHBOARD191202	10 %	48 %	48 Kbps	25 Kbps	1
Storage					Oct 27 - Nov 2, 202
Storage locations	Total size of all recordings	7-day total	7-day average		Weekday average
2	<b>110.98</b> GB ↑2868%	<b>107 33</b> cp 12771%	15.33 GB		21.47 GB

- The **Storage**, **Sessions**, and **Clients** sections refresh data automatically at a specific time every day. When you select a site or click **Refresh** on the dashboard page, data is refreshed immediately.
- Select a site from the drop down list and click on the icon to display and configure the dashboard settings.

					Down
ASHBOARD191202 V					3
Servers				C• Ret	fresh Last refreshed: 11/4/2022, 2:52:31 F
Server name 🍦	CPU usage 🍦	Memory usage 🍦	Network (receive) 🍦	Network (send) 🍦	Number of live sessions $\ \ \oplus$
DASHBOARD191201	3%	40 %	501 Kbps	24 Kbps	<u>0</u>
DASHBOARD191202	10 %	48 %	48 Kbps	25 Kbps	1
Storage					Oct 27 -Nov 2, 202
Storage locations	Total size of all recordings	7-day total	7-day average		Weekday average
2	<b>110.98</b> gB ↑2868%	<b>107.33</b> GB ↑2771%	15.33 GB		<b>21.47</b> GB

Dashboard settings		$\times$
Servers CPU usage Warning threshold (%) Critical threshold (%) 65 0 0 0 00 0 Network (send) Warning threshold (kbps) Critical threshold (kbps) 10000 0 50000 0 Critical threshold (kbps) 0000 0 Critical threshold (kbps) 0000 0 Critical threshold (kbps) 0000 0 Critical threshold (kbps)	Memory usage         Warning threshold (%)         75       90         90       \$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$\$	
Storage		
Storage location	Warning threshold	
<pre>\\servername\sharename\directory \\servername\sharename\directory1 \\servername\sharename\directory2 \\servername\sharename\directory3 \\servername\sharename\directory4</pre>	Not configured Not configured Not configured Not configured	00000
Apply Cancel		

Dashboard settings allow you to:

- Set warning and critical thresholds for:
  - * CPU usage
  - * Memory usage
  - * Network (send)
  - * Network (receive)
- Enable the feature to collect and show recording success rates.
- Allocate space in a location for recording storage and set warning thresholds for the space

usage. When a warning or critical threshold is reached, the entry is displayed with an orange or red icon.

The storage usage for recorded sessions is influenced by factors such as the chosen image mode and the on-screen activities throughout the sessions. For instance, viewing videos during a virtual session can result in larger recording files.

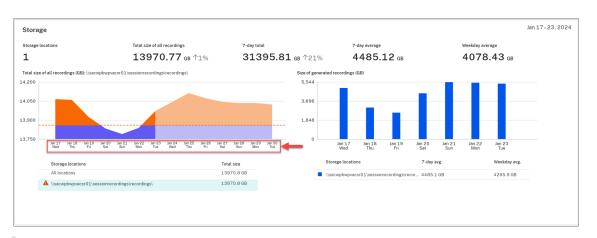
Storage		
Storage location	Warning threshold	
\\sacwpbwpvacsr01\sessionrecordings\recordings\	99 $\left[ \begin{array}{c} \Lambda \\ \mathbf{V} \end{array} \right] \% \text{ of } \left[ \begin{array}{c} 13999 \\ \mathbf{V} \end{array} \right] \mathbf{GB}$	✓ ×
Enable storage consumption forecast		

 Enable storage consumption forecast. Storage consumption forecast allows you to predict resource usage and take precautions in advance. After you enable the feature, a storage consumption forecast for the next 7 days can be generated based on sufficient historical consumption data of approximately one month. You can view the forecast on the **Total** size of all recordings chart of the **Storage** section.

When the storage consumption forecast is not enabled, the **Total size of all recordings** chart shows only the actual consumption data over the past 7 days. For example:



When the storage consumption forecast is enabled, the **Total size of all recordings** chart shows not only the actual consumption data over the past 7 days but also a consumption forecast for the next 7 days. For example:



### Note:

The consumption forecast requires sufficient historical data of approximately one month. For example, see the following prompt:

Storag	ge											Jan 17-23, 202
Storage l	ocations	Total size of all recordings	7-day			7-day averag	e			Weekday ave	erage	
1		0.02 gB ↑100%	6 <b>O</b> G	в ↑0%		<b>O</b> GB				<b>O</b> GB		
Total size	of all recordings (GB): c:\sessionrecordings)				Size of generated reco	rdings (GB)						
50			You do not have sufficient data to generate a foreca		8							
0	Jan 17 Jan 18 Jan 19 Jan 20 Jan 21 Wed Thu Fri Sat Sun	Jan 22 Jan 23 Jan 24 Jan Mon Tue Wed Th	25 Jan 26 Jan 27 Jan 28 Jan nu Fri Sat Sun M	29 Jan 30 on Tue	şt. 0	n 17 Jan 18 Ved Thu	Jan 19 Fri	Jan 20 Sat	Jan 21 Sun	Jan 22 Mon	Jan 23 Tue	
	Storage locations		Total size		Storage	locations		7-day	avg.		Weekday avg.	
	All locations		0.0 GB		c:\sessi	onrecordings\		0.0 GB	3		0.0 GB	
	c:\sessionrecordings\		0.0 GB									

• In the **Servers** section, you can open and play live sessions by clicking on the number of live sessions. For example:

1					4 <mark>1</mark> 0	CCID:
						Downlo
ASHBOARD191202 V						8
Servers				C* Re	efresh Last refreshed: 11/4/2	022, 2:52:31 PM
Server name 🍦	CPU usage 🍦	Memory usage 🍦	Network (receive) 🍦	Network (send) $\buildrel \oplus$	Number of live ses	sions ≑
DASHBOARD191201	<b>3</b> %	40 %	501 Kbps	24 Kbps	<u>0</u>	
DASHBOARD191202	10%	48%	48 Kbps	25 Kbps	1	
Storage					Oct 2	7-Nov 2, 202
Storage locations	Total size of all recordings	7-day total	7-day average		Weekday average	
2	<b>110.98</b> gB ↑2868%	<b>107.33</b> GB ↑2771%	15.33 GB		21.47 GB	

											_		
											<b>*</b>	CCID:	
												I	Down
SHBOARD191202	~						Live sessions						
ervers							Start Time 🍦	User 🌲	Host 🌲	Client 🌲	Events 🌲	Events Only 🍦	
ierver name 🌐			с	CPU usage 🍦		Memory us	November 4, 2022 3:13 PM	administrator	AGENT01	HTML-2672-7522	1	false	
DASHBOARD191201				6 %		<b>)</b> 40 9							
DASHBOARD191202				5 %		<b>)</b> 49 5							<
Storage		Tot	tal size of all	l recordings		7-day total			ß				
2		1	10.9	<b>8</b> _{GB} ↑2	2868%	107.							
fotal size of all recordings (GB) 150 50	: All locations												
0 Oct 27 Fri	Oct 28 O Sat	ct 29 Sun	Oct 30 Mon	Oct 31 Tue	Nov 1 Wed	Nov 2 Thu							
Storage location	s					Total size							
All locations	201\1912sh					111.0 GB 81.8 GB	Close						

• In the **Recording success rate** section, you can see a widget showing the recording success rates for the current site. The recording success rate is calculated as follows:

Recording success rate = the number of successfully recorded sessions / the total number of sessions matching the currently active recording policy

#### Note:

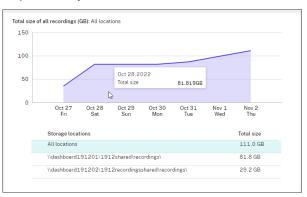
The recording success rate widget can be shown next to the **Servers** section if the following conditions are met:

- You are using the cloud client version 7.42.15010.4 or later.
- You have only one site that has available servers and you have turned on the feature toggle on the dashboard settings page of that site.

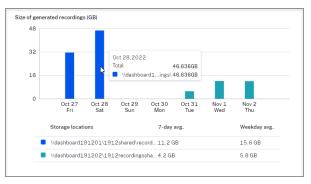
#### For example:

≡ citri×́	DaaS Prem	nium						↓ ⑦
Overviev	v Manage	Monitor						
Dashboard			]					
Recordings		Site 1	$\checkmark$					2
Comments		Servers			C Refresh	Last refreshed: Sep 8, 202	23, 11:45:53 AM	Recording success rate
Policies		Server name ↑	CPU usage	Memory usage	Network (send)	Network No	umber of liv	C* Refresh
Activity Feed		server1	80%	65%	680 kbps	980 kbps	<u>13</u>	Latest: Sep 8, 2023, 4:00 PM
Notifications		server3	56%	26%	321 kbps	749 kbps	<u>15</u>	Sessions recorded: 5/5
Admin Loggir	ug ≻	server4	20%	18%	825 kbps	1,142 kbps	<u>10</u>	Last 12 hours
Configuration		server2 (Offline)	-	-	-			
~								4:00 AM 10:00 AM 4:00 PM

• In the **Total size of all recordings (GB)** section, you can switch between storage locations to view relevant data. You can also hover over the chart to view the total size of all recordings on a specific day.



• In the **Size of generated recordings (GB)** section, you can hover over the bar chart corresponding to a day to view the size of newly generated recordings on that day.

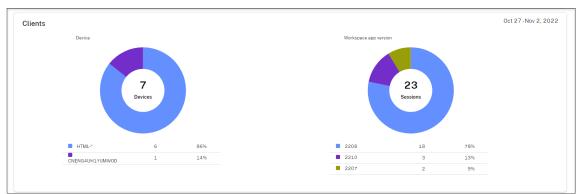


• In the **Sessions** section, you can click **Longest session** and **Largest file size by session** to view session details.



						4	9	CCID:	
								Dow	vnload
ASHBOARD191202 V		Session detail	s						×
100		The session starts from Tue Session duration 29:06:26	≥ Nov 01 2022 10:41:	:55 GMT+0800 (Chi	na Standard Tir	me) and inc	ludes 30 record	dings.	
Oct 27 Oct 28 Oct 29 Oct 30 Oct 31 Nov 1 Fri Sat Sun Mon Tue Wed	Nov 2 Thu Total size	File size 14.78606 GB Recordings							
	111.0 GB	Start Time 👙	User 🌲	Client 🗘 Host 🌲		Events 🗘	Events Only	Duration \$	
•	81.8 GB	November 1, 2022 10:41 AM	R938N\administrator	AGENT01 CNENG	UH1YUMWOD	11	false	01:00:07	€
		November 1, 2022 11:42 AM	R938N\administrator	AGENT01 CNENG	UH1YUMWOD	0	false	01:00:00	€
		November 1, 2022 12:42 PM	R938N\administrator	AGENT01 CNENG	UH1YUMWOD	0	false	01:00:01	$\mathbf{b}$
Sessions		November 1, 2022 1:42 PM	R938N\administrator	AGENT01 CNENG	UH1YUMWOD	1	false	01:00:00	€
Total number of sessions Average session duration	Longest ser	November 1, 2022 2:42 PM	R938N\administrator	AGENT01 CNENG	UH1YUMWOD	0	false	01:00:00	
23 00:36:14	29:0	November 1, 2022 3:42 PM	R938N\administrator	AGENT01 CNENG	UH1YUMWOD	0	false	01:00:04	•
Number of Sessions 5	Sort by: Duration 🗸	November 1, 2022 4:42 PM	R938N\administrator	AGENT01 CNENG	UH1YUMWOD	0	false	01:00:20	۲
30		November 1, 2022 5:42 PM	R938N\administrator	AGENT01 CNENG	UH1YUMWOD	0	false	01:00:00	$\bullet$
20		November 1, 2022 6:42 PM	R938N\administrator	AGENT01 CNENG	UH1YUMWOD	0	false	01:00:00	$\mathbf{\bullet}$
10		Close							

• The **Clients** section shows the percentage of client devices that have different machine name prefixes and the percentage of sessions that run on different versions of Citrix Workspace app.



# **Activity feed**

April 26, 2024

### Overview

As a supplement to the Session Recording management dashboard, the Session Recording service introduces an activity feed to improve data visibility and data visualization.

The activity feed gives you information about events and tasks that happened in the past.

### Events that the activity feed can show

- CPU usage exceeds threshold
- Memory usage exceeds threshold
- Network (send) usage exceeds threshold
- Network (receive) usage exceeds threshold
- Recording success rate alert
- Storage usage exceeds threshold
- Server status change
- Unrestricted playback link sharing

### Note:

The thresholds and the toggle for recording success rate alerts are configurable through the Session Recording management dashboard. For more information, see dashboard settings in the **Tips for using the dashboard** section.

### Tasks that the activity feed can show

- Automatic archive
- Automatic delete
- Manual archive
- Manual delete
- Statistics

### Note:

- You can select target recordings to archive and delete manually. You can also schedule site-level tasks to automatically archive and delete recordings. For more information, see Manage selected recordings and Manage recordings on schedule.
- Statistics refer to the daily tasks initiated by the system to collect data on storage consumption, sessions, and client devices. The three types of data are displayed in the corresponding sections of the Session Recording management dashboard.

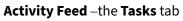
### View the activity feed

- 1. Sign in to Citrix Cloud.
- 2. In the upper left menu, select **My Services > DaaS**.
- 3. From Manage, select Session Recording.
- 4. From the left navigation of the Session Recording service, select **Activity Feed**.

5. Switch between the **Events** and **Tasks** tabs to view the information about events and tasks that happened in the past.

Activity	Feed the	Events tab
----------	----------	------------

ium					4 ²⁴⁴ 7 ccid:	
					Downloads	
Activity Feed					Event Details $ imes$	
Events Tasks	👔 Copy 🙁 Dismiss					
Last 7 days 🗸 Event 🗸 Site 🗸 Serve	Last7 days v Event v Site v Server v Serverity v					
🔿 🕂 Refresh 🖞 Export 🛞 Dismiss a	at and a second s				January 30, 2024 6:33 PM	
Time (UTC+08:00) 🌐	Event	Site	Server	Severity	Event Server status change	
January 30, 2024 6:33 PM	Server status change			Info	Site	
January 30, 2024 6:33 PM	Server status change			<li>Info</li>	SR2405	
January 30, 2024 6:33 PM	Server status change			<li>Info</li>	Server	
January 30, 2024 6:33 PM	Server status change			<ol> <li>Info</li> </ol>	SR2405	
January 30, 2024 6:33 PM	Server status change			Info	Severity	
January 30, 2024 6:33 PM	Server status change			<li>Info</li>	Info	
January 30, 2024 6:33 PM	Server status change			<ol> <li>Info</li> </ol>		
+ January 30, 2024 6:33 PM	Server status change			1 Info 1	Server status	
January 30, 2024 6:33 PM	Server status change			Info	🤜 Available	
January 30, 2024 6:33 PM	Server status change			Info	Version	
January 30, 2024 6:24 PM	Unrestricted playback link sharing			<li>Info</li>	7.42.14010.7	
January 30, 2024 3:34 PM	Memory usage exceeds threshold			A Warning		
January 30, 2024 3:33 PM	Memory usage exceeds threshold			A Warning		
January 30, 2024 3:03 PM	Memory usage exceeds threshold			A Warning		
January 30, 2024 3:03 PM	Memory usage exceeds threshold			A Warning		
			< 1 2	3 4 5 ··· 55 > 15/page v	9 (1)	



							CCID:
							Download
ctivity Feed							Task Details
vents Tasks							🕞 Copy 🛞 Dismiss
Last 7 days ∨ Task C• Refresh 🖒 E>		Server 🗸 Status 🗸					Task Manual archive
Task	Initiated by	Site	Server	Start Time (UTC+08:00) 🍦	End time (UTC+08:00) 🗘	Status	Initiated by
Manual archive	@citrix.com			January 30, 2024 2:11 PM	January 30, 2024 2:11 PM	📀 Completed	@citrix.com
Manual archive	eitrix.com			January 30, 2024 1:53 PM	January 30, 2024 1:53 PM	Completed	Site SERVER
Statistics	System			January 30, 2024 12:10 PM	January 30, 2024 12:12 PM	Completed	
Statistics	System			January 30, 2024 12:10 PM	January 30, 2024 12:12 PM	Completed	Server
Statistics	System			January 30, 2024 12:10 PM	January 30, 2024 12:13 PM	Completed	Start Time (UTC+08:00)
Statistics	System			January 30, 2024 12:10 PM	January 30, 2024 12:13 PM	📀 Completed	January 30, 2024 2:11 PM
Manual delete	@citrix.com			January 30, 2024 10:30 AM	January 30, 2024 10:30 AM	Completed	End time (UTC+08:00)
Manual delete	i@citrix.com			January 30, 2024 10:22 AM	January 30, 2024 10:22 AM	Completed	January 30, 2024 2:11 PM
Manual archive	i@citrix.com			January 30, 2024 10:16 AM	January 30, 2024 10:16 AM	Completed	Status
Manual delete	i@citrix.com			January 30, 2024 10:14 AM	January 30, 2024 10:15 AM	Failed	S Completed
Statistics	System			January 29, 2024 12:10 PM	January 29, 2024 12:12 PM	Completed	
Statistics	System			January 29, 2024 12:10 PM	January 29, 2024 12:12 PM	Completed	January 30, 2024 2:11 PM
Statistics	System			January 29, 2024 12:10 PM	January 29, 2024 12:12 PM	Completed	Archiving 1 recordings (1.71 MB)
Statistics	System			January 28, 2024 12:10 PM	January 28, 2024 12:12 PM	Completed	January 30, 2024 2:11 PM
Statistics	System			January 28, 2024 12:10 PM	January 28, 2024 12:12 PM	🤣 Completed	Successfully archived 1 recordings (1.71 MB).
						1 2 > 15/page v	
							<b>Q</b>

Note the following tips when viewing the activity feed:

Task	Action
To filter and view specific events or tasks	Select the corresponding filters on the <b>Events</b> or <b>Tasks</b> tab. For example, select the <b>Last 7 days</b> filter to show only events or tasks that happened within the past 7 days.
To update the list of events or tasks immediately	Click <b>Refresh</b> on the <b>Events</b> or <b>Tasks</b> tab.
To copy details about the entire events or tasks	Click <b>Export</b> on the <b>Events</b> or <b>Tasks</b> tab.
To dismiss the entire events or tasks To view the details of an individual event or task	Click <b>Dismiss all</b> on the <b>Events</b> or <b>Tasks</b> tab. When you click <b>Dismiss all</b> , you are prompted to confirm the action. Click the event or the task in the list. Events of the same type, site, server and severity are
	combined into one record and you can expand to display all events.
To copy the details of an individual event or task	Click <b>Copy</b> on the <b>Event Details</b> or <b>Task Details</b> page.
To dismissan individual event or task	Click <b>Dismiss</b> on the <b>Event Details</b> or <b>Task</b> <b>Details</b> page. You are not prompted for confirmation when clicking <b>Dismiss</b> .

# Notifications

April 26, 2024

### **Email notifications**

### Overview

To get notified about specific events and tasks through email, subscribe to email notifications.

You can subscribe to be notified about:

• Resource usage alerts: When resource usage thresholds are exceeded

Resource usage refers to:

- CPU usage

- Memory usage
- Network (send) usage
- Network (receive) usage
- Storage usage

Resource usage thresholds are configurable through the Session Recording management dashboard. For more information, see dashboard settings in the Tips for using the dashboard section.

• Server status changes: When the status of a Session Recording server changes

The status of a server can change to:

- Offline
- Discovered
- Available
- Deleted
- Uninstalled
- Upgrading
- Ready to install
- Installation in progress
- **Recording success rate alerts**: When a recording success rate is below 100%. To ensure that you can receive email notifications on recording success rates, enable the feature on the dashboard settings page of your site. For more information, see Management dashboard.
- **Storage maintenance results**: A digest of the results of automated tasks for archiving and deleting recordings

For information on scheduling storage maintenance tasks, see Manage recordings on schedule.

• Unrestricted playback link sharing: When an unrestricted playback link is shared

For more information, see Share recordings as links.

### Subscribe to email notifications

- 1. Sign in to Citrix Cloud.
- 2. In the upper left menu, select **My Services > DaaS**.
- 3. From Manage, select Session Recording.
- 4. From the left navigation of the Session Recording service, select **Notifications**.

### Tip:

You are entitled to 500 email notifications from the Session Recording service every month. After the monthly quota is used up, the Session Recording service stops sending email notifications until the UTC first day of a new month.

5. Set the default recipients that you can apply to all subscribed categories.

Notifications		
Email		
Quota usage		
You're entitled to 500 email notifications from the Session Recording service per month. View your email quota usage below.		
		<b>426/</b> 500
8	5% Resource usage alerts Server status changes	22 388
u	Server status changes	10
	Recording success rate alerts	3
	Unrestricted playback link sharing	3
Cubanistian		
Subscription Send email notifications based on your subscriptions below.		
Default recipients (0) Manage recipients		
Subscribe to		
Resource usage alerts		
Send a notification when resource usage exceeds the threshold.		
Server status changes Send a notification when the status of a server changes.		
Recording success rate alerts		
Send a notification when recording success rate is below 100%		
Storage maintenance results		
Send a summary of the results of automated tasks for archiving and deleting recordings.		
Unrestricted playback link sharing		
Send a notification when an unrestricted playback link is shared.		
Notifications	Manage default recipients	×
Email		
_	Emails are sent to the default recipients if no recipient is specified for a su	bscribed category.
	Recipients (0)	
Quota usage You're entitled to 500 email notifications from the Session Recording service per month. View your email quota usage below.	+ Add	
	-T Add	
85% Resource usage alerts		
used Storage maintenance results		
Recording success rate alerts     Unrestricted playback link sha		
Subscription Send email notifications based on your subscriptions below.		
Default recipients (0) Manage recipients		
Subscribe to		
Resource usage alerts     Send a notification when resource usage exceeds the threshold.		
Server status changes Send a notification when the status of a server changes.		
	Done Cancel	- + ·, • 🦘 📷
Recording success rate alerts		

Emails are sent to the default recipients if no recipient is specified for a subscribed category.

To specify recipients for a subscribed category, clear the **Use default recipients** check box and then click **Manage recipients** to add recipients.

Notifications	Manage default recipients	×
Email	Specify email recipients for recording success rate alerts.	
Subscription Send email notifications based on your subscriptions below.	Recipients (1) jiajia.ai@citrix.com	0 1
Default recipients (2) Manage recipients	+ Add	
Subscribe to		
Resource usage elerts     Send a notification when resource usage exceeds the threshold,		
Server status changes Server a notification when the status of a server changes.		
Recording success rate alerts     Send a notification when recording success rate is being 400%		
Recipients Use default recipients Manage recipients (1)		
Storage maintenance results     Sand a summary of the results of automated tasks for archiving and deleting recordings.		
Unrestricted playback link sharing Send a notification when an unrestricted playback link is shared.		
Apply changes Cancel	Done Cancel	<b>1</b>

- 6. Subscribe to any of the following categories by selecting the check boxes next to them:
  - Resource usage alerts
  - Server status changes
  - Recording success rate alerts
  - Storage maintenance results
  - Unrestricted playback link sharing

### Tips:

• When you select **Resource usage alerts**, specify the alert types and severities. To optimize your quota usage, warning alerts are withheld after you exceed 50% of your quota until the end of the month.

it 			
Quota usage			March 2023
You're entitled to 500 email notifications fr	om the Session Recording service per month. View your email qu	uota usage below.	
		338/500	
	68%	Resource usage alerts 188	
	used	Server status changes 136	
		Storage maintenance results 14	
Subscription			
Resource usage alerts Send a notification when resource usage			
Alert type	e exceeds the threshold.		
All selected ~			
: 🗹 CPU usage			
Memory usage			
Vetwork (send) usage			
	ning alerts are withheld after you exceed 50% of your quota unt	til the end of the month. $ imes$	
Storage usage			
Use default recipients			
Server status changes			
Send a notification when the status of a			
Send email when a server's status cl All selected ~			
Recipients	,		
Use default recipients			
Storage maintenance results			
	nated tasks for archiving and deleting recordings.		
Recipients			
Use default recipients			(
fications			(
ibscription			
d email notifications based on your subscr	iptions below.		
fault recipients (7) Manage rec	ipients		
bscribe to			
Resource usage alerts			
Send a notification when resource usage e	exceeds the threshold.		
Alert type			
All selected ~			
Severity Critical			
Warning			
	ng alerts are withheld after you exceed 50% of your quota until t	the end of the month. $ imes$	
-Recipiente			
Use default recipients			
Manage recipients (1)			
Server status changes			
Server status changes Send a notification when the status of a se	rver changes.		

• For the available server statuses, see the following screen capture:

iota usage				March 2023
're entitled to 500 email notification:	s from the Session Recording service per month. View your email q	uota usage below.		
		3	<b>38/</b> 500	
	68%	Resource usage alerts	188	
	used	Server status changes	136	
		Storage maintenance results	14	
bscribe to				
Resource usage alerts Send a notification when resource us Alert type				
Send a notification when resource us Alert type All selected	lage exceeds the threshold.			
Send a notification when resource us Alert type All selected Severity				
Send a notification when resource us Alert type All selected Severity C Offline				
Send a notification when resource us Alert type All selected Severity C Offline C Offline C Discovered		all be and all be work y		
Send a notification when resource un Alert type All selected Severity C Offline Offline Available		til the end of the month. $\times$		
Send a notification when resource us Alert type All selected Severity C Offline C Offline C Discovered		till the end of the month. $\ \times$		
Send a notification when resource us Altrettype All selected Severity (© Offline (© Discovered (© Available (© Deleted		tol the end of the month. $\times$		
Send a notification when resource us Aler type All selected Severity C Offline C Offline Available C Deteed C Uninstalled	> Tring alerts are withheid after you exceed 50% of your quota un	stil the end of the mostly. $\times$		
Send a notification when resource us Aler type All selected Severity Offline Offline Observed Observed Observed Observed Observed Observed Observed	Tring alerts are withheid after you exceed 50% of your quote un	at the end of the month. $\times$		
Send a notification when resource us Aler type All calculated Severity Discovered Multiple Detected De	ning alerts are withheld after you exceed 50% of your quota un server changes. Tanges to	til the end of the month. $\times$		
Send a notification when resource us Aler type All telected Severity Discovered Discovered Detected Detected Detected Detected Detected Detected Detected Detected Detected Detected Detected	ning alerts are withheld after you exceed 50% of your quota un server changes. Tanges to	til the end of the month. X		
Send a notification when resource us Alter type All talectectod Severity Continue Control (Continue) Control ) Continue) Continue) Control (Continue) Con	ning alerts are withheld after you exceed 50% of your quota un server changes. Tanges to	til the end of the month. $\times$		
Send a notification when resource us Alter type Alt table:  Severity  Continue  Continue  Austable  Austable  Continue Continue  Continue Continue  Continue Continue Continue Continue Continue Continue Continue Continue Continue Continu	ning alerts are withheld after you exceed 50% of your quota un server changes. Tanges to	til the end of the month. X		
Send anotification when resource us <b>Aler type Aler type All table: Severity () Otions () Discovered () Discovered () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () () Distributed () () () () () () () ()</b>	ring alerts are withheld after you exceed 50% of your quote un server changes. inages to	til the end of the match. X		
Send a notification when resource us Alter type Alt selected Good Content Alter type Good Content Good Conten	ning alerts are withheld after you exceed 50% of your quota un server changes. Tanges to	Nil the end of the month. X		
Send anotification when resource us <b>Aler type Aler type All table: Severity () Otions () Discovered () Discovered () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () Distributed () () Distributed () () () () () () () ()</b>	ring alerts are withheld after you exceed 50% of your quote un server changes. Langes to	til the end of the month. X		

• Emails are sent separately for each subscribed category. For example, an email notification about resource usage is similar to the following:

Session Recording resource usage alert (Etheral) D (Record			¢	0	Z	
•	sessionrecording-xac-no-reply@apps.cloud.com to me ▼	80	00 AM (6 hours ago)	☆	¢	:
		citrix.				
		Session Recording - Memory usage alert (Critical)				
		Customer name: Organization ID:				
		Memory usage has exceeded Critical threshold.				
		Site: Critical threshold. 75% Trime (UTC-05:00): 2023-03-28T19:41:51.514996				
		Server:				
		Memory usage: 76%				
		To change your email notification settings, go to Configuration > Notification Settings in the Session Recording service.				
		This is an automated email from the Session Recording service. Do not reply.				

# **Customer data management**

April 1, 2022

#### **Data collection**

The Session Recording service collects three types of customer data to Citrix Cloud:

- Logs collected from the Session Recording service console and from the Session Recording infrastructure services
- The Session Recording service configurations and policies defined by administrators
- Statistics associated with Session Recording servers

#### Data control and storage

Log files. All log files are sent to Splunk.

**Session Recording service configurations and policies**. All the configurations and policies you configure are saved and stored in the SQL Server database of your on-premises deployment.

**Statistics associated with Session Recording servers**. All statistics associated with Session Recording servers are saved and stored in the back-end Azure database. They are not accessible to customers.

#### **Data retention**

The customer data associated with the Session Recording service is retained by Citrix. Retention periods differ for different types of data:

- Log files are retained for 90 days by default and deleted thereafter. Retaining those log files for a custom time period is not supported.
- Statistics associated with Session Recording servers are retained for 90 days by default and deleted thereafter.

#### **Best practices**

June 19, 2024

You can consult the following best practices documentation for deploying Session Recording and configuring load balancing:

- Configure load balancing in an existing deployment
- Deploy and load-balance Session Recording in Azure

# Integrate with Citrix HDX plus for Windows 365 in a Session Recording deployment

#### June 20, 2024

This article walks you through the procedures of creating a Session Recording site through a host connection and then integrating the Session Recording service with Citrix HDX plus for Windows 365.

#### **Requirements for using this solution**

To successfully implement the solution, the following requirements must be fulfilled:

#### **Citrix requirements**

- Citrix Cloud tenant with Citrix HDX Plus for Windows 365 entitlement
- Citrix Cloud administrator account with full administrator rights.
- The deployed environment must have access to:
  - https://*.citrixworkspacesapi.net (provides access to Citrix Cloud APIs that the services use)
  - https://*.cloud.com (provides access to the Citrix Cloud sign-in interface)
  - https://*.blob.core.windows.net (provides access to Azure Blob Storage, which stores updates for the Session Recording cloud client)

#### **Microsoft requirements**

- Azure administrator account:
  - Azure AD Global administrator

#### **Supported Configurations**

The Session Recording service supports Windows 365 deployments with Entra joined, and Entra hybrid joined Cloud PCs.

#### Step 1: Add a host connection to your Azure subscription

For a step-by-step guide, see Add a host connection.

#### Step 2: Create and deploy a Session Recording site through the host connection

You can create a site to deploy the following Session Recording resources to your Azure subscription from within the Session Recording service:

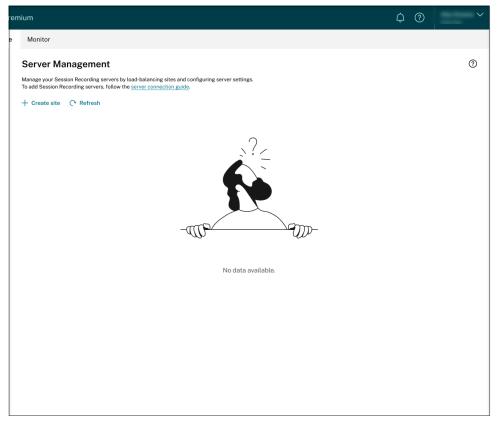
- Session Recording servers
- Databases
- Storage
- Load balancer

You can also get recommended VM and storage configurations, predict costs, and view the actual monthly costs for using Azure from within the Session Recording service.

For an existing site deployed on Azure, you can add resources including servers and storage to it and change the IP addresses that are allowed to access the load balancer.

This article guides you through the following procedures:

 Select Configuration > Server Management from the left navigation of the Session Recording service.



2. On the Server Management page, click Create site. The Create Site page appears.

Create site	×
1 Site information	What would you like to do?
	Create an empty site Create a site and add servers later.
	Create and deploy a site through a host connection Deploy Session Recording resources using a host connection that connects to your specific cloud subscription. Learn more
	Create and deploy a site through an ARM template Create an Azure Resource Manager template (ARM template) to deploy Session Recording resources in Azure. Learn more
	Site name
	Name this site Description (optional)
	Enter description
	8
Save Cancel	

3. Select **Create and deploy a site through a host connection**. The main steps are listed in the left navigation.

Create site X				
1 Site information	What would you like to do?			
About your deployment Optional	Create an empty site			
3 Network	Create a site and add servers later.			
(4) Virtual machines	Create and deploy a site through a host connection			
5 Domain and certificate	Deploy Session Recording resources using a host connection that connects to your specific cloud subscription. Learn more			
6 Storage	Create and deploy a site through an ARM template			
⑦ Databases	Create and depudy a site in longing in Arth template Create and Aure Resource Manager template (ARM template) to deploy Session Recording resources in Azure. Learn more			
8 Load balancer				
(9) Tags Optional	Site name			
0 Secure client	Name this site			
(1) Summary	Description (optional)			
	Enter description			
	ß			
	Host Connection			
	APIAutoTestTurnkey V			
	Add connection			
Next Cancel	9 <u>(1)</u>			

- 4. Enter a site name and description, select the host connection that you added in Step 1, and specify a region. Azure Government regions aren't supported.
- 5. After completing the site information, click **Next** to continue.
- 6. (Optional) To get recommendations for VM and storage configurations, provide information about your recording needs.

You can skip this step by clicking **I'm good, skip this step** or by clicking **Next** with nothing selected.

Create site	×
Site information     About your deployment     Optional	Tell us about your recording needs, so we can provide some recommendations for your VM and storage configurations.
<ol> <li>Network</li> </ol>	<u>I'm good. skip this step.</u>
(4) Virtual machines	The following information helps determine the recommended number of Session Recording servers.
5 Domain and certificate	How many concurrent sessions do you have at most?
6 Storage	4,000-6,000 v
⑦ Databases	Recommended number of servers: 3 5 reset
8 Load balancer	
Tags Optional	The following information helps determine the recommended storage capacity.
<ol> <li>Secure client</li> </ol>	How much visual movement do your sessions typically have?
D Summary	Some, the display changes but not drastically $\checkmark$
	How many sessions do you need to record per day?
	5,000-10,000 v
	For how long do you need to retain each recording file?
	15-30 days ×
	Recommended storage capacity: 30 TiB

When you select an option from the drop-down list, a recommendation is presented according to your selection. A **reset** button is available next to the recommendation. It lets you clear your selections and the corresponding recommendation in that section.

7. Specify the virtual network and subnet for your Session Recording servers to join. If your VDAs reside in a different virtual network from the Session Recording servers or in an on-premises network, establish connectivity to ensure the Session Recording servers can communicate with your VDAs.

С	reate site	×
<ul><li>✓</li><li>✓</li></ul>	Site information About your deployment Optional	Specify the virtual network and subnet for your Session Recording servers to join. Virtual network
3	Network	v
4	Virtual machines	Select a virtual network that your VDAs can connect to.
5	Domain and certificate	Subnet
6	Storage	Select a subnet that your VDAs can connect to.
7	Databases	
8	Load balancer	
9	Tags Optional	
10	Secure client	
11	Summary	
	Next Cancel	e tai

8. Create virtual machines (VMs) as your Session Recording servers.

С	reate site	×
	Site information	Create virtual machines as your Session Recording servers.
	About your deployment Optional	Session Recording server version to install: 2311 v
	Network	Image
4	Virtual machines	Windows Server 2022 Datacenter: Azure Edition - x64 Gen2 🗸
5	Domain and certificate	Size
6	Storage	Standard_D4s_v3-4vcpus, 16 GiB memory v
7	Databases	Number of VMs       3       4       9       Recommended for you: 3
8	Load balancer	
9	Tags Optional	Estimated cost (per month) \$812.16
10	Secure client	
11	Summary	Create an administrator account for the virtual machines.
		Administrator account username Set username
		Password ©
		Confirm password
	Next Cancel	<b>1</b>

#### Note:

- The **Number of VMs** field is prefilled with the recommended number if there's one. Change the number as needed.
- Estimated costs are based on standard pricing and don't take discounts into consideration. You can expect lower actual costs than estimated.
- 9. Join the Session Recording servers to the same domain with your VDAs and specify a certificate for the Session Recording servers.
  - If your VDAs connect to an Active Directory domain, select the Join servers to an Active Directory domain check box and enter the relevant information. By selecting the Join servers to an Active Directory domain check box, you are configuring the deployment for a hybrid scenario, integrating on-premises Active Directory with Azure AD.
  - If your VDAs connect to an Azure Active Directory (Azure AD) domain, clear the Join servers to an Active Directory domain check box. After you complete creating the current site, make sure to manually join the Session Recording servers to the same Azure AD domain. Notice that pure Azure AD deployment is available only for Session Recording 2402 and later.

С	reate site	X
0	Site information About your deployment Optional	<ul> <li>Join servers to an Active Directory domain</li> <li>This should be the domain where your VDAs reside.</li> </ul>
0	Network Virtual machines	Domain name Enter domain name
5	Domain and certificate	Domain controller IP address Enter IP address
6 7	Storage Databases	Username Enter domain\username
8	Load balancer	Specify a domain user with sufficient rights to join machines to the domain. Password Enter password ©
(9) (10)	Tags Optional Secure client	Specify a certificate for the virtual machines to use. Only .pfx files are supported.
11	Summary	Certificate Browse
		Certificate password Enter password ©
	Next Cancel	<b>6</b>

С	reate site	X
<ul> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> <li></li> &lt;</ul>	Site information About your deployment Optional Network	<ul> <li>Join servers to an Active Directory domain</li> <li>Supported only on Session Recording server version 2402 or later. Please select a compatible version in the previous step. Go back</li> </ul>
<ul> <li>(5)</li> </ul>	Virtual machines	Specify a certificate for the virtual machines to use. Only .pfx files are supported.
6	Storage	Browse Certificate password
(7) (8)	Databases Load balancer	Enter password
9 10	Tags Optional Secure client	
11	Summary	
	Next Cancel	<b>6</b>

#### Note:

Since July 2023, Microsoft has renamed Azure Active Directory (Azure AD) to Microsoft Entra ID. In this document, any reference to Azure Active Directory, Azure AD, or AAD now refers to Microsoft Entra ID.

10. Configure an Azure storage account and file shares to store your recording files. For pricing information, see Azure Files pricing.

Create site	×
Site information     About your deployment     Optional	Configure a storage account and file shares to store your recording files. For pricing information, see <u>Azure File Pricing</u> .
Network	<ol> <li>A separate storage account will be created for your archived recordings, which does not generate any cost if not used.</li> </ol>
Virtual machines	Storage account
Domain and certificate	Performance
6 Storage	<ul> <li>Standard: Recommended for most scenarios (general-purpose v2 account).</li> <li>Premium: Recommended for scenarios that requires low latency.</li> </ul>
⑦ Databases	Redundancy
8 Load balancer	Locally-redundant storage (LRS)
Tags Optional	
<ol> <li>Secure client</li> </ol>	File shares
0	Tier
(11) Summary	Transaction optimized
	Maximum capacity
	5 TIB
	Number of file shares
	6 A Recommended for you: 6
	Estimated cost (per month)
	\$1843.2 (max.)
	\$0.06 per used GiB, actual cost depends on your usage.
Next Cancel	<b>۳</b> ۵)

11. Create two SQL databases in Azure. One is used as the Session recording database (named **sessionrecording**) and the other as the administrator logging database (named **sessionrecordinglogging**).

	Create 2 SQL databases for recording and logging data, respectively.
Site information	
About your deployment	Compute + storage
Optional	Service tier
Network	General Purpose
	Compute tier
Virtual machines	Provisioned
Domain and certificate	Hardware configuration
	Standard-series (Gen5)
Storage	Up to 128 vCores, up to 625 GiB memory
Databases	vCores
Load balancer	Data max size (GiB)
Tags Optional	
	<b>-</b> O
Secure client	Estimated cost (per month)
Summary	\$441.3
	Database administrator
	Username
	dbadmin1
	Password
	Confirm password

12. Create a load balancer to distribute workload among the Session Recording servers. Enter the IP addresses or ranges of your VDAs and separate them by a comma (,) in the **Restrict access of the load balancer to only the following addresses** field. For pricing information, see Load Balancer pricing.

С	reate site		×
C Q Q Q Q Q Q Q Q Q Q Q Q Q	reate site Site information About your deployment Optional Virtual machines Domain and certificate Storage Databases Load balancer Tags Optional Secure client Summary	Create a load balancer to distribute workload among the servers. For pricing information, see Load Balancer Pricins. Azure load balancer SKU Standard Type Public Tier Regional Estimated cost (per month) \$189.6 Access Restrict access of the load balancer to only the following addresses Enter IP address or ranges	×
			8
	Next Cancel		

13. (Optional) Apply tags to the Azure resources to be created.

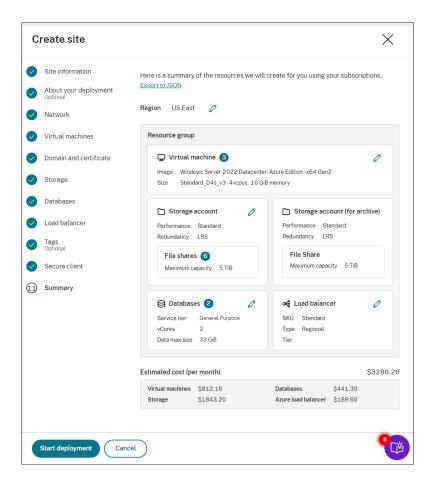
Create site X				
<ul> <li>Site information</li> <li>About your deployment Optional</li> </ul>		the Azure resources that will be created. , simply click <b>Next</b> to continue.		
Optional     Network	Name	Value		
Virtual machines	+ Add			
Oomain and certificate				
Storage				
Databases				
Load balancer				
Tags Optional				
Secure client				
(1) Summary				
Next Cancel	)		8 [ý	

14. Create a secure client to onboard the Session Recording servers to the Session Recording service.

Click **Create client** to let Citrix create a secure client on your behalf. Alternatively, you can create a secure client through the **Identity and Access Management > API Access** tab of the Citrix Cloud console and then fill in the information below.

С	reate site		×
	reate site Site information About your deployment Optional Network Virtual machines Domain and certificate Storage Databases Load balancer Tags Optional Secure client Summary	Create a secure client to onboard the Session Recording servers to Recording service. Click Create client and we will create a secure client on your behalf can create a secure client through the identity and Access Management the Citrix Cloud console and then fill in the information below. <b>Create client</b> <b>ID</b> 6b63afdf-d048-49e1-b27d-781bffea97a2 <b>Secret</b>	Alternatively, you
	Next Cancel		<b>B</b>

15. View the summary about the site to be created. Click the pencil icon to edit your settings if needed or click the button to start deployment.



The following are examples of the deployment process:

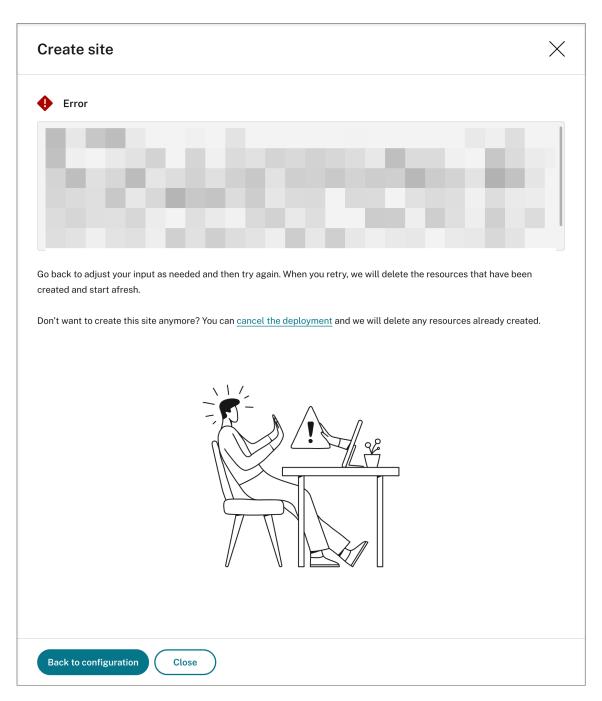
Deployment in progress:

en	nium	¢	?		1
•	Monitor				
	Server Management Manage your Session Recording servers by load-balancing sites and configuring server settings. To add Session Recording servers, follow the <u>server connection guide</u> . + Create site C Refresh				0
	My test site (Some description for my test site.)			View status	

While a site deployment is in progress, you can click **View status** to view the progress. Deployment failed:

en	nium	¢	?		$\sim$
	Monitor				
	Server Management Manage your Session Recording servers by load-balancing sites and configuring server settings. To add Session Recording servers, follow the <u>server connection guide</u> . + Create site C Refresh				0
	My test site (Some description for my test site.)			View status	

If errors occur during the deployment process, click **View status** to view the error details. For an example of the error details:



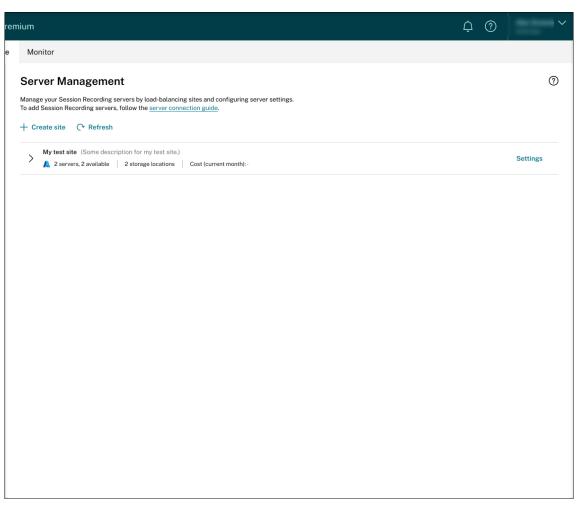
You can click **Back to configuration** or **cancel the deployment**. If you click **Back to configuration**, you're taken back to the **Create Site** page where you can alter your configurations and try again. If you're sure to cancel the deployment, follow the wizard to remove the site and the Azure resources created for the site. For example:

Cancel deployment	$\times$
O Deleting site and resources	
You can now close this dialog. The site will be removed once the resources are deleted.	
Close	

**Deployment success:** 

When a site deployment is complete, you can expand the site and view and manage the resources created under it. The **View status** button changes to **Settings**. An Azure icon is available to represent sites deployed on Azure.

For information about site settings, see Site and server settings.



Keep a record of the storage location and the DNS name listed in the load balancer section. The DNS name will serve as the Session Recording server name that you need to fill in later for communicating with the VDAs.

#### Step 3: Install and configure the Session Recording agent on Windows 365 cloud PCs

On the target Windows 365 cloud PCs, install the Session Recording agent. During the agent installation, make sure that you complete the following steps on the **Agent configuration** page:

- Enter the DNS name you previously recorded in the **Session Recording Server name** text box.
- If you are installing the Session Recording agent on an Azure AD joined machine, select Enable Azure AD support. Otherwise, clear the check box. By clearing the check box, you are configuring the deployment for a hybrid scenario, integrating on-premises Active Directory with Azure AD.

Licensing Agreement Core Components Agent Summary Install	Configuration Session Recording Server name:
Finish	Note: Enter information for connecting to the Session Recording Server. You can modify such information later in the Session Recording Agent Properties. Protocol: HTTPS Port 443  Enable Azure AD support This option lets you make Session Recording available only for Azure AD joined machines. Later when configuring policies, you can specify Azure AD users and groups who launch sessions from Azure AD joined machines.
	443 • • • • • • • • • • • • • • • • • •

#### **Step 4: Configure policies**

The Session Recording service lets you view and configure session recording, event detection, and event response policies for a specific site. Each policy you create or activate applies to all Session Recording servers of a site.

For more information, see:

- Configure session recording policies
- Configure event detection policies
- Configure event response policies

#### Step 5: Replay recorded sessions

To replay recorded sessions, go to the **All Recordings** and **Archived** pages. each recording has a play button on the right side. You can play live and completed recordings. For more information, see the View recordings chapter.

#### Troubleshoot

#### February 22, 2024

The troubleshooting information contains solutions to issues that might occur when you use the Session Recording service, for example:

- Server troubleshooting from the cloud
- Servers not seen in the cloud

#### Server troubleshooting from the cloud

#### July 13, 2023

When a Session Recording server does not work as expected even though it shows **Available** on the cloud, you can perform a few troubleshooting actions from the cloud:

- 1. Select **Configuration > Server Management** from the left navigation of the Session Recording service.
- 2. Expand a site to locate the target Session Recording server and then click the **Troubleshooting** icon next to it. The **Troubleshooting** page appears.

Tip:

The **Troubleshooting** icon is present only for servers in **Available** state.

$\sim$	2308SRN 1 server, 1 available				Settings
	Servers				Troubleshooting
	2308SRN	Server version 22.3.3000.4	Cloud client version 7.39.25758.25384	🥑 Available	Q @
$\sim$	ATEST 2 servers, 0 available				Settings
	B Servers				
	79880BF6B891	Server version 22.6.0.760	Cloud client version 7.39.25732.44993	♦ Offline	Ū
::	AUTOSERVER3	Server version 23.3.0.17	Cloud client version 7.39.25754.46001	Our Uninstalled	Ū
$\sim$	AutoTestApiSite202306301601 2 servers, 0 available				Settings
	Servers				
	AUTOSERVER1	Server version 22.10.0.8	Cloud client version 7.39.25758.25384	Offline	<b>11</b> .
	AUTOSERVER2	Server version 22.10.0.8	Cloud client version 7.39.25758.25384	⊗ Uninstalled	

- 3. Perform the following troubleshooting actions on the target server as needed :
  - a) In the **Service monitoring** section, check and restart the following services running on the Session Recording server:

- The IIS,
- The Citrix Session Recording Analytics Service (CitrixSsRecAnalyticsService),
- The Citrix Session Recording Storage Manager Service (CitrixSsRecStorageManager), and
- The Citrix Session Recording Cloud Client Monitor Service (CitrixSsRecCloudClient-MonitorService).

For example:

		<b>*</b> ¹⁰	CCID .
			Downloads
Troubleshooting 2308SRN			×
Service monitoring Check and restart the following service	es running on the Session Recording serve	f.	
Service name	CPU usage	Memory usage	Action
IIS	0.0%	174.0 MB	Restart
Storage manager	0.0%	31.2 MB	Restart
Analytics service	0.0%	44.9 MB	C Restarting
Cloud client	6.3%	107.3 MB	Restart
Cloud client monitor	0.0%	18.8 MB	Restart
Registries View, modify, or create relevant registr Check registry Log uploading Upload service logs to the cloud to hely	y values. p us identify issues for you. After you turn-	on log uploading for a service.	it will be automatically turned off in
Close			112

If you restart a service successfully, the **Restarted** status initially appears and then the **Restart** button is displayed.

If your attempt to restart a service is unsuccessful, the **Failed** status initially appears and then the **Restart** button is displayed.

b) In the **Registries** section, click **Check Registry** to view, modify, and create relevant registry values.

		e 📫	CCID
			Downloads
			~
Check re	gistry		$\times$
Specify a registry	value to check or update its data.		
Registry key			
SOFTWARE\Citrix\	SmartAuditor\Server	ČI.	
Value name	SmartAuditor\Server	2	
Enter registry v	SessionRecording\CloudClientService		
	Auditor Cloud/CloudClientService		
Check value	Auditor Cloud Monitor\CloudClientMonitorService		
	Auditor Cloud Monitor/CloudClientMonitorService		

Select a registry key from the drop-down list.

	4 ¹⁰ 0	CCID: ···· ¥
		Downloads
Troubleshooting		×
Check registry		$\times$
Specify a registry value to check or update its data.		
Registry key SOFTWARE\Citrix\ SmartAuditor\Server	v	
Value name installation		
Check value	-	
Registry key SOFTWARE\Citrix\SmartAuditor\Server Value name installation		
[ype		
<ul> <li>String</li> <li>Multi-String</li> </ul>		
DWord		
QWord		
Data		
Enter data		
Save		
Close		11.

Enter a registry value to check whether it exists. If a registry value you enter does not exist, you can create it as needed by following the instructions.

If a registry value you enter exists, you can view its information and modify its value data as needed.

		<b>≜</b> [□] 0	ccii).j
			Downloads
Turnible also stiller			$\checkmark$
Check registry			$\times$
Specify a registry value to check or update its	lata.		
Registry key SOFTWARE\Citrix\ SmartAuditor\Server		~	
Value name installocation			
Check value			
Registry key SOFTWARE\Citrix\SmartA	uditor\Server		
Type String			
Data C:\Program Files\Citrix\Se	sionRecording		
You can change the value data in the following	field and then click Save to apply.		
Enter data			
Save			
Close			1

c) In the **Log uploading** section, select services of your choice to upload logs about them to the cloud. The logs help Citrix identify issues for you. Click Save after making your selections.

			Downloads
Troubleshooting 2308SRN			×
Service name	CPU usage	Memory usage	Action
IIS	0.0%	173.9 MB	Restart
Storage manager	0.0%	30.9 MB	Restart
Analytics service	0.0%	46.6 MB	Restart
Cloud client	18.7%	98.5 MB	Restart
Cloud client monitor	0.0%	18.8 MB	Restart
	ny values.		
iew, modify, or create relevant regist Check registry og uploading pload service logs to the cloud to hel	zy values. p us identify issues for you. After you tur	n on log uploading for a service	, it will be automatically turned off in
iew, modify, or create relevant regist Check registry og uploading pload service logs to the cloud to hel n hour.		m on log uploading for a service	, it will be automatically turned off in
.og uploading		n on log uploading for a service	, it will be automatically turned off in
lew, modify, or create relevant regist Check registry og uploading bload service lags to the cloud to hel hor. IS Storage manager 2 Analytics service		n on log uploading for a service	, it will be automatically turned off in
iew, modify, or create relevant regist Check registry ogo uploading upload service logs to the cloud to hel ) IS ) Storage manager 2) Analytics service ) Diroker service		n on log uploading for a service	, it will be automatically turned off in
tew, modify, or create relevant regist Check registry og uploading bjood service logs to the cloud to hel bjood service 3 Storage manager 3 Analytics service bm		m on log uploading for a service	, it will be automatically turned off in
tew, modify, or create relevant regist Check registry or uploading global service lags to the cloud to hel global service lags to the cloud to hel I IS 3 Stratge manager 9 Analytics service Jorder service Jorder service Jorder service		m on log uploading for a service	, it will be automatically turned off in
tew, modify, or create relevant regist Check registry or uploading global service lags to the cloud to hel global service lags to the cloud to hel I IS 3 Stratge manager 9 Analytics service Jorder service Jorder service Jorder service		n on log uploading for a service	, it will be automatically turned off in

#### Servers not seen in the cloud

#### February 22, 2024

A Session Recording server you connected might not show in the cloud.

**Possible cause:** Outbound traffic is denied for the Session Recording server to reach the Session Recording service through port 443 or ports 80, 443, 8088, and 9090–9094 depending on the version of your cloud client.

With versions 7.40.13020.11 and later of the cloud client, you need to only open a single port (TCP port 443) for communication. Cloud clients earlier than version 7.40.13020.11 require you to open more ports. For more information, see Ports.

### If you are using version 7.40.13020.11 or later of the cloud client, complete the following steps to address the issue:

1. Check whether port 443 is open by running the following script on the Session Recording server:

```
1 # Copyright (c) Citrix Systems, Inc. All rights reserved.
2
3 <#
4 .SYNOPSIS
5 This script is used to check whether or not port 443 is open.</pre>
```

```
Note: Execute this script from the machine where you installed
6
            the cloud client.
7
   #>
8
9 $SR_CLOUD_DOMAIN = "srs.apps.cloud.com"
10 function Check-PortStatus {
11
12
13
14
       $ctResult = tnc $SR_CLOUD_DOMAIN -port 443
15
       if($ctResult.TcpTestSucceeded -ne $True) {
16
17
           Write-Host "Error : $SR_CLOUD_DOMAIN : $_ is unreachable"
               -ForegroundColor Red
        }
18
19
       else {
           Write-Host "$SR_CLOUD_DOMAIN : 443 is open" -
22
               ForegroundColor Green
23
        }
24
    }
26
27
28 Check-PortStatus
   <!--NeedCopy-->
29
```

The output of the port checking script can be **srs.apps.cloud.com <port number> is unreach-able** or **srs.apps.cloud.com <port number> is open**.

- 2. Allow outbound traffic on port 443 for the Session Recording server to reach the Session Recording service.
- 3. Reinstall the cloud client on the Session Recording server.

After the Session Recording cloud client completes installation, the target server is connected to the Session Recording service. Click **Refresh** on the **Server Management** page to update the list of connected servers. It might take a few minutes for your servers to be detected.

### If you are using a cloud client earlier than version 7.40.13020.11, complete the following steps to address the issue:

1. Check whether ports 8088, 443, 9090, 9091, 9092, 9093, and 9094 are open by running the following script on the Session Recording server:

```
6 Note: Execute this script from the machine where you installed
            the cloud client.
7
   #>
8
9 $SR_CLOUD_DOMAIN = "sessionrecording.apps.cloud.com"
10 function Check-PortStatus {
11
12
          (8088,443,9090,9091,9092,9093,9094) | ForEach-Object {
13
14
              $ctResult = tnc $SR_CLOUD_DOMAIN -port $_
15
              if($ctResult.TcpTestSucceeded -ne $True) {
16
               Write-Host "Error : $SR_CLOUD_DOMAIN : $_ is
17
                   unreachable" -ForegroundColor Red
18
               }
19
              else {
21
               Write-Host "$SR_CLOUD_DOMAIN : $_ is open" -
22
                   ForegroundColor Green
23
               }
24
           }
26
27
    }
28
29
30 Check-PortStatus
31
  <!--NeedCopy-->
```

The output of the port checking script can be **sessionrecording.apps.cloud.com <port number> is unreachable** or **sessionrecording.apps.cloud.com <port number> is open**.

- 2. Allow outbound traffic on ports 80, 443, 8088, and 9090–9094 for the Session Recording server to reach the Session Recording service.
- 3. Reinstall the cloud client on the Session Recording server.

After the Session Recording cloud client completes installation, the target server is connected to the Session Recording service. Click **Refresh** on the **Server Management** page to update the list of connected servers. It might take a few minutes for your servers to be detected.

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