About Citrix Monitor Service API

Use the Citrix Monitor Service REST APIs to collect, analyze, and categorize data from the Citrix Virtual Apps and Desktops™ and Citrix DaaS (formerly Citrix Virtual Apps and Desktops service) site.

The Citrix Monitor Service API is built on the SQL Server Monitor database that is populated during processing and consolidation. This API is based on the ASP.NET Web API Framework. The Citrix Monitor Service API uses the Open Data (OData) protocol, which is a Web protocol for querying and updating data, built upon Web technologies such as HTTP. ASP.NET Web API Framework supports OData Version 4.

You can access Citrix Monitor Service API using an OData consumer API. OData consumers are applications that consume data exposed using the OData protocol. For more access methods, please read Data Access Methods.

If you are a Citrix Virtual Apps™ and Desktop administrator with read-only privileges, you can use the API to get following types of data from the Citrix Virtual Apps and Desktops and Citrix DaaS site:

- Data relating to connection failures, session usage, logon duration, and load balancing
- Machines in a failure state, hotfixes applied to a machine, hosted application usage, and application failure
- Machine level CPU, memory, and disk usage
- Process level CPU and memory usage

The preceding data received using the Citrix Monitor Service REST APIs allows you to:

- Analyze historical trends for future planning
- Perform detailed troubleshooting of connection and machine failures
- Extract information for feeding into other tools and processes; for example, using Microsoft Excel's PowerPivot tables to display the data in different ways
- Build a custom user interface based on the data provided by the API
- Run aggregation queries with the OData Version 4 endpoints to get basic grouping and aggregation functionality.

To get additional information on performing the preceding the tasks, go through the details on how to access the monitor service data, data access privilege, Data Access protocol.

Use the various access methods to export the data using OData API. Follow the Citrix Monitor Service REST APIs reference to get information on the methods, parameters, field descriptions, error types, and error values associated with the APIs.

Have a question on Citrix Monitor Service API? Find answers and ask questions, on the Citrix Developer Exchange forum.

Supported API Gateway endpoints

Use one of the following endpoints based on the geographical region you selected while accessing the Citrix Monitor Service data for DaaS:

- US/EU/AP-S region: `https://api.cloud.com/monitorodata`
- Japan region: `https://api.citrixcloud.jp/monitorodata`
- US Gov region: `https://api.cloud.us/monitorodata`

Who can use this API service

To use the Monitor Service OData API, you must be a XenApp and XenDesktop® administrator. To call the API, you require read-only privileges; however, the data returned is determined by XenApp and XenDesktop administrator roles and permissions.

For example, Delivery Group Administrators can call the Monitor Service API but the data they can obtain is controlled by Delivery Group access set up using Citrix Studio.

For more information about XenApp® and XenDesktop administrator roles and permissions, see Delegated Administration.

Data Available using the API

Currently, the following API entities are supported:

- **ApplicationActivitySummaries:** The activity summary of each application.
- **ApplicationErrors:** Records of application errors.
- **ApplicationFaults:** Records of application fault.
- **ApplicationInstances:** Record of an instance of a running application.

- **Applications:** Represents a virtualized application running on a session.
- **Catalogs:** Catalog images in the Site.
- **ConnectionFailureCategories:** Grouping for connection failure types.
- **ConnectionFailureLogs:** Log of each connection failure in the Site.
- **Connections:** Represents an initial connection or reconnect for a session.
- **DesktopGroups:** Delivery Groups in the Site.
- **DesktopOSDesktopSummaries:** Summary of Desktop usage.
- **FailureLogSummaries:** Failures (connection/machine) counts by time period and Delivery Group.
- **Hotfixes:** Hotfixes applied to a machine.
- **Hypervisors:** Hosts (hypervisors) in the Site.
- **LhcReport:** LhcReport.
- **LoadIndexSummaries:** Load Index averages by time period and machine.
- **LogOnSummaries:** Logon breakdown rollup/summary per hour/day.
- **LoadIndexes:** Load Index data received from the Virtual Delivery Agent (VDA).
- **LogOnMetrics:** Timestamps related to Interactive Session breakdown.
- **MachineCostSavingsSummaries:** Summary of machine cost saving metrics.
- **MachineCosts:** Model entity of the cost of a VM.
- **MachineFailureLogs:** Log of each machine failure by start and end date in the Site.
- **MachineHotfixLogs:** HotfixHistory relates the machine and hotfixes installed/ removed.
- **MachineMetric:** Represents a machine metrics statistics of a particular machine.
- **MachineMetricSummary:** Represents a machine metrics statistics summary of a particular machine.
- **MachineSummaries:** Summary of machine metrics.
- **Machines:** Machines in the Site.
- **NotificationActionEmails:** NotificationActionEmails.
- **NotificationEmailAddresses:** NotificationEmailAddresses.
- **NotificationEmailServerConfigurations:** NotificationEmailServerConfigurations.
- **NotificationRuleActions:** NotificationRuleActions.
- **NotificationRuleGroups:** NotificationRuleGroups.

- **NotificationRuleParameterChangeLogs:** NotificationRuleParameterChangeLogs.
- **NotificationRuleParameters:** NotificationRuleParameters.
- **NotificationRuleTargetValues:** NotificationRuleTargetValues.
- **NotificationRuleTargets:** NotificationRuleTargets.
- **NotificationRules:** NotificationRules.
- **NotificationSnmpConfigurations:** NotificationSnmpConfigurations.
- **NotificationTargets:** NotificationTargets.
- **Notifications:** Notifications.
- **NotificationsLogs:** NotificationsLogs.
- **ProbeDesktop:** Probe Desktop.
- **ProbeEndpoints:** Machines running Citrix Probe Agent to probe applications in the Site.
- **ProbeLogDesktop:** Probe Log Desktop.
- **ProbeLogs:** Results of probes run per application.
- **ProbeResultDesktop:** Probe Result Desktop.
- **ProbeResults:** Results of probes run (with failure stage) per application.
- **ProbeRuleApplications:** Probe Rule Application.
- **ProbeRuleDesktop:** Probe Rule Desktop.
- **ProbeRuleEndpoints:** Probe Rule Target.
- **ProbeRules:** Application probes configured in the Site.
- **ProbeStages:** Probe Stage.
- **ProcessDataLimitedMachines:** List the process data limited machines.
- **ProcessUtilization:** Represents a process utilization statistics of a particular process on a machine.
- **ProcessUtilizationDaySummary:** Day level summary for ProcessUtilization.
- **ProcessUtilizationHourSummary:** Hour level summary for ProcessUtilization.
- **ProcessUtilizationMinuteSummary:** Minute level summary for ProcessUtilization.
- **Processes:** Represents a process utilization statistics of a particular process on a machine.
- **PublishedDesktopNames:** Published Desktop Names.
- **ResourceUtilization:** Represents a resource utilization statistics of a particular machine every 5 minutes.

- **ResourceUtilizationSummary:** Represents a hourly level and day level resource utilization statistics of a particular machine.
- **ServerOSDesktopSummaries:** ServerOSDesktopSummaries.
- **SessionActivitySummaries:** Session counts and logon data by time period and delivery group.
- **SessionAutoReconnects:** Records of session auto reconnect.
- **SessionMetrics:** Represents a session metrics of a particular session for a machine.
- **SessionRecordingServers:** Session Recording Servers.
- **Sessions:** Represents a user connected to a desktop.
- **SpaApplications:** Represents a virtualized application running on a session for SPA service.
- **SpaEnumerations:** Represents the enumeration for SPA service.
- **SpaSessions:** Represents a user connected to a desktop for SPA service.
- **TaskLogs:** Log of all tasks and their status that have been run as part of the internal Monitor Service.
- **Users:** Users that have launched a session in the Site.

Please see API Exploration or Schema Diagram for schemas.

Authentication

Requests to the Monitor Service REST APIs require authentication. For **cloud** setups, the following are required for the request authentication:

- **Citrix CustomerID:** CustomerId is passed in the `Citrix-CustomerId` header
- **CCAuth Token:** Secure HTTP requests sent to Citrix Cloud™ (CC) use a custom `Authorization` header that contains a CC bearer token. Bearer tokens are required for actions that take place on behalf of a user.

For information on how to obtain the Citrix-CustomerId and generate a custom Authorization header that contains the bearer token, look at sections Get started with Citrix Cloud APIs and Generate Citrix Cloud bearer token.

The Monitor OData API is also available on **on-premises** setups.

The request URL is of the form: `http[s]://{MonitorServiceHost}/Citrix/Monitor/OData/v4/Data/{Entity}`, followed by the OData query parameters. NTLM is used for authentication,

so `username` and `password` need to be provided. The `username` may need to be prefixed with the `domain`, if applicable.

Required headers

Please set the following headers for the API requests for **cloud** setups

- **Citrix-CustomerId:** Your customer Id.
- **Authorization:** In format `CWSAuth bearer=<Token>`, `<Token>` is obtained from the Authentication process.
- **Accept-Encoding:** Set this header to `gzip, deflate, br` to reduce the network traffic. Some tools, such as Postman, will set this value automatically.
- **User-Agent:** Set this header to `<existing script/tool version>` can help Citrix fine tune the api performance and better rate limiting for customers who are leveraging OData for either internal automation and workflows or third party tools for data extraction, and monitoring.

Here is a sample request:

```
GET /monitorodata/$metadata HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>

Accept-Encoding: gzip, deflate, br

User-Agent: third-party-tool-v1
```

Concurrent request limitation

For maintaining the service quality and preventing abuse, the service enforces a request concurrency limitation. If multiple concurrent requests are issued, new requests may fail with the "429 Too Many Requests" status code.

In such a scenario, fine-tune the script, increase the number of retries, extend the interval between queries, or simplify the query.

Pagination

Citrix Monitor supports OData pagination. All OData v4 endpoints return a maximum of 1000 records per page with a link to the next 1000 records. The following PowerShell script fetches applications in batches of 1000 records using Citrix Cloud authentication following the @odata.nextLink property in the response.

```
$customerId = "CUSTOMER_ID"

$apiEndpoint = "https://api.cloud.com/monitorodata"

$query = "$apiEndpoint/Applications"



$bearerToken = "CWSAuth bearer=TOKEN"

$headers = @{'Citrix-CustomerId'=$customerId;'Authorization'=$bearerToken}



$results = Invoke-RestMethod $query -Headers $headers -Verbose

Write-Host "Number of items returned in the first call : ",
$results.value.Count



while($results.'@odata.nextLink' -ne $null)

{

    $results = Invoke-RestMethod $results.'@odata.nextLink' -Headers
$headers -Verbose

    Write-Host "Number of items returned in next call : ",
$results.value.Count

}
```

In the above snippet, replace `CUSTOMER_ID` and `TOKEN` as needed for the cloud based Authentication.

Data Access Protocol

The Monitor Service API is a REST-based API that can be accessed using an OData consumer. OData consumers are applications that consume data exposed using the OData protocol. OData consumers vary in sophistication from simple web browsers to custom applications that can take advantage of all the features of the OData Protocol.

Every part of the Monitor Service data model is accessible and can be filtered on the URL. OData provides a query language in the URL format you can use to retrieve entries from a service. You can use the OData V4 endpoints to run your queries. OData V4 supports aggregation queries.

The query is processed on the server side and can be filtered further using the OData protocol on the client side.

The data modeled falls into three categories: aggregate data (the summary tables), current state of objects (machines, sessions, etc.), and log data, which is really historical events (connections, for example).

Note: Enums are not supported in the OData protocol; integers are used in their place. To determine the values returned by the Monitor Service OData API.

What is OData Protocol?

OData (Open Data Protocol) is an OASIS standard that defines a set of best practices for building and consuming RESTful APIs. OData helps you focus on your business logic while building RESTful APIs without having to worry about the various approaches to define request and response headers, status codes, HTTP methods, URL conventions, media types, payload formats, query options, etc.

OData also provides guidance for tracking changes, defining functions/actions for reusable procedures, and sending asynchronous/batch requests.

OData RESTful APIs are easy to consume. The OData metadata, a machine-readable description of the data model of the APIs, enables the creation of powerful generic client proxies and tools.

OData Consumers: http://www.odata.org/ecosystem/#consumers

Client Libraries: http://www.odata.org/libraries/

Basic Tutorial: http://www.odata.org/getting-started/basic-tutorial/

As OData Provider, Citrix Monitor Service API is implemented by ASP.NET Web API.

For more detail about using ASP.NET Web API to create OData V4 endpoints, see OData v4 Web API

Data Access methods

The following examples show how to export Monitor Service data using the OData API.

Both **cloud** and **on-premises** setups are covered.

In the provided examples, authentication prerequisites are assumed to be available (e.g. credentials or bearer tokens). Please look at the Authentication section for details on the authentication methods.

Access using a Browser

1. Place the request URL into a web browser that is running with the appropriate administrative permissions for the XenApp and XenDesktop® Site. Citrix® recommends using the Chrome browser with a Rest Client add-in.
2. For on-premises setups, authenticate using a `username` and `password`.

   For cloud setups authenticate by appending the required headers to the request. See the Authentication paragraph for details.
3. View the response in a raw XML form.

Access using MS Excel

The steps provided below apply only to **on-premises** setups. For cloud setups, Power Query is required to implement the required Citrix Cloud™ authentication.

1. Click the Data tab.
2. Choose "Get Data" > "From Other Sources" > "From OData Feed".
3. Enter the data feed URL: `http://{MonitorServiceHost}/Citrix/Monitor/OData/v4/Data/{ODataQuery}` (or https: if you are using SSL). Replace the placeholder values with the actual host and the OData query. Click **Next** .
4. An authentication window will popup during the first data load. Select **Windows** and provide the required credentials (`domain\username` and `password`). Click **Connect**.
5. Select the tables you want to import into Excel and click **Next**.

6. Transform the fetched data and finally Load it.

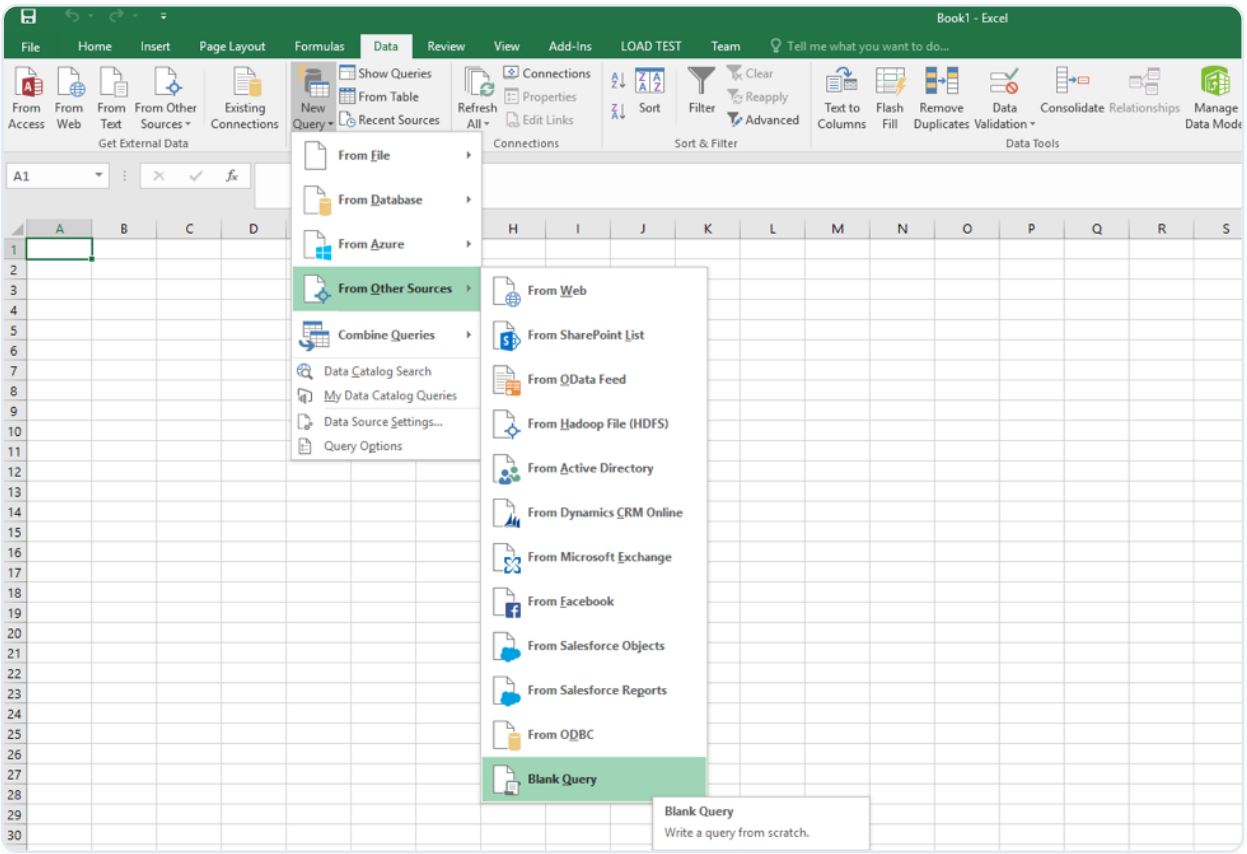
Access using MS Excel PowerQuery

Power Query is a data transformation and data preparation engine.

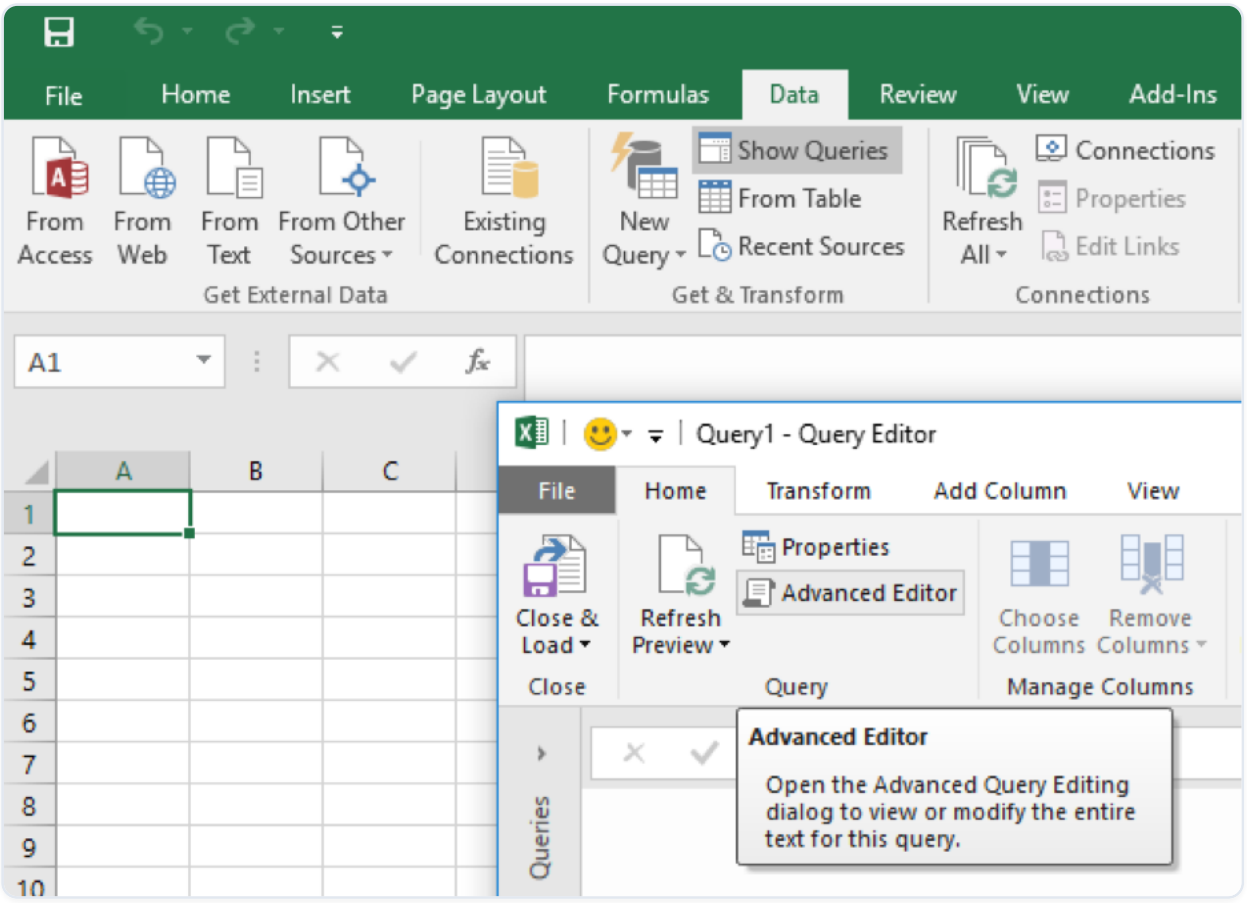
Power Query comes with a graphical interface for getting data from sources and a Power Query Editor for applying transformations. Because the engine is available in many products and services, such as PowerBI and Excel.

Learn from the following example to access the Citrix Monitor Service data using MS Excel PowerQuery. This section only applies to **cloud** setups.

1. Open Excel (Excel 2016 has PowerQuery inbuilt. If you are using earlier versions of Excel, install PowerQuery. For more information, see Microsoft documentation).
2. In Excel 2016, go to **Data** menu > **Get & Transform group** > **New Query** > **From Other Sources** > click **Blank Query**



3. In the **Query Editor** window, go to **Home** menu > **Query group** > click **Advanced Editor**.



4. In the **Advanced Editor** window, type the following query:

```
let

    // Replace the place holder values with your customer and client
values

    customerId = "CUSTOMER_ID_PLACE_HOLDER",

    clientId = "CLIENT_ID_PLACE_HOLDER",

    clientSecret = "CLIENT_SECRET_PLACE_HOLDER",

    // Update the endpoint URL based on your region

    ccAPIBaseURL = "https://api.cloud.com",

    // Replace the sample OData query

    oDataQuery = "Machines?$filter=LifecycleState eq 0",
```

```
    requestURL = ccAPIBaseURL & "/monitorodata/" & oDataQuery,
    tokenUrl = ccAPIBaseURL & "/cctrustoauth2/root/tokens/clients",

    // Get Citrix Cloud API credential
    headers = [
        #"customerid" = customerId,
        #"Content-Type" = "application/x-www-form-urlencoded",
        #"Accept" = "*/*"
    ],

    postData = [
        grant_type = "client_credentials",
        client_id = clientId,
        client_secret = clientSecret
    ],

    response = Json.Document(Web.Contents(tokenUrl, [Headers = headers,
Content = Text.ToBinary(Uri.BuildQueryString(postData))])),
    token = "CwsAuth bearer=" & response[access_token],

    apiHeaders = [
        #"Authorization" = token,
```

```
        #"Citrix-CustomerId" = customerId
    ],


    Source = OData.Feed(requestURL, null, [ Headers=apiHeaders ])
in
    Source
```

Replace `CUSTOMER_ID_PLACE_HOLDER`, `CLIENT_ID_PLACE_HOLDER`, `CLIENT_SECRET_PLACE_HOLDER` with your actual values. Update the API endpoint per your region and define the OData query of your preference. Once the **No Syntax errors have been detected** is displayed in the bottom of the window, click **Done**.

5. In case of first login, a message for specifying how to connect may be displayed. Click **Edit Credentials**. The **Access an OData feed** window appears. Make sure that the **Anonymous** tab and the base URL are selected and click **Connect**.
6. Upon successful authentication, the results are displayed as a table. In this example, the table lists all the Machines of the customer environment.

Access using LINQPad

This section refers to **on-premises** setups only.

1. Download and install the latest version of LINQPad from http://www.linqpad.net.
2. Run LINQPad with the appropriate administrative permissions for the XenApp® and XenDesktop Site.

Tip: *the easiest way is to download, install and run on the Delivery Controller™*

1. Click the Add connection link.

   a. To use the OData v3 endpoint, choose WCF Data Services 5.1 (OData 3) and click **Next** .

   b. To use the OData v4 endpoint the first time, click **View More Drivers**, search for the OData V4 Driver, click the **Download and Enable driver** link. This adds the Odata 4 driver to the list of available drivers. Subsequently, you can select OData 4 and click **Next**.

2. Enter the data feed URL: `http://{MonitorServiceHost}/Citrix/Monitor/OData/v4/Data` (or https: if you are using SSL). Select **Basic** authentication and provide the `username`, `password` and (optionally) `domain`. Click **OK**.
3. You can now run LINQ queries against the data feed and export the data as needed. For example, right-click Catalogs and choose **Catalogs.Take(100)**. This returns the first 100 Catalogs in the database. Choose Export>Export to Excel with formatting.

Access using a Client Library

Currently Citrix Monitor Service supports OData protocol V3 and V4. So, when implementing OData consumers with various programming platforms, please select the correct client libraries.

Access using C#/.NET

The code samples provided in this section demonstrate a way to access Citrix Monitor Service data using C# and more specifically the *Simple.OData.Client* package.

First, the *Simple.OData.V4.Client* Nuget Package needs to be installed. **Note**: If used along with *Microsoft.OData.Core*, the latter may need to be downgraded to a compatible version.

Sample code for **cloud** scenario:

```
using Simple.OData.Client;



namespace ODataClientExample

{

    class Program

    {

        static async Task Main()

        {

            var settings = new ODataClientSettings();

            settings.BaseUri = new Uri("https://api.cloud.com/
monitorodata/");
```

```
            settings.BeforeRequest += request =>

            {

                request.Headers.Add("Authorization", "CWSAuth
bearer=BEARER_TOKEN");

                request.Headers.Add("Citrix-CustomerId", "CUSTOMER_ID");

            };

            var client = new ODataClient(settings);

            var x = ODataDynamic.Expression;

            var machines = await client

                .For(x.Machine)

                .FindEntriesAsync();

            foreach (var machine in machines)

            {

                Console.WriteLine($"MachineID: {machine.Id}, Name:
{machine.Name}");

            }

        }

    }

}
```

The URI can be adjusted to match the customer region. The `CUSTOMER_ID` should be replaced with the Citrix Cloud Customer ID. Finally, the `BEARER_TOKEN` can be fetched dynamically using C# code samples available under page Generate Citrix Cloud bearer token.

Sample code for **on-premises** scenario:

```
using Simple.OData.Client;

using System.Diagnostics;

using System.Net;



namespace ODataClientExample

{

    class Program

    {

        static async Task Main()

        {

            var credentials = new NetworkCredential("DOMAIN\USERNAME",
"PASSWORD");

            var baseUrl = new Uri("MONITOR_SERVICE_HOST/Citrix/Monitor/
OData/v4/Data/");

            var settings = new ODataClientSettings(baseUrl, credentials)

            {

                PayloadFormat = ODataPayloadFormat.Json,

                IgnoreResourceNotFoundException = true,

                IgnoreUnmappedProperties = true,

                RenewHttpConnection = true

            };

            var client = new ODataClient(settings);

            var x = ODataDynamic.Expression;
```

```
            var machines = await client
                .For(x.Machine)
                .FindEntriesAsync();
            foreach (var machine in machines)
            {
                Console.WriteLine($"Machine ID: {machine.Id}, Name:
{machine.Name}");
            }
        }
    }
}
```

Replace the placeholder credentials (`USERNAME` and `PASSWORD`), as well as the `MONITOR_SERVICE_HOST` value.

References:

- Getting started with Simple.OData.Client
- OData Tutorial with Simple.OData.Client
- Calling an OData Service From a .NET Client (C#)

Access using Java

Calling an OData Service from a Java Client based on Odata4j v0.3 library:

http://www.odata.org/libraries/

http://odata4j.org/v/0.3/javadoc/

Code Fragment:

```
// create consumer instance

String serviceUrl = "http://{ApiGatewayEndpoint}";

ODataConsumer consumer = ODataConsumer.create(serviceUrl);
```

```
// ================General Query================================

Enumerable<String> qEntitySets = consumer.getEntitySets();

System.out.println(qEntitySets.first().toString());



Enumerable<OEntity> qList =
consumer.getEntities(qEntitySets.first()).execute();

System.out.println(qList.first().toString());



OEntity qEntity = qList.first();

System.out.println(qEntity.getProperties().get(0));



OProperty<?> qProperty = qEntity.getProperties().get(0);

System.out.println(qProperty.getName());

System.out.println(qProperty.getType());

System.out.println(qProperty.getValue());
```

```
// =================Filter
Query=========================================

/* GET http://{ApiGatewayEndpoint}/Machines */

String entitySetName = "Machines";
```

```
qList = consumer.getEntities(entitySetName).execute();

System.out.println(qList.first().toString());



/* GET http://{ApiGatewayEndpoint}/Machines()?$select=Name, IPAddress */

qList =
consumer.getEntities(entitySetName).select("Name,IPAddress").execute();

System.out.println(qList.first().toString());



/* GET http://{ApiGatewayEndpoint}/Machines()?$orderby=Id
desc&$skip=2&$top=10 */

qList = consumer.getEntities(entitySetName).orderBy("Id
desc").skip(2).top(10).execute();

System.out.println(qList.first().toString());



/* GET http://{ApiGatewayEndpoint}/Machines()?$filter=Name eq '$Name'*/

qList = consumer.getEntities(entitySetName).filter("Name eq 'DOMAIN\
\HOSTNAME'").execute();

System.out.println(qList.first().toString());
```

Access using PowerShell

Learn from the following examples how to access the Citrix Monitor Service data using PowerShell.

Sample OData query for **cloud** scenario, triggered from PowerShell with the headers initialized and the Raw XML output redirected to a file:

```
$customerId = "CUSTOMER_ID"

$bearerToken = "CWSAuth bearer=TOKEN"

$apiEndpoint = "https://api.cloud.com/monitorodata"

$query = "$apiEndpoint/Applications"

$headers = @{'Citrix-CustomerId'=$customerId;'Authorization'=$bearerToken}

$results = Invoke-RestMethod $query -Headers $headers -Verbose

$results | ConvertTo-Json > <Path-to-Output-File>
```

Please look at section Generate Citrix Cloud bearer token for a PowerShell example for generating a bearer token.

Same query, adjusted for the **on-premise** scenario:

```
$userName = 'domain\username'

$userPassword = 'password'

[securestring]$secStringPassword = ConvertTo-SecureString $userPassword
-AsPlainText -Force

[pscredential]$credObject = New-Object
System.Management.Automation.PSCredential ($userName, $secStringPassword)

$url = "http[s]://{MonitorServiceHost}/Citrix/Monitor/OData/v4/Data/User"

$results = Invoke-WebRequest -Uri $url -Method GET -Credential $credObject

$results.Content > <Path-to-Output-File>
```

Complete solutions for collecting Monitor Service data using PowerShell scripts can be found under the `citrix-data` GitHub repository.

Access using any REST API tool

Learn from the following example how to access the Citrix Monitor Service data using any REST API tool, for example Postman Chrome Ext.

Postman is an API platform for building and using APIs. Postman simplifies each step of the API lifecycle and streamlines collaboration, so you can create better APIs, faster.

1. Install Postman from Chrome extensions. See https://chrome.google.com/webstore.
2. Launch the application.
3. Select GET in the dropdown and type in the URL to request.



1. Insert headers with your token and customerId. Click **Send**.
2. If authentication is successful, response data is seen in the **Response** section of Postman.

For accessing **on-premise** Monitor Service data, use NTLM authentication instead in the Authorization tab and provide `username` and `password`.

A Postman collection including several OData examples can be found at Monitor Service OData Postman Collection.

Access using Python script

Learn from the following example to access the Citrix Monitor Service data using Python script with `Requests` library.

For a **cloud** environment:

```
import requests

url = "https://{ApiGatewayEndpoint}/monitorodata/Machines"

payload = {}

headers = {

  'Authorization': 'CWSAuth bearer=BEARER_TOKEN',
```

```
  'Citrix-CustomerId': 'CUSTOMER_ID'

}

response = requests.request("GET", url, headers=headers, data=payload)

print(response.text)
```

Replace `CUSTOMER_ID` and `BEARER_TOKEN` with the values of CustomerID and bearer token. An example for generating a bearer token using Python can be found under section Generate Citrix Cloud bearer token.

For an **on-premises** environment:

```
import requests

from requests_ntlm import HttpNtlmAuth

url = "http[s]://{MonitorServiceHost}/Citrix/Monitor/OData/v4/Data/
Machines"

response = requests.get(url, auth=HttpNtlmAuth('domain\
\username','password'))

print(response.text)
```

Access using curl

Accessing Citrix Monitor Service data is also feasible using command `curl`.

For a **cloud** environment:

```
curl --location 'https://{ApiGatewayEndpoint}/monitorodata/Machines' \

     --header 'Citrix-CustomerId: {YourCustomerId}' \

     --header 'Authorization: CWSAuth bearer={YourToken}' \

     --header 'User-Agent: curl'
```

For an **on-premises** environment:

```
curl --ntlm --user 'domain\username:password' \

     --location 'http[s]://{MonitorServiceHost}/Citrix/Monitor/OData/v4/
Data/Machines'
```

Securing On-Premises Monitor OData API Access

> **IMPORTANT:**
>
> This section is NOT applicable for cloud customers. Citrix DaaS always requires HTTPS connections using TLS.
>
> If you choose to use TLS, you must configure TLS on all Delivery Controllers in the Site; you cannot use a mixture of TLS and non-TLS. To improve the security of the Citrix Virtual Apps and Desktops, Citrix will block any communication over Transport Layer Security (TLS) 1.0 and 1.1 as of March 15, 2019, allowing only TLS 1.2 communications.

To enforce the usage of TLS 1.2, update the registry as described in the Knowledge Center article CTX245765

To secure Monitor Service endpoints using TLS, you must perform the following configuration. Some steps need to be done only once per Site, others must be run from every machine hosting the Monitor Service in the Site. The steps are described below.

Part 1: Certificate registration with the system

1. Create a certificate using a trusted certificate manager. The certificate must be associated with the port on the machine that you wish to use for OData TLS.
2. Configure the Monitor Service to use this port for TLS communication. The steps depend on your environment and how this works with certificates. The following example shows how to configure port 443:
3. Associate the certificate with a port:

```
netsh http add sslcert ipport=0.0.0.0:443

certhash=97bb629e50d556c80528f4991721ad4f28fb74e9
```

```
appid='{00000000-0000-0000-0000-000000000000}'
```

Tip: *In a PowerShell command window, ensure you put single quotes around the GUID in the appID, as shown above, or the command will not work. Note that a line break has been added to this example for readability only.*

Part 2.1: Modify the Monitor Service configuration settings **(applicable for OData V1 to V3 only)**

1. From any Delivery Controller™ in the Site, run the following PowerShell commands once. This removes the Monitor Service registration with the Configuration Service.

   `asnp citrix.*; $serviceGroup = get-configregisteredserviceinstance -servicetype Monitor | Select -First 1 ServiceGroupUid; remove-configserviceGroup -ServiceGroupUid $serviceGroup.ServiceGroupUid`

2. Do the following on all the Controllers in the Site:

   - Using a cmd prompt, locate the installed Citrix Monitor directory (typically in `C:\\Program Files\\Citrix\\Monitor\\Service`). Within that directory run:

     `Citrix.Monitor.Exe -CONFIGUREFIREWALL -ODataPort 443 -RequireODataSsl`

   - Run the following PowerShell commands:

     `asnp citrix.*; get-MonitorServiceInstance | register-ConfigServiceInstance; Get-ConfigRegisteredServiceInstance -ServiceType Config | Reset-MonitorServiceGroupMembership`

Part 2.2: Modify the Monitor Service configuration settings **(applicable for OData V4 only)**

1. Open the `Citrix.Monitor.exe.Config` file and modify the element given below (`http` to `https`): `<add key="owin:baseAddress" value="https://localhost/citrix/monitor/odata/v4" />`
2. From any Delivery Controller in the Site, run the following PowerShell commands once. This removes the Monitor Service registration with the Configuration Service.

   `asnp citrix.*; $serviceGroup = get-configregisteredserviceinstance -servicetype Monitor | Select -First 1 ServiceGroupUid; remove-configserviceGroup -ServiceGroupUid $serviceGroup.ServiceGroupUid`

3. Do the following on all Controllers in the Site:

   - Using a cmd prompt, locate the installed Citrix Monitor directory (typically in `C:\\Program Files\\Citrix\\Monitor\\Service`). Within that directory run:

     ```
     Citrix.Monitor.Exe -ConfigureFirewall -ODataPort 443 -RequireODataTls -ODataSdkPort 443 -RequireODataSdkTls
     ```

   - Run the following PowerShell commands:

     ```
     asnp citrix.*; get-MonitorServiceInstance | register-ConfigServiceInstance; Get-ConfigRegisteredServiceInstance -ServiceType Config | Reset-MonitorServiceGroupMembership
     ```

How to access On-Premises Monitor OData API

IMPORTANT: This section is NOT applicable for cloud customers.

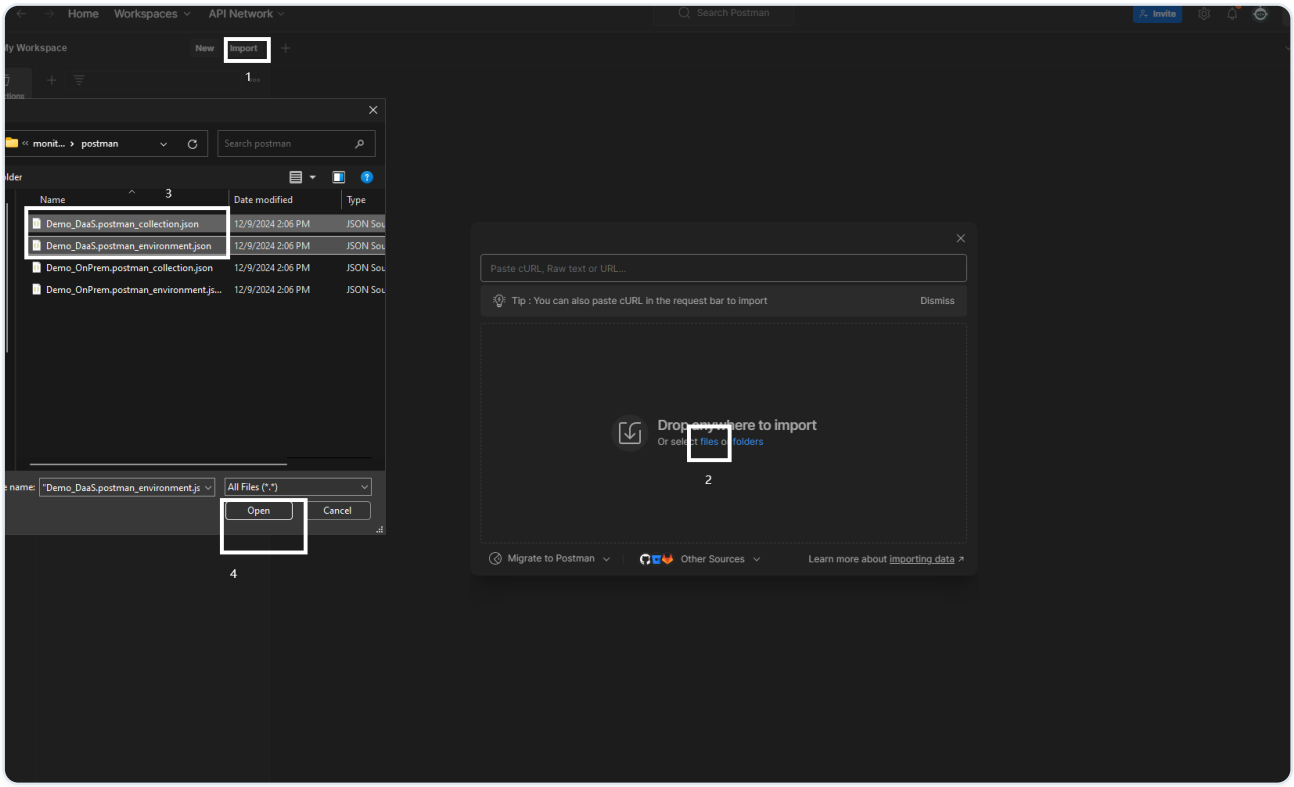
The Monitor OData API is also available for on-premises use. However, you will need to adjust the URL and authentication method accordingly.

The request URL is of the form: `http[s]://{MonitorServiceHost}/Citrix/Monitor/OData/v4/Data/{Entity}`, followed by the OData query parameters. NTLM is used for authentication, so `username` and `password` need to be provided.

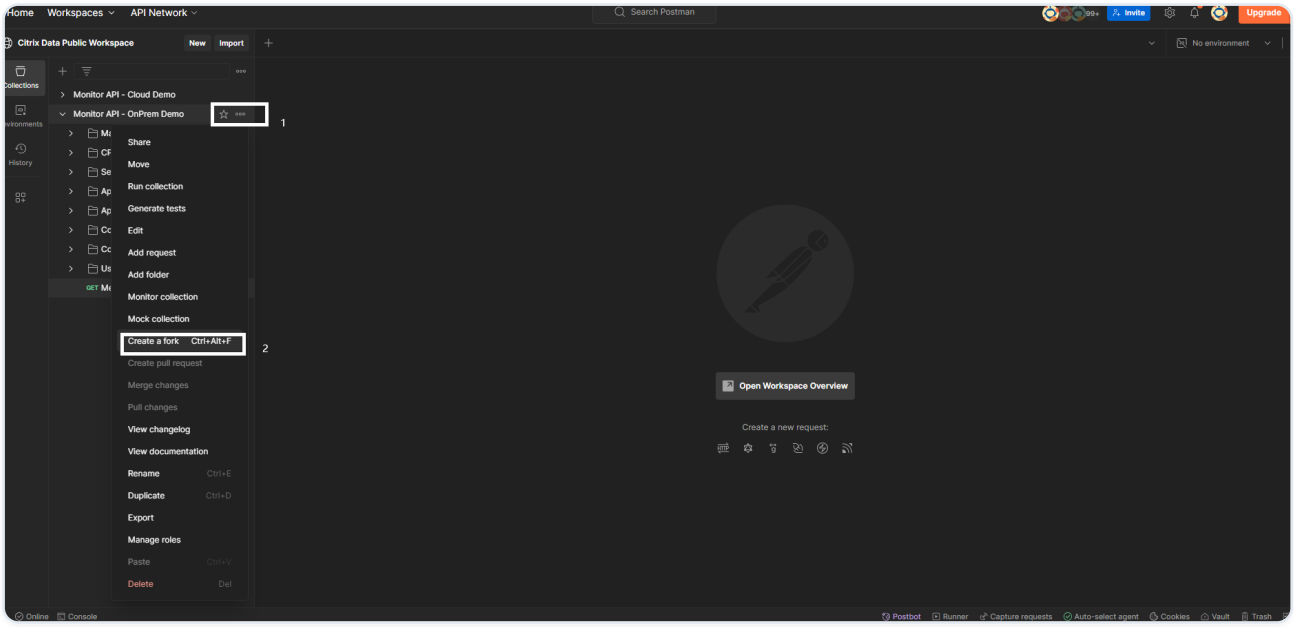
In this section, we will demonstrate how to access the local version of the API using Postman as an example.

Use the collection and environment in the Postman

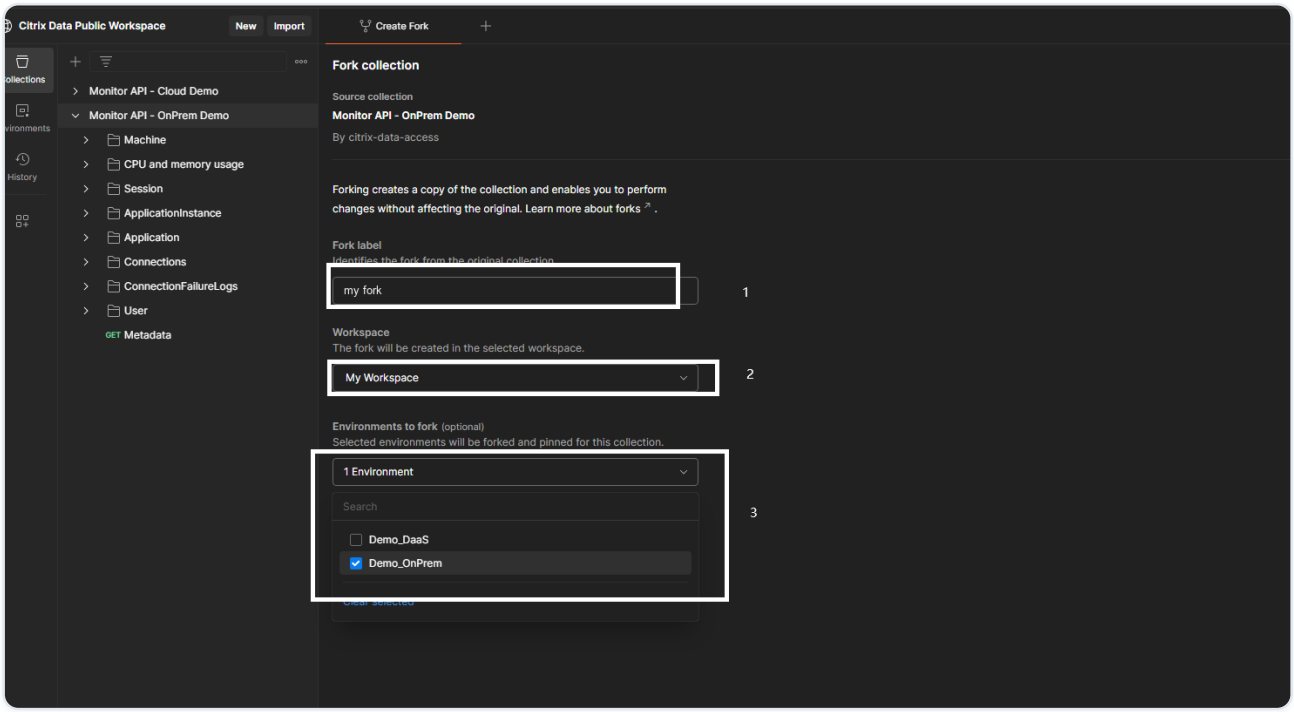
Download the collection and environment from github, then import them into the Postman.



Another way, fork the collection and environment from Postman workspace.



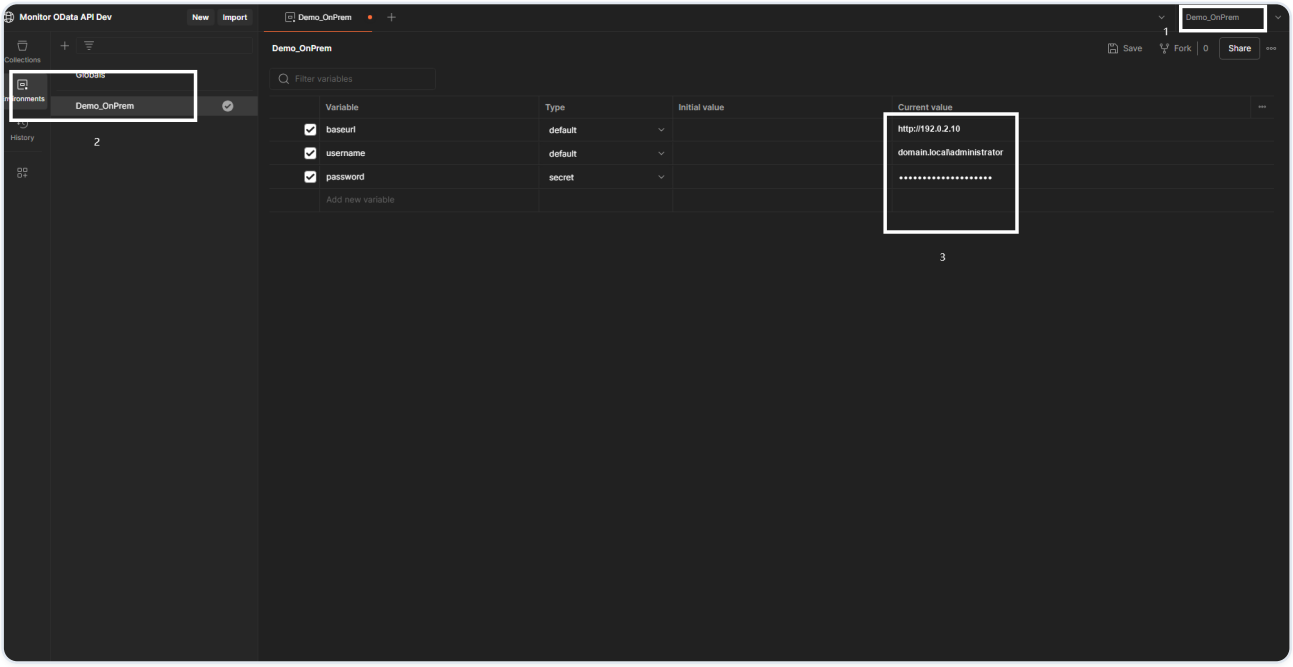
Click the `Create a fork`.



Config the fork.

- Fork Label: name your fork.
- Workspace: choose your own workspace.
- Environments to fork: choose the `Demo_OnPrem`.

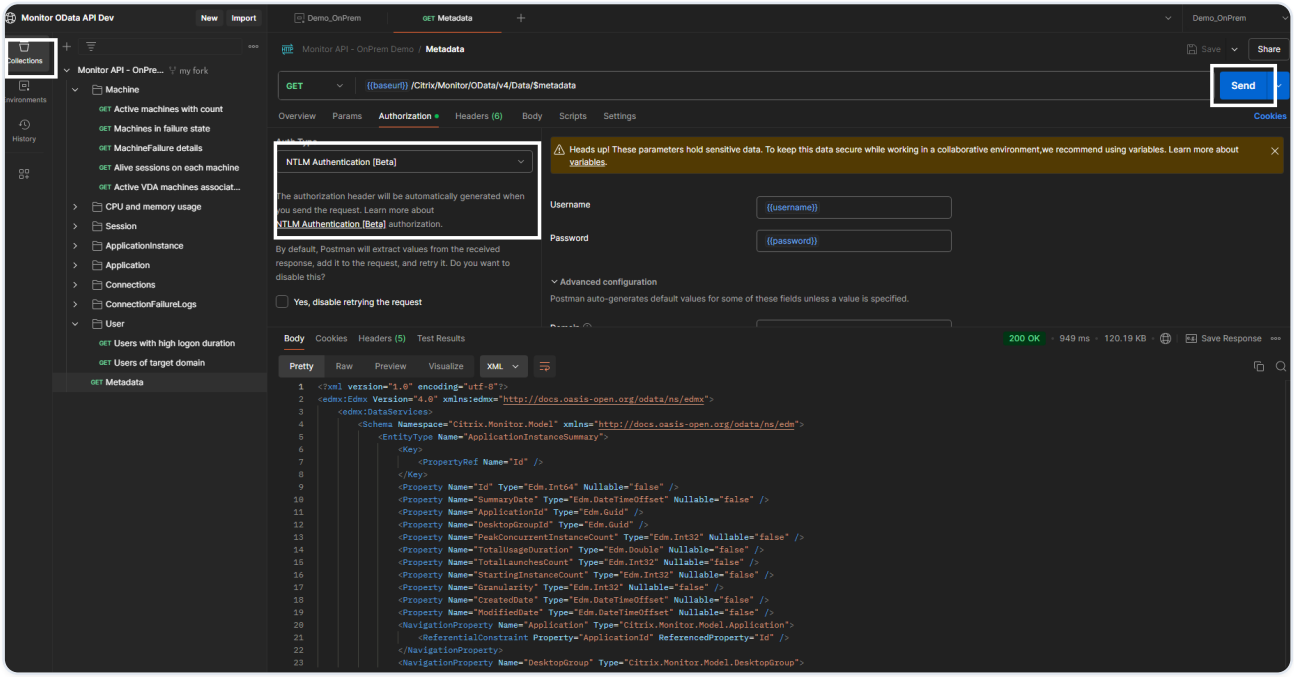
Config the environment



1. Switch the environment to `Demo_OnPrem`.
2. Click the Environments -> Demo_OnPrem.
3. Config the `Current value`

    - baseurl: URL with the IP of the DDC.
    - username: in format `domain\username`.
    - password: the password of the username.

Try the API



Choose one API in the Collections, then click the `Send`.

Descriptions for enums and error codes

AllocationType

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	Unknown. When the Broker does not send an allocation type.
1	Static	Machines get assigned to a user either by the admin or on first use. This relationship is static and changes only if an admin explicitly changes the assignments.
2	Random	Machines are allocated to users randomly from a pool of available machines.
3	Permanent	Equivalent to 'Static'.

ConnectionFailureEnumValue

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	Unknown.
1	None	None (no failure).
2	SessionPreparation	Failure during session preparation.
3	RegistrationTimeout	Failure due to registration timeout.

ERROR CODE	ENUM VALUE	DESCRIPTION
4	ConnectionTimeout	Failure due to connection timeout.
5	Licensing	Failure due to licensing.
6	Ticketing	Failure due to ticketing.
7	Other	Other failure reasons.
8	GeneralFail	General failure.
9	MaintenanceMode	Desktop group, machine, or hypervisor is in maintenance mode.
10	ApplicationDisabled	Selected application is currently disabled.
11	LicenseFeatureRefused	Required feature is not licensed.
12	NoDesktopAvailable	No machine is available to satisfy launch.
13	SessionLimitReached	VDI machine is already in use (not used for RDS).
14	DisallowedProtocol	Requested protocol is not allowed.
15	ResourceUnavailable	Resource is unavailable.
16	ActiveSessionReconnectDisabled	Active session stealing is required, but is disabled.
17	NoSessionToReconnect	Session to which reconnect is directed is not found (can only occur on a launch retry).
18	SpinUpFailed	Failed to power-up machine for launch.

ERROR CODE	ENUM VALUE	DESCRIPTION
19	Refused	Session refused.
20	ConfigurationSetFailure	Configuration set failure.
21	MaxTotalInstancesExceeded	App launch refused because limit on total concurrent usage is reached.
22	MaxPerUserInstancesExceeded	App launch refused because limit on per-user usage is reached.
23	CommunicationError	Launch failed because the VDA could not be contacted.
24	MaxPerMachineInstancesExceeded	App launch refused because limit on per machine usage is reached.
25	MaxPerEntitlementInstancesExceeded	Desktop launch refused because limit on per entitlement usage is reached.
26	UserCancellation	User Cancellation.
27	NetworkGatewayFail	Gateway Network Failed.
28	NetworkVdaFail	VDA Network Failed.
29	HdxHandshakeFail	HDX Handshake Failed.
30	LaunchCancellationOther	Other Launch Cancellation.
100	NoMachineAvailable	No machine available.
101	MachineNotFunctional	Machine not functional.

CatalogType

ERROR CODE	ENUM VALUE	DESCRIPTION
0	ThinCloned	A thin-cloned catalog is used for original golden VM images that are cloned when they are assigned to a VM, and users' changes to the VM image are retained after the VM is restarted.
1	SingleImage	A single-image catalog is used when multiple machines provisioned with Provisioning Services for VMs all share a single golden VM image when they run and, when restarted, they revert to the original VM image state.
2	PowerManaged	This catalog kind is for managed machines that are manually provisioned by administrators. All machines in this type of catalog are managed, and so must be associated with a hypervisor connection.
3	UnManaged	This catalog kind is for unmanaged machines, so there is no associated hypervisor connection.
4	Pvs	This catalog kind is for managed machines that are provisioned using Provisioning Services. All machines in this type of catalog are managed, and so must be associated with a hypervisor connection. Only

ERROR CODE	ENUM VALUE	DESCRIPTION
		shared desktops are suitable for this catalog kind.
5	Pvd	A personal vDisk catalog is similar to a single-image catalog, but it also uses personal vDisk technology.
6	PvsPvd	A Provisioning Services-personal vDisk (PvsPvd) catalog is similar to a Provisioning Services catalog, but it also uses personal vDisk technology.

ConditionTargetType

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	The unknown.
1	Site	The site.
2	Controller	The controller.
3	DesktopGroup	The delivery group.
4	Catalog	The Catalog.
5	RdsWorker	The RDS worker.
6	Vdi	The vdi.
7	User	User.

ConnectionFailureType

ERROR CODE	ENUM VALUE	DESCRIPTION
0	None	None.

ERROR CODE	ENUM VALUE	DESCRIPTION
1	ClientConnectionFailure	Session failed to start.
2	MachineFailure	Machine failure.
3	NoCapacityAvailable	No available capacity to start or reconnect to a session.
4	NoLicensesAvailable	No Licenses available.
5	Configuration	Configuration failure.

ConnectionState

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	Default value: unknown.
1	Connected	Actively connected to desktop.
2	Disconnected	Disconnected from desktop, but session still exists.
3	Terminated	Session has been terminated.
4	PreparingSession	Session is in the preparing state.
5	Active	Session is active.
6	Reconnecting	User is reconnecting to the session.
7	NonBrokeredSession	Session is non-brokered.
8	Other	Connection state is reported as Other.
9	Pending	Connection state is pending.

DeliveryType

ERROR CODE	ENUM VALUE	DESCRIPTION
0	DesktopsOnly	Only desktops are published.
1	AppsOnly	Only applications are published.
2	DesktopsAndApps	Both desktops and applications are published.

DeregistrationReasonCode

ERROR CODE	NAME	DESCRIPTION
0	AgentShutdown	VDA reported shutdown via CBP.
1	AgentSuspended	VDA reported OS suspended via CBP.
2	AgentRequested	Failure during SessionPreparation.
100	IncompatibleVersion	Broker agent version on the VDA is too old.
101	AgentAddressResolutionFailed	Broker cannot find VDA machine information in AD (the VDA machine SPN).
102	AgentNotContactable	Test callback from broker to VDA failed.
103	AgentWrongActiveDirectoryOU	When using AD-based discovery on the VDA, and the AD OU used by the VDA is the wrong one for this site.
104	EmptyRegistrationRequest	Registration request body from VDA is empty/missing.

ERROR CODE	NAME	DESCRIPTION
105	MissingRegistrationCapabilities	Expected callback endpoints from the registration request are missing.
106	MissingAgentVersion	Registration request does not specify agent version.
108	NotLicensedForFeature	Required edition-specific feature is unavailable for configured license.
109	UnsupportedCredentialSecurityVersion	Requested credential encryption method is not supported by the broker.
110	InvalidRegistrationRequest	Registration request contains details that are not allowed or corrupted.
111	SingleMultiSessionMismatch	VDA is configured to be in a catalog/group for single/multi session VDAs but reports as the opposite kind.
112	FunctionalLevelTooLowForCatalog	VDA reported functional level is lower than the catalog configured minimum functional level.
113	FunctionalLevelTooLowForDesktopGroup	VDA reported functional level is lower than the group configured minimum functional level.
114	OSNotCompatibleWithDdc	Some types of Windows OS, such as multi-session win10, are not allowed to use with on-premises Citrix Virtual Apps and Desktops.

ERROR CODE	NAME	DESCRIPTION
115	VMNotCompatibleWithDdc	Some types of VM, such as multi-session win10 on non-Azure hosted machines, are not allowed.
200	PowerOff	VDA is marked as deregistered because the VDA is reported as powered off.
201	DesktopRestart	End user requested a restart of the VDA.
202	DesktopRemoved	VDA has been removed from its delivery group.
203	AgentRejectedSettingsUpdate	CBP call to `Configuration.Set` failed because the VDA broker agent rejected it.
204	SendSettingsFailure	CBP call to `Configuration.Set` failed for some other reason.
205	SessionAuditFailure	CBP call to request a session audit failed.
206	SessionPrepareFailure	CBP call to prepare for a session launch failed.
207	ContactLost	VDA has not contacted the broker (eg with a ping) for longer than the timeout period.
208	SettingsCreationFailure	Settings could not be sent to the VDA because preparing the settings to send failed.

ERROR CODE	NAME	DESCRIPTION
300	UnknownError	General failure, such as an unexpected exception.
301	BrokerRegistrationLimitReached	Broker cannot accept another VDA registration based on the configured limit.
400	None	For power action case, no deregistration.
401	HypervisorReportedFailure	For power action case, hypervisor request failed.
402	HypervisorRateLimitExceeded	For power action case, hypervisor request refused due to quotas.
1000	HardRegistrationPending	Registration success. VDA hard registration is pending.
1001	SoftRegistered	Registration success. VDA is soft registered.
1002	Unknown	Registration failure. Internal reason code does not map to opevent code.

DesktopKind

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Private	Private desktops.
1	Shared	Shared desktops.

DesktopType

ERROR CODE	ENUM VALUE	DESCRIPTION
0	None	None.
1	Vdi	VM hosted desktop.
2	RemotePc	Unmanaged desktop RemotePC.
3	Rds	VM hosted RDS.
4	Unknown	Unknown type.

FailureCategory

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	Default value: unknown.
1	Connection	Connection failure category.
2	Machine	Machine failure category.

LifecycleState

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Active	Default value: entity is active.
1	Deleted	Object was deleted.
2	RequiresResolution	Object was created, but values are missing, so a background process should poll to update missing values.
3	Stub	Stub object: for example, a machine or a session that does not exist but is created

ERROR CODE	ENUM VALUE	DESCRIPTION
		by internal processing logic to preserve data relationships.

LogonBreakdownType

ERROR CODE	ENUM VALUE	DESCRIPTION
0	None	Default value: none.
1	UsersLastSession	User's last session information.
2	UsersSessionAverage	Average across the user's sessions.
3	DesktopGroupAverage	Average for the desktop group.

LogOnStep

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Total	Total.
1	Brokering	Time taken to complete the process of brokering the session.
2	VMStart	If the session required a machine to be started, the time taken to start the VM.
3	Hdx	Time taken to complete the steps required in setting up the HDX connection from the client to the VM.
4	Authentication	Time taken to complete authentication to the remote session.

ERROR CODE	ENUM VALUE	DESCRIPTION
5	Gpos	If any Group Policy settings have been enabled on the machines, the time taken for the GPOs to be applied.
6	LogOnScripts	If logon scripts are configured for the session, the time taken for the logon scripts to be executed.
7	ProfileLoad	If profile settings are configured for the user or the machine, the time taken for the profile to be loaded.
8	Interactive	Time taken to hand off keyboard and mouse control to the user.
9	UserInit	Time taken to complete the user initialization step.
10	Shell	Time taken to complete the shell (desktop) initialization step.
11	VMPowerOn	If the session required a machine to be started, the time taken to power on the VM.
12	VMRegistration	If the session required a machine to be started, the time taken for the VM to register with the Delivery Controller.
13	ClientLogOn	Time taken to complete the VDA client logon.

ERROR CODE	ENUM VALUE	DESCRIPTION
14	AppxAssociation	Time taken to complete Appx file associations.
15	AppxLoadPackage	Time taken to complete Appx package loading.
16	IcaFileDownloadToLaunch	Time from ICA file download to user launch.

MachineFaultStateCode

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	Fault unknown.
1	None	No fault (healthy machine).
2	FailedToStart	Last power-on operation for the machine failed.
3	StuckOnBoot	Machine might not have booted following power on (VM tools did not transition to running).
4	Unregistered	Machine has failed to register within the expected period, or its registration has been rejected.
5	MaxCapacity	Machine is reporting itself at maximum capacity.
6	VirtualMachineNotFound	Virtual machine is not found.

MachineRole

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Vda	Vda machine.
1	Ddc	Ddc machine.
2	Both	Machine acting as VDA and DDC.

PowerActionReasonCode

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	Unknown reason.
1	Reset	For shutdown power actions when a user requests the reset of a VM from WI/ StoreFront.
2	Pvd	For 'turn on' power actions when a VM needs to have its associated PvD disk updated due to a change in the underlying master OS disk image.
3	Schedule	For shutdown and turn on power actions to be generated to reboot machines at configured times and/or to reboot machines to roll out updated base master OS image disks to VMs.
4	Launch	For 'turn on' or 'resume' power action if the VM is required to satisfy the requested desktop or app

ERROR CODE	ENUM VALUE	DESCRIPTION
		resource and is not in a suitable power state.
5	Admin	An administrator can directly request any power action (turn on, turn off, suspend, resume, restart, reboot etc.)
6	Untaint	For shutdown power action to 'clean' a VM OS disk back to the state of the golden master image that the VM was originally provisioned with.
7	Policy	Rules can be created to cause VMs to be shutdown or suspended some number of minutes after trigger events such as user disconnect or user logoff. This source is also used for some other cases, such as the shutdown issued to a VM if it doesn't register in time after a turn on.
8	IdlePool	For shutdown or turn on power actions generated to cause the appropriate number of VMs to be made running/ready at any one time, driven by the pool size and buffer size (and peak/off-peak times and timezone) configuration.

PowerActionTypeCode

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	Unknown action type.
1	PowerOn	Turn a VM on from an 'off' state.
2	PowerOff	Abruptly turn off a VM without allowing the guest OS to shut down.
3	Shutdown	Gracefully shut down a VM, allowing the guest OS to perform shut down actions as needed.
4	Reset	Abruptly reset (turn off and then turn on) a VM without allowing the guest OS to shut down.
5	Restart	Gracefully restart (shut down and then turn on) a VM, allowing the guest OS to perform shut down actions as needed.
6	Suspend	Request a hypervisor suspend VM activity. This may or may not involve guest OS notification depending on hypervisor type.
7	Resume	Request a hypervisor resume a previously suspend VM activity. This may or may not involve guest OS notification depending on hypervisor type.

ProvisioningType

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	Unknown.
1	MCS	Machine provisioned by Machine Creation Services™ (machine must be a VM).
2	PVS	Machine provisioned by Provisioning Services (may be physical, blade, VM).
3	Manual	No automated provisioning.

PowerStateCode

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	Unknown power state.
1	Unavailable	Power state is not available.
2	Off	Machine is powered off.
3	On	Machine is powered on.
4	Suspended	Machine is suspended.
5	TurningOn	Machine is in the process of turning on.
6	TurningOff	Machine is in the process of turning off.
7	Suspending	Machine is in the process of suspending.
8	Resuming	Machine is in the process of resuming from suspension.

ERROR CODE	ENUM VALUE	DESCRIPTION
9	Unmanaged	Machine is not under management control.
10	NotSupported	Power state is not supported.
11	VirtualMachineNotFound	Virtual machine is not found.

PersistentUserChangesType

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	Unknown.
1	Discard	User changes are discarded.
2	OnLocal	User changes are persisted locally.
3	OnPvd	User changes are persisted on the Pvd.

RegistrationState

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	Unknown.
1	Registered	Machine is currently registered.
2	Unregistered	Machine has been unregistered.

SessionType

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Desktop	Desktop session.

ERROR CODE	ENUM VALUE	DESCRIPTION
1	Application	Application session.

SessionSupportCode

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	Unknown session support type.
1	SingleSession	Supports single session only (VDI).
2	MultiSession	Supports multiple concurrent sessions (RDS).

CostType

TYPE	ENUM VALUE	DESCRIPTION
0	Unknown	Unknown.
1	AssumedCost	Assumed Cost.
2	ConfiguredCostFromStudio	The cost configured in Studio.
3	AzureRetailAPI	Azure Retail API cost.
4	CostFromHostService	Cost associated with host service.
5	ActualCost	Actual Cost.

CurrencyType

TYPE	ENUM VALUE	DESCRIPTION
0	Unknown	Unknown.

TYPE	ENUM VALUE	DESCRIPTION
1	USD	Currency type in US dollar.
2	EUR	Euro currency in Europe.
3	CAD	Canadian dollar currency type.
4	CNY	Chinese yuan currency type.
5	BRL	Brazilian real currency type.
6	NZD	New Zealand dollar currency.
7	GBP	British pound currency type.
8	JPY	Japanese yen currency type.
9	KRW	South Korean won currency.

CostSavingsSummaryGranularity

GRANULARITY	ENUM VALUE	DESCRIPTION
0	Hour	Granularity used for hour level data.
1	Day	Granularity used for day level data.
2	Month	Granularity used for month level data.
3	DayLevelInMinutes	Granularity used for day level data in terms of minutes.

HdxConnectionType

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	Unknown connection type.

ERROR CODE	ENUM VALUE	DESCRIPTION
1	HDX	Citrix session protocol.
2	HDXDirect	Allows the client device to establish a direct connection to the VDA.
3	Rendezvous	Cloud optimization that reduces dependency on intermediaries.

HypervisorType

ERROR CODE	ENUM VALUE	DESCRIPTION
0	None	Used for machine data for which there is no Hypervisor attached.
1	Unknown	Hypervisor type is unknown.
2	Azure	Hypervisor type from Microsoft.
3	AWS	Amazon Web Services hypervisor type.
4	GCP	Hypervisor type from Google cloud.
5	XenServer	Hypervisor type from Citrix.
6	HyperV	Microsoft HyperV hypervisor type.
7	AHV	Hypervisor type from Nutanix.
8	VSphere	Hypervisor type from VMWare.

ERROR CODE	ENUM VALUE	DESCRIPTION
9	SCVMM	Microsoft System Center Virtual Machine Manager (SCVMM).
10	Windows365	Microsoft Windows 365.
11	AmazonWorkSpaces	Amazon WorkSpaces.
12	AWSMachineManager	AWS MCS-provisioned machines.

WorkspaceType

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Unknown	Workspace type is Unknown.
1	Windows	Workspace type is Windows.
2	Mac	Workspace type is Mac.
3	Linux	Workspace type is Linux.
4	HTML5	Workspace type is HTML5.
5	Chrome	Workspace type is Chrome.

EndpointSecurityPayloadType

ERROR CODE	ENUM VALUE	DESCRIPTION
0	Detected	Payload type reported as Detected.
1	Protected	Payload type reported as Protected.

Citrix Monitor Service OData Data Model

This reference describes the entity sets exposed by the Monitor Service OData v4 API, grouped by functional category, along with the enumerations they use. Each entity set is listed by the name you query (for example, `/Sessions`); the backing entity type is noted for cross-reference with the service `$metadata` document.

Usage

Usage - Session, application, and connection activity - who connected, what they launched, and when. Use `Sessions` and `Connections` for live per-session and per-connection detail, `ActiveApplicationLaunches` / `ApplicationInstances` for running apps, and the `*Summaries` sets (for example `SessionActivitySummaries`, `ApplicationActivitySummaries`) for pre-aggregated trend reporting over long date ranges. Secure Private Access app usage is under the `Spa*` sets.

ActiveApplicationLaunches

Entity type: ActiveApplicationLaunch

Currently running application instance (one row per active launch; IsAppEnded flips true on process exit).

Properties

Machine

The machine on which the application was launched

ApplicationNameId

Application details for the launched application

DesktopGroup

Desktop group id of the launched application

AppId

Application Id

AppVersion

Application Version

DesktopGroupId

DesktopGroup Id

ExecutablePath

Application executable path

Id

Unique identifier

IsAppEnded

True if the application is Terminated

IsPublishedApp

True if the launch is for a published application

MachineId

Foreign key to the Machine on which the application was launched.

ModifiedDate

Database Record to track the changes to the launch record

ProcessGUID

Unique Identifier of the process

ProcessName

Process Name associated with the application

ProcessParentGUID

Parent Process GUID

ProcessParentName

Parent Process Name

SessionGUID

Unique Identifier of the session

StartDate

Start Time of the application

StartupIOPS

Startup IOPS for the application

StartupTimeMs

Startup time in ms for the application to initialize

UserName

User who launched the application.

ApplicationActivitySummaries

Entity type: ApplicationInstanceSummary

Roll up table for Application instances

Properties

Id

Unique identifier for ApplicationInstanceSummary

SummaryDate

Beginning time (to the minute) that this summary data represents

ApplicationId

Guid of the application this instance summary corresponds to (see Application property)

Application

The application this summary data represents

DesktopGroupId

The Id of the Delivery Group this application instance is associated with.

DesktopGroup

The delivery group this application instance is associated with

PeakConcurrentInstanceCount

Number of peak concurrent instances of the application for the time slot specified

TotalUsageDuration

Total application usage duration in seconds (sum of each application instance's active duration) for all instances of this application in the time slot. Value is in seconds, not milliseconds.

TotalLaunchesCount

Total number of application launch events in the time slot

StartingInstanceCount

Number of application instances at the start of the summary window (see SummaryDate)

Granularity

Granularity of this summary item in minutes (how many minutes of data included in this time slot)

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

ApplicationIdDesktopGroupIdMappings

Entity type: ApplicationIdDesktopGroupIdMapping

Represents ApplicationId and DesktopGroupId Mapping data for local applications

Properties

AppId

Application Id

AppVersion

Application Version

CreatedDate

Time of creation of the application

DesktopGroupId

DesktopGroup Id

LastUsageTimestamp

Time when the application was last used

ModifiedDate

Time of modification of the application

ApplicationNameId

Application details

DesktopGroup

Desktop Group details

ApplicationInstances

Entity type: ApplicationInstance

A running or previously running instance of a published application within a session.

Properties

Id

Unique identifier of the application instance

ApplicationId

Guid of the application

SessionKey

Guid of the session this application instance was created on (See Session property).

StartDate

Date when the application was started

EndDate

Date when the application was terminated

Application

Application associated this application instance

Session

The session associated with the application

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

ApplicationsUsageSummaryData

Entity type: ApplicationUsageSummaryData

Represents the summary of application usage metrics

Properties

Id

Unique identifier

SummaryDate

Summary Date

DesktopGroupId

Foreign key to the DesktopGroups entity. Null when the summary spans all delivery groups.

AppId

Application Id

UniqueUserCount

Unique Users Count

TotalMachinesCount

Total Machines Count

PeakConcurrentLaunches

Peak Concurrent Launches

StartingInstancesCount

Starting Instances Count

TotalLaunches

Total Launches

ProcessName

Process name for local applications. This will be NULL for published applications.

ApplicationNameId

Application details

DesktopGroup

Desktop group details of the application

Connections

Entity type: Connection

Summary collection object for session detail information - a new record will be created for every connect/reconnect on the same session All session connect data points will be captured in this class

Properties

Id

Unique identifier for Connection

ClientName

The host name of the client connected to the session Broker name: ClientName Desktop Director name: Endpoint

ClientAddress

The IP address of the client connected to the session Broker name: ClientAddress Desktop Director name: Endpoint (IP)

ClientPublicIP

Client Public IP Address

ClientVersion

The version of the Citrix Receiver running on the client connected to the session. Assigning to this property automatically refreshes the derived ClientVersionYYMM so the two columns stay in sync without each caller having to remember.

ClientVersionYYMM

Normalized CWA version in YYMM.Patch form (decimal(10,5)); null when ClientVersion is N/A or unparseable. Derived from ClientVersion. The setter is private so the column can only be mutated through ClientVersion's setter or RefreshClientVersionYYMM. EF6 materializes private setters via reflection, so persistence is unaffected.

ClientPlatform

The platform running on the client.

ClientISP

Client Internet Service Provider

ClientLocationCountry

Client Location (Country)

ClientLocationCity

Client Location (City)

ClientNetworkInterfaceType

Client Network Interface Type

WorkspaceType

Citrix Workspace App (CWA) client/workspace type used for the connection, as a WorkspaceType enum value. Null when not reported.

ConnectedViaHostName

The host name of the incoming connection. This is usually a gateway, router or client. Broker name: ConnectedViaHostName Desktop Director name: ConnectedVia

ConnectedViaIPAddress

The IP address of the incoming connection This is usually a gateway, router or client. Broker name: ConnectedViaIP Desktop Director name: ConnectedVia (IP)

LaunchedViaHostName

The host name of the StoreFront server used to launch the session. Broker name: LaunchedViaHostName Desktop Director name: LaunchedVia

LaunchedViaIPAddress

The IP address of the StoreFront server used to launch the session Broker name: LaunchedViaIP Desktop Director name: LaunchedVia (IP)

StoreFrontFQDN

FQDN of the StoreFront server parsed from LaunchedViaUserAgent. Populated only when the launching agent type is StoreFront.

StoreFrontIPAddress

IP address of the StoreFront server parsed from LaunchedViaUserAgent. Populated only when the launching agent type is StoreFront.

IsReconnect

Indicates whether this connection is a reconnection to an existing session.

IsSecureIca

Indicates whether SecureICA is active on the session. Broker name: SecureIcaActive Desktop Director name: SecureICA

Protocol

The protocol that the session is using, can be HDX, RDP, or Console Broker name: Protocol Desktop Director name: Connection Type

LogOnStartDate

Time stamp of Logon Start event

LogOnEndDate

Time stamp of Logon end event

BrokeringDuration

Brokering duration calculation

BrokeringDate

Time stamp of Brokering time

DisconnectCode

Disconnect event code

DisconnectDate

Time stamp of Disconnect event

VMStartStartDate

Time stamp of VmStartStart event maps to Brokering Time in Desktop Director UI

VMPoweredOnDate

Time stamp of VMPoweredOn event

VMStartEndDate

Time stamp of VmStartEnd event

ClientSessionValidateDate

Time stamp of Client Session Validated

ServerSessionValidateDate

Time stamp of Server Session Validated

EstablishmentDate

Time stamp recorded on the Broker at the point when the VDA confirms session connect / reconnect maps to Resolution Time in Desktop Director UI

HdxStartDate

Time stamp of Hdx Start event

HdxEndDate

Time stamp of Hdx end event

AuthenticationStartDate

DateTime? for Authentication Start event

AuthenticationDuration

Authentication Duration in milliseconds

GpoStartDate

Time stamp of GpoStart event

GpoEndDate

Time stamp of GpoEnd event

LogOnScriptsStartDate

Time stamp of LogonScriptsStart event

LogOnScriptsEndDate

Time stamp of LogonScriptsEnd event

ProfileLoadStartDate

Time stamp of ProfileLoadStart event

ProfileLoadEndDate

Time stamp of ProfileLoadEnd event

InteractiveStartDate

Time stamp of InteractiveStart event

InteractiveEndDate

Time stamp of InteractiveEnd event

SessionKey

Guid if session this connection is associated with

TransactionId

Guid of transaction Id

Session

Session this connection is associated with

ConnectionFailureLog

ConnectionFailureLog this connection is associated with, if any

SessionAccessDeniedList

List of SessionAccessDenied this connection is associated with

EndpointId

Foreign key associating this Endpoint record of this Connection

Endpoint

Endoint record for this Connection

IcaFileDownloadedDate

ICA File download timestamp

IcaFileToEngineDate

ICA File handed over to engine timestamp

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

DesktopOSDesktopSummaries

Entity type: DesktopOSDesktopSummary

Time-windowed VDI (single-session) desktop usage per Delivery Group.

Properties

Id

Unique identifier of the DesktopOSDesktopSummary instance

SummaryDate

Beginning timeslot (to the minute) that this summary data represents

DesktopGroupId

Guid of the DesktopGroupId this machine belongs to.

DesktopGroup

The session associated with the application

PeakConcurrentInstanceCount

Peak number of concurrent desktop sessions (distinct SessionKey) on single-session (VDI) machines in this Delivery Group during the time slot.

TotalUsageDuration

Total desktop session usage in seconds (sum of each session's active duration) across all sessions in this Delivery Group for the time slot. Value is in seconds, not milliseconds.

TotalLaunchesCount

Number of desktop sessions that started during the time slot.

StartingInstanceCount

Number of desktop sessions already running at the start of the summary window (see SummaryDate).

Granularity

Granularity of this summary item in minutes (how many minutes of data included in this time slot)

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

HistoricalApplicationLaunches

Entity type: HistoricalApplicationLaunch

Completed (historical) application launch record, created when an active launch ends; includes startup performance metrics.

Properties

Machine

The machine on which the application was launched

ApplicationNameId

Application details for the launched application

DesktopGroup

Desktop group id of the launched application

Id

Unique identifier

AppId

Application Id

ProcessName

Process Name associated with the application

StartDate

Start Time of the application

EndDate

End Time of the application

AppVersion

Application Version

ExecutablePath

Application executable path

UserName

User who launched the application.

MachineId

Foreign key to the Machine on which the application was launched.

DesktopGroupId

DesktopGroup Id

SessionGUID

Unique Identifier of the session

ProcessGUID

Unique Identifier of the process

StartupTimeMs

Startup time in ms for the application to initialize

StartupIOPS

Startup IOPS for the application

ProcessParentGUID

Parent Process GUID

ProcessParentName

Parent Process Name

ModifiedDate

Database Record to track the changes to the launch record

IsPublishedApp

True if the launch is for a published application

ServerOSDesktopSummaries

Entity type: ServerOSDesktopSummary

Time-windowed multi-session (Server OS) desktop usage per Delivery Group and machine.

Properties

Id

Unique identifier of the ServerOSDesktopSummary instance

SummaryDate

Beginning timeslot (to the minute) that this summary data represents

MachineId

Guid of the Desktop

Machine

Machine associated this session

DesktopGroupId

Guid of the DesktopGroupId this machine belongs to.

DesktopGroup

The session associated with the application

PeakConcurrentInstanceCount

Peak number of concurrent desktop sessions (distinct SessionKey) on this multi-session (Server OS) machine during the time slot.

TotalUsageDuration

Total desktop session usage in seconds (sum of each session's active duration) on this machine for the time slot. Value is in seconds, not milliseconds.

TotalLaunchesCount

Number of desktop sessions that started on this machine during the time slot.

StartingInstanceCount

Number of desktop sessions already running on this machine at the start of the summary window (see SummaryDate).

Granularity

Granularity of this summary item in minutes (how many minutes of data included in this time slot)

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

SessionActivitySummaries

Entity type: SessionActivitySummary

POCO object for session activity consolidation

Properties

Id

Unique identifier for the session summary

SummaryDate

Timestamp of the beginning of the time window that this summary data represents

DesktopGroupId

Guid of the desktop group this entry is associated with

DesktopGroup

The DesktopGroup this entry is associated with

ConnectedSessionCount

Number of maximum connected sessions for this desktop group for the time window specified

DisconnectedSessionCount

Number of maximum disconnected sessions for this desktop group for the time window specified

ConcurrentSessionCount

Number of maximum concurrent sessions for this desktop group for the minute specified

ClientLogOnDuration

Sum of all Client Logon durations

ClientLogOnCount

Count of all Client Logon durations

TotalLogOnDuration

Total logon duration in milliseconds for all logons in this desktop group for the time window specified

TotalLogOnCount

Total number of logons in this desktop group for the time window specified

Granularity

Granularity of the time window associated with this summary item in minutes (how many minutes of data included in this record)

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

Sessions

Entity type: Session

Represents a user connected to a desktop.

Properties

SessionKey

Broker-assigned SessionKey for this Session

StartDate

Time the session started (logon)

LogOnDuration

Total log on duration for this session

ClientLogOnDuration

Client logon duration for this session

EndDate

Time the session ended (logoff)

ExitCode

Session termination exit code

FailureId

Id of the associated Failure (null if no failure)

Failure

Information on how the session failed (null if no failure)

FailureDate

If the connection failed, the time the failure occurred. Otherwise, null

ConnectionState

Connection State for the session. See the enum ConnectionState for possible values

SessionIdleTime

Session idle time since

ConnectionStateChangeDate

Date of last connection state change

LifecycleState

Lifecycle state for the Session. Used internally for tracking and management. See the enum LifecycleState for possible values.

CurrentConnectionId

Id of the connection record currently associated with this session. May be null when session is disconnected.

CurrentConnection

Connection record currently associated with this session.

UserId

Id of User entry for the user logged on to this session

User

User for the user logged on to this session maps to Last Connection User in Desktop Director UI

MachineId

Guid of the Machine this session is running on.

Machine

Machine this session is running on.

SessionType

Determines if this session is from an application/ desktop. See SessionType enum for possible values

Connections

Connections (current and past) associated with this session.

ConnectionFailureLogs

Connection failures (current and past) associated with this session.

SessionMetricsV1

SessionMetrics values associated with this session

SessionMetrics

SessionMetricsView values associated with this session

EndpointMetrics

Endpoint metrics with this session

Processes

ProcessInfo object associated with this session

IsAnonymous

Defines whether a session is anonymous or not

ApplicationInstances

Application related to this session (if SessionType is 'Application')

ApplicationFaults

Application faults associated wth this session

ApplicationErrors

Application errors associated wth this session

ProbeLogs

Contains mapping to the probe log for that session

LogOnMetrics

Contains mapping to the logon metric for that session

ProbeLogsDesktop

Contains mapping to the desktop probe log for that session

SessionAutoReconnects

Contains mapping to the session auto-reconnects for that session

SessionRecordingServer

Contains mapping to the session recording for that session

PublishedDesktopId

Id of publishedDesktopName which is used to launch this session

PublishedDesktopName

Navigation property to the published desktop name (display name) used to launch this session.

SessionMetricsLatest

Latest metrics for that session

SessionLogonMetrics

Logon metrics for that session

SessionAccessDeniedList

List of SessionAccessDenied this session is associated with

UCAppsOptimizationSummary

UCApps OptimizationSummary for that session

EndpointSecurityEventsList

Endpoint Security Events for that session

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

SpaApplications

Entity type: SpaMonitorServerApplication

Represents a single application-access event within a Secure Private Access (SPA) session: a user reaching a web/SaaS app or a TCP/UDP resource. Captures the accessed URL, applied access policy and security controls, routing, destination, and gateway/connector context, and links to its parent SPA enumeration and session.

Properties

Id

Unique identifier (primary key) of this application-access record. This is the record identity, not the SPA application's own ApplicationId.

ApplicationName

Display name of the SPA application.

ApplicationId

SPA application identifier assigned by Secure Private Access. Distinct from Id, which is this record's primary key.

ApplicationStatus

Access status for the application (for example "Allowed", "Denied", or "Redirected").

ApplicationType

Application type classification (for example a web/SaaS app or a TCP/UDP resource).

MessageCode

Numeric status/result code for the enumeration or launch event, from MonitorServerStatusTypes (for example 3000 = enumeration allow, 4001 = launch deny). Defaults to APP_ENUMERATION_UNKNOWN.

LaunchTime

UTC timestamp when the application was launched. Null for enumeration-only events where no launch occurred.

TransactionId

Correlation transaction ID that links related SPA events for this access.

AccessedUrl

The URL or resource the user accessed for this application.

AllowedUrls

Allowed URL patterns for the application, as defined by the applied access policy.

Policies

Serialized SPA access policies applied to this application.

MatchedPolicyName

Name of the access policy rule that matched and was applied to this access.

SecurityControls

Security controls applied to this access (for example clipboard restriction or download block).

AccessedResource

Serialized details of the backend resource accessed during this event.

ApplicationDomain

Domain associated with the application (for example the host domain of the accessed resource).

DestinationIp

Destination (backend) server IP address for the accessed resource.

DestinationPort

Destination (backend) server port for the accessed resource.

Protocol

Protocol(s) used to reach the resource (for example HTTP, HTTPS, TCP, or UDP), as a comma-separated string.

DataPath

Data path used to reach the resource (for example "Direct", "ViaConnector", or "Cloud").

ApplicationRoute

Routing classification for the access: "internal", "external", or empty for enumeration events.

ApplicationUser

Server username for SSH/RDP connections (for example "rootlogin"). Populated from CEP SessionActivity accessedResource.applicationUser.

FailureOriginator

Component that originated the failure, if the access failed; otherwise empty.

SessionId

Foreign key to the parent SPA session (SpaSessions). Null for enumeration events.

EnumerationId

Foreign key to the parent SPA enumeration (SpaEnumerations). Null for session/launch events.

AppliedRoutePolicyType

Type of route policy applied, from RoutePolicyType: 0 = AccessPolicy, 1 = SessionPolicy, 2 = ApplicationDomain. Defaults to ApplicationDomain.

ResourceLocationId

GUID of the resource location hosting the connector that served this resource.

ConnectorId

Identifier of the Connector Appliance that brokered the connection to the resource.

GatewayFqdn

Fully qualified domain name (FQDN) of the gateway used to route the access.

GatewayPopName

Name of the gateway Point of Presence (PoP) that handled routing for the access.

GoogleSecureGatewayRegion

GCP Secure Gateway region used to route the access, when the access is routed via a Google Secure Gateway; otherwise empty.

GatewaySiteFQDN

FQDN of the gateway site used to route the access (GCP Secure Gateway routing).

AppConnectionKeyHash

Hash that keys this application row for change detection. For session applications: hash of connection fields (DestinationIp, DestinationPort, etc.). For enumeration applications: hash of enumeration fields (ApplicationId, ApplicationName, etc.).

AppPayloadHash

16-byte hash of the application payload fields, used to detect changes and skip redundant updates during merge.

Enumeration

Navigation property to the parent SPA enumeration this application belongs to.

Session

Navigation property to the SPA session this application is associated with.

SpaEnumerationApplications

Entity type: SpaEnumerationApplication

Represents an application that appears in a Policy.Evaluation.Enumeration event. This is a full data table storing enumeration application details, not a junction table. ApplicationId is the business identifier string (GUID), not a foreign key.

Properties

Id

Internal database ID (primary key).

EnumerationId

Enumeration ID (foreign key to SpaEnumerations).

ApplicationId

Application identifier (business key, not a foreign key). This is a string identifier like a GUID, not a reference to SpaApplications.Id.

ApplicationName

Display name of the application listed in the enumeration.

ApplicationStatus

Access status of the application, for example "Allowed" or "Denied".

ApplicationType

Classification of the application type.

MessageCode

Status or error message code for this application entry.

LaunchTime

UTC launch time; for enumeration records this reflects when the record was created. Null when not set.

TransactionId

Correlation transaction ID that ties this entry to related SPA events.

AccessedUrl

URL the user accessed for this application.

AllowedUrls

Allowed URL patterns from policy, stored as JSON.

Policies

SPA policies applied to this application, stored as JSON.

SecurityControls

Security controls applied to this application, stored as JSON.

AppPayloadHash

16-byte payload hash for change detection. Computed from all enumeration application fields to enable efficient change detection and reduce LOG IO and DATA IO during updates.

Enumeration

Navigation property to the parent SpaEnumerations record, linked by EnumerationId.

SpaEnumerations

Entity type: SpaMonitorServerEnumeration

Represents a single Secure Private Access (SPA) resource-enumeration event, recorded when the SPA plugin lists the applications a user is entitled to before launch. Captures the user identity, client device, gateway context, status, timings, correlation key, and deployment type.

Properties

Id

Primary key of the enumeration record.

UserName

Identity of the user for whom applications were enumerated.

UserSid

Windows security identifier (SID) of the enumerated user.

UserOid

Azure AD object identifier (OID) of the enumerated user.

Status

Outcome of the enumeration, for example "Success" or "Failure".

StatusCode

Numeric status code for the enumeration outcome. Null when not reported.

TransactionId

Correlation transaction ID that ties this enumeration to related SPA events.

ContextualTags

Contextual tags derived from endpoint analysis at enumeration time.

DeviceName

Name of the client device that performed the enumeration.

DeviceId

Identifier of the client device that performed the enumeration.

DeviceIp

Private IP address of the client device.

DevicePublicIp

Public IP address of the client device.

GatewaySessionId

Gateway session identifier for the enumeration.

GatewayName

Name of the gateway through which the enumeration was made.

GatewayVip

Virtual IP (VIP) address of the gateway.

CorrelationKey

Cross-service correlation key used to join this enumeration with data from other services.

DeploymentType

Deployment type of the environment: "Cloud" or "Hybrid". On-prem deployments are recorded as "Hybrid" ("Onprem" is not reported as a distinct value). Defaults to "Cloud".

StartTime

UTC time at which the enumeration started.

LastActiveTime

UTC time of the last activity recorded for the enumeration.

Applications

Legacy navigation collection of SPA application records linked to this enumeration through the SpaApplications.EnumerationId foreign key. Retained for backward compatibility; newer data is exposed through the EnumerationApplications navigation.

EnumerationApplications

Navigation collection of the applications discovered during this enumeration, linked by EnumerationId. This is the current storage model that supersedes the legacy Applications collection.

ClientType

Type of client used for the enumeration, for example Browser or CWA.

SessionPolicies

Session-level policies applied during the enumeration. Null when none apply.

SpaSessions

Entity type: SpaMonitorServerSession

Represents a single Citrix Secure Private Access (SPA) end-user session as recorded by the Monitor service. A session covers a user accessing internal, SaaS, and TCP/UDP resources through the SPA plugin, StoreFront, and a gateway or connector, and captures user and device identity, gateway and StoreFront routing, client details, session timings, single sign-on and auto-logon outcomes, and any linked ICA session. Backs the SpaSessions OData entity set.

Properties

Id

Unique Monitor-assigned identifier (primary key) for the SPA session record.

UserName

User identity (user principal name or account name) of the account that established the session.

UserSid

Windows security identifier (SID) of the session user. May be empty when the identity is not Windows-based.

UserOid

Azure AD (Entra ID) object identifier (OID) of the session user.

Status

Textual status of the session (for example, whether it is active or has ended).

StatusCode

Numeric status code corresponding to the session Status.

GatewaySessionId

Identifier of the session as tracked by the gateway or connector.

GatewayAddress

Address (host name or URL) of the gateway that fronted the session.

GatewayVip

Virtual IP (VIP) address of the gateway used for the session.

ContextualTags

Contextual tags derived from endpoint analysis (device posture) for the session.

DeviceName

Name of the client device from which the session originated.

DeviceId

Identifier of the client device from which the session originated.

DeviceIp

Private (local network) IP address of the client device.

DevicePublicIp

Public (internet-facing) IP address of the client device.

DeviceOs

Operating system reported by the client device.

CebVersion

Version of the Citrix Enterprise Browser (CEB) used for the session.

DomainsVisitedInternal

Internal (corporate) domains accessed during the session.

DomainsVisitedExternal

External (internet) domains accessed during the session.

CorrelationKey

Cross-service correlation key used to trace this session across Citrix services. Defaults to a generated GUID.

DeploymentType

Deployment type of the environment: "Cloud" or "Hybrid". On-prem deployments are recorded as "Hybrid" ("Onprem" is not reported as a distinct value). Defaults to "Cloud".

SpaSession

Secure Private Access (SPA) session identifier assigned by the SPA service.

PluginIpAddress

IP address of the SPA plugin (client-side agent) that handled the session.

StoreFrontAddress

Address of the StoreFront through which the session was launched.

ClientType

Type of client used to establish the session (for example CEB or Browser).

ClientVersion

Version of the client used to establish the session.

StartTime

UTC timestamp when the session started.

LastActiveTime

UTC timestamp of the most recent activity recorded in the session.

EndTime

UTC timestamp when the session ended. Null while the session is still active.

AppLaunchedCount

Number of applications launched during the session. Null if not recorded.

Environment

Type of environment the user was working in when the session was recorded. (0 = Desktop, 1 = Citrix Virtual Desktop)

SessionType

Whether the session served a single application or multiple applications. (0 = Single, 1 = Multi)

LogonType

How the user authenticated to the resource for this session. (0 = Manual, 1 = AutoLogon, 2 = SpaSSO)

SpaSSO_Enabled

Whether SPA single sign-on (SSO) was enabled for the session. Null if not applicable.

SpaSSO_Attempted

Whether SPA single sign-on (SSO) was attempted during the session. Null if not applicable.

SpaSSO_Result

Outcome of the SPA single sign-on (SSO) attempt. (0 = Ok, 1 = Error)

SpaSSO_Message

Message describing the SPA single sign-on (SSO) outcome, typically populated when the attempt failed.

SpaSSO_ErrorCode

Error code from the SPA single sign-on (SSO) attempt when it failed. Null when there was no error.

AutoLogon_Enabled

Whether auto-logon was enabled for the session. Null if not applicable.

AutoLogon_Attempted

Whether auto-logon was attempted during the session. Null if not applicable.

AutoLogon_Type

Authentication mechanism used for auto-logon. (0 = AD, 1 = Kerberos, 2 = AAD-PRT, 3 = Others)

AutoLogon_Result

Outcome of the auto-logon attempt. (0 = Ok, 1 = Error)

AutoLogon_Message

Message describing the auto-logon outcome, typically populated when the attempt failed.

AutoLogon_ErrorCode

Error code from the auto-logon attempt when it failed. Null when there was no error.

IcaSessionKey

Foreign key to the associated ICA session (Sessions entity) for Citrix Virtual Desktop or published-app sessions. Null when the SPA session is not linked to an ICA session.

Applications

Navigation collection of Secure Private Access (SPA) applications accessed during this session. Populate via $expand=Applications.

ClientGeo

Geographic location of the client, for example a country or region code such as "us".

BrowserMode

Browser used for the session. Defaults to 2 (CEB). (1 = CEP, 2 = CEB, 3 = Other)

Users

Entity type: User

Represents a user in the system. A user identity that has launched sessions in the site.

Properties

Id

Unique identifier for the User

Sid

Security Identifier for the user.

Upn

User Principal Name - has two parts: the UPN prefix (the user account name) and the UPN suffix (a DNS domain name). The parts are joined together by the at sign (@) symbol to make the complete UPN. Broker name: AssociatedUserUpns DesktopDirector name: UserUpn

UserName

Username in the form of DOMAIN\UserName

FullName

Full name of the user.

Domain

Domain the user is associated with

Sessions

List of past and present sessions for this User

ConnectionFailureLogs

List of past and present connectionfailuress for this User

SessionAccessDeniedList

List of past and present SessionAccessDenied entries for this User

BlockedUsers

List of BlockedUser entries for this User

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

Performance

Performance - Resource and responsiveness metrics - CPU, memory, disk, latency, throughput, logon timing, and experience scores. Use `SessionMetricsLatest` for a live per-session snapshot and `SessionMetrics` for the historical time-series; `ResourceUtilization` / `ResourceUtilizationSummary` for machine resource use; `LogOnMetrics` and `LogOnSummaries` for logon breakdowns; and `SessionScoreMetrics` / `SessionPerformanceSummaries` for experience scoring. Prefer the `*Summary` sets for dashboards and the raw metric sets for drill-down.

ApplicationPerformanceMetrics

Entity type: ApplicationPerformanceMetrics

Per-application performance metrics from uberAgent on VDAs (CPU, memory, disk, input delay, network latency, page faults).

Properties

Session

The session this ApplicationPerformanceMetrics record is associated with

Machine

The machine this ApplicationPerformanceMetrics record is associated with

Id

Auto-generated identifier for the record. Part of the composite key together with CollectedDay.

CollectedDate

UTC date and time when the metrics were collected.

SessionKey

Identifier of the session the application ran in. Null when the metrics are not tied to a specific session.

MachineId

Identifier of the VDA machine the application ran on.

DesktopGroupId

Identifier of the delivery group (desktop group) the machine belongs to. Null when the machine is not in a delivery group.

UserId

Identifier of the user running the application. Null for system-level processes.

UserName

Name of the user running the application.

AppId

Application identifier string (stable key for the application).

AppName

Display name of the application.

IsPublished

True when the application is published (delivered through Citrix); false for local or unpublished applications.

Processes

Comma-separated list of process names that make up the application.

CPUUsagePercent

Average CPU usage over the collection interval, as a percentage. Null when not reported.

MemoryUsagePercent

Average memory usage over the collection interval, as a percentage. Null when not reported.

DiskIops

Average disk I/O rate over the collection interval, in IOPS (I/O operations per second). Null when not reported.

DiskLatency

Average disk latency over the collection interval, in milliseconds. Null when not reported.

InputDelay

Average user input delay over the collection interval, in milliseconds. Null when not reported.

PageFaultsPS

Average page fault rate over the collection interval, in page faults per second. Null when not reported.

WorkingSetMB

Average working set (physical memory in use) over the collection interval, in megabytes (MB). Null when not reported.

NetworkLatency

Per-window weighted average send latency (ms). Populated from UAApplicationPerformanceMetrics.AvgNetworkLatency for older VDAs; derived as SumSendLatencyDurationMs / SumSendLatencyCount by the processor for newer VDAs that emit raw sums instead of a pre-averaged value.

CollectedDay

Day of the month (1-31) when the data was collected. Part of the composite key and used for table partitioning.

P95CPUPercent

95th-percentile CPU usage over the collection interval, as a percentage. Null when there are insufficient samples.

P95MemoryUsage

95th-percentile memory usage over the collection interval, as a percentage. Null when there are insufficient samples.

P95InputDelay

95th-percentile user input delay over the collection interval, in milliseconds. Null when there are insufficient samples.

ComponentResourceUtilizations

Entity type: ComponentResourceUtilization

Resource Utilization for a given component at a given time

Properties

CollectedDate

Collection date for this a given row

AgentId

ID for the agent this data is collected from

FetchId

FetchId to join this with component specific data e.g. PvsMetrics, etc.

PercentCpus

CPU percentages for the component

AvgPercentCpu

Average CPU percentage for the component

PeakPercentCpu

Peak CPU percentage for the component

MemoryUsages

Memory usages for the component

AvgMemoryUsage

Average Memory usage for the component

PeakMemoryUsage

Peak Memory usgae for the component

DiskIOs

Disk IOs for the component

AvgDiskIO

Average Disk IO for the component

PeakDiskIO

Peak Disk IO for the component

DiskLatenciesInMs

Disk Latencies in milliseconds for the component

AvgDiskLatencyInMs

Average Disk Latency in millisecond for the component

PeakDiskLatencyInMs

Peak Disk Latency in millisecond for the component

DiskSpaceUsage

Disk Space Usage in megabytes for the component

AvgDiskSpaceUsage

Average Disk Usage Space in megabytes for the component

PeakDiskSpaceUsage

Peak Disk Space Usage in megabytes for the component

NetworkBytesTransferred

Network Bytes Transfered for the component

AvgNetworkBytesTransferred

Average Network Bytes Transfered for the component

PeakNetworkBytesTransferred

Peak Network Bytes Transfered for the component

LoadIndexes

Entity type: LoadIndex

Load Index collected data

Properties

Id

Unique identifier for LoadIndex

EffectiveLoadIndex

Percentage of Total load Desktop Director name: Load Evaluator %

Cpu

Percentage of CPU load

Memory

Percentage of Memory load

Disk

Percentage of Disk load

Network

Percentage of Network load

SessionCount

Percentage of Session Count load maps to # of Session in Desktop Director UI

MachineId

Guid of machine this LoadIndex record is associated with

Machine

The machine this LoadIndex record is associated with

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

LoadIndexSummaries

Entity type: LoadIndexSummary

POCO object for load index rollup/summary per hour/day

Properties

Id

Unique identifier

SummaryDate

Time stamp associated with this summary data

MachineId

Guid of machine this summary is associated with

Machine

Machine this summary is associated with

SumCount

Count of samples aggregated for each of the loadIndex parameters

SumLoadIndex

Aggregation of effective load index for this machine for the time window associated with this summary

SumCpu

Aggregation of CPU for this machine for the time window associated with this summary

SumNetwork

Aggregation of Network bandwidth records for this machine for the time window associated with this summary

SumDisk

Aggregation of Disk for this machine for this machine for the time window associated with this summary

SumMemory

Aggregation of Memory for this machine for the time window associated with this summary

SumSessionCount

Aggregation of session counts for this machine for the time window associated with this summary

Granularity

Granularity of this summary item in minutes Size of the time windows in minutes for this summary

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

LogOnMetrics

Entity type: LogOnMetric

Logon Metric

Properties

Id

Logon Metric Id

SessionKey

Foreign key to the Session these logon metrics belong to.

UserInitStartDate

User Init Start Date

UserInitEndDate

User Init End Date

AppxAssociationStartDate

Appx File Associations Start Date

AppxAssociationEndDate

Appx File Associations End Date

AppxLoadPackageStartDate

Appx Load Packages Start Date

AppxLoadPackageEndDate

Appx Load Packages End Date

Session

Contains mapping to the Session

LogOnSummaries

Entity type: LogOnSummary

POCO object for logon breakdown rollup/summary per hour/day The total duration and each breakdown has an associated count This count is used to get the average correctly in case of rollups

Properties

Id

Unique identifier

SummaryDate

Time stamp associated with this summary data

DesktopGroupId

Guid of DesktopGroup this summary is associated with

DesktopGroup

DesktopGroup this summary is associated with

TotalDuration

Sum of all logon durations

TotalCount

Count of Total logons

BrokeringDuration

Sum of all brokering durations

BrokeringCount

Count of the Brokering durations

VMStartDuration

Sum of all VM Start durations

VMPowerOnDuration

Sum of all VM power on durations

VMRegistrationDuration

Sum of all VM registration durations

VMStartCount

Count of all VM Start durations

HdxDuration

Sum of all Hdx durations

HdxCount

Count of all Hdx durations

AuthenticationDuration

Sum of all Authentication durations

AuthenticationCount

Count of all Authentication durations

GpoDuration

Sum of all Gpo durations

GpoCount

Count of all Gpo durations

LogOnScriptsDuration

Sum of all LogonScripts durations

LogOnScriptsCount

Count of all LogonScripts durations

InteractiveDuration

Sum of all Interactive durations

InteractiveCount

Count of all Interactive durations

ProfileLoadDuration

Sum of all Profile Load durations

ProfileLoadCount

Count of all Profile Load durations

ClientLogOnDuration

Sum of all Client Logon durations

ClientLogOnCount

Count of all Client Logon durations

AppxAssociationDuration

Sum of all Appx File Associations durations

AppxAssociationCount

Count of all Appx File Associations durations

AppxLoadPackageDuration

Sum of all Appx Load Packages durations

AppxLoadPackageCount

Count of all Appx Load Packages durations

Granularity

Granularity of this summary item in minutes Size of the time windows in minutes for this summary

IsReconnect

Indicates whether this connection is a reconnection to an existing session.

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

ReconnectSummaries

Entity type: ReconnectSummary

POCO object for reconnect breakdown rollup/summary per hour/day The total duration and each breakdown has an associated count This count is used to get the average correctly in case of rollups

Properties

Id

Unique identifier

SummaryDate

Time stamp associated with this summary data

DesktopGroupId

Guid of DesktopGroup this summary is associated with

DesktopGroup

DesktopGroup this summary is associated with

TotalDuration

Sum of all reconnect durations

TotalCount

Count of Total reconnects

BrokeringDuration

Sum of all brokering durations

BrokeringCount

Count of the Brokering durations

VMStartDuration

Sum of all VM Start durations

VMPowerOnDuration

Sum of all VM power on durations

VMRegistrationDuration

Sum of all VM registration durations

VMStartCount

Count of all VM Start durations

InteractiveDuration

Sum of all Interactive durations

InteractiveCount

Count of all Interactive durations

Granularity

Granularity of this summary item in minutes Size of the time windows in minutes for this summary

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

ResourceUtilization

Entity type: ResourceUtilization

New added ResourceUtilization View to union ResourceUtilization table and ResourceUtilizationViewV2 table.

Properties

Machine

The machine this ResourceUtilization record is associated with

DesktopGroup

The desktop group this ResourceUtilization record is associated with

CollectedDate

Date this object was created

PercentCpu

CPU utilization in percent

UsedMemory

Memory utilization in bytes

DiskLatency

Disk latency

DiskIops

Total disk I/O operations per second (IOPS) on the machine. Null if not supported.

TotalMemory

Total memory in bytes

SessionCount

Number of sessions

CreatedDate

Date this object was inserted in the database

ModifiedDate

Date this object was modifed in the database

MachineId

Guid of machine this ResourceUtilization record is associated with

DesktopGroupId

Guid of DesktopGroup this ResourceUtilization record is associated with

AvgIcaRttInMs

Average ICA RTT in milliseconds

RAMUsagePercent

Mmeory used percent

NetUtilizationPercent

Network utilization as a percentage of available bandwidth (0-100). Null if not supported.

IdlenessPercent

Idleness present

CPURelativeFrequencyPercent

CPU Relative Frequency

PagefileUsagePercent

Page file usage

PercentGPU

GPU usage percent

DiskUsagePercent

Disk usage percent

ProfileDiskUsagePercent

Profile disk usage percent

LoadIndexPercent

EffectiveLoadIndex column of LoadIndex table Percentage of Total load

ResourceUtilizationSummary

Entity type: ResourceUtilizationSummary

Summary table for ResourceUtilization

Properties

SummaryDate

Beginning timeslot (to the minute) this Summary date represent

MachineId

Machine unique id

Machine

Actual Machine object

DesktopGroupId

Guid of DesktopGroup this ResourceUtilizationSummary record is associated with

DesktopGroup

The DesktopGroup this ResourceUtilizationSummary record is associated with

AvgPercentCpu

Average percentage of CPU for given SummaryDate Eg: Lets say CPU for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Average will be calculated for above 10 records

PeakPercentCpu

Peak percentage of CPU for given SummaryDate Eg: Lets say CPU for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Peak will be the highest value of above 10 records

P95PercentCpu

P95 of the hourly peak percent cpu at a day level

AvgUsedMemory

Average of Memory used for given SummaryDate Eg: Lets say memory for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Average will be calculated for above 10 records

PeakUsedMemory

Peak of Memory used for given SummaryDate Eg: Lets say Memory for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Peak will be the highest value of above 10 records

P95UsedMemory

P95 of the hourly Used memory peaks

AvgTotalMemory

Total Memory available with Machine

TotalSessionCount

Total sessions running for given SummaryDate

Granularity

Granularity of this summary item in minutes (how many minutes of data included in this time slot)

AvgIcaRttInMs

Average ICA RTT in milliseconds

AvgLogOnDurationInMs

Average logon duration in milliseconds

UptimeInMinutes

Uptime of the power managed machine in minutes

UpTimeWithoutSessionInMinutes

The time in minutes that machine is up without session

DisconnectTimeInMinutes

The time in minutes that machine has session but without connection

IdleTimeInMinutes

The time in minutes that session is idle

AvgDiskLatency

Average Seconds (\PhysicalDisk(*)\Avg. Disk sec/Transfer)

AvgDiskIops

Average Transfers per second (\PhysicalDisk(*)\Disk Transfers/sec)

AvgCPURelativeFrequencyPercent

Average actual CPU frequency as a Percentage of the base frequency

AvgIdlenessPercent

Status of the idle timer expressed as a percentage. 100% = system is completely idle (screen saver/display off)

AvgRAMUsagePercent

Average RAM usage in percent

AvgNetUtilizationPercent

Average Network utilization in percent

AvgPagefileUsagePercent

Average Pagefile usage in percent

AvgPercentGPU

Average GPU utilization in percent

AvgDiskUsagePercent

Average Disk Usage memory usage in percent

AvgProfileDiskUsagePercent

Average Profile Disk Usage in percent

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

ResourceUtilizationSummaryLatestMapping

Entity type: ResourceUtilizationSummaryLatestMapping

Table to store mapping of latest RUS per granularity to machine.

Properties

MachineId

Machine unique id

Machine

Actual Machine object

ModifiedDate

Date this object was updated or modified

Latest1HourRusId

Foreign key to ResourceUtilizationSummary Id for latest 1 hour data

Latest1HourRus

Latest 1 hour ResourceUtilizationSummaryLatest record

Latest2HoursRusId

Foreign key to ResourceUtilizationSummary Id for latest 2 hours data

Latest2HoursRus

Latest 2 hours ResourceUtilizationSummaryLatest record

Latest1DayRusId

Foreign key to ResourceUtilizationSummary Id for latest 1 day data

Latest1DayRus

Latest 1 day ResourceUtilizationSummaryLatest record

Latest7DaysRusId

Foreign key to ResourceUtilizationSummary Id for latest 7 days data

Latest7DaysRus

Latest 7 days ResourceUtilizationSummaryLatest record

SessionAutoReconnects

Entity type: SessionAutoReconnect

Session Auto Reconnect class

Properties

Session

Contains mapping to the session

Id

Unique identifier to store ID

SessionKey

Foreign key reference to session

ConnectionId

Contains the Connection Id

AutoReconnectCount

Auto-Reconnect Count for a payload

AutoReconnectType

Auto-Reconnect Type

EventTimestamp

Timestamp of the reconnect event

CreatedDate

Created Date of the record

SessionLogonMetrics

Entity type: SessionLogonMetrics

Profile and logon-phase metadata captured once per session. Contains FSLogix/CPM profile details and GPO records.

Properties

Session

Session this logon metrics was created from

AppxLoadPackages

Appx Load Packages

CreatedDate

Record creation timestamp (UTC).

DiskCapacity

The Disk Capacity in Giga bytes

DiskSizeUsed

The Profile Container Disk Size Used in Giga bytes

DiskType

Disk Type (VHD, VHDX)

FilesCount

Total Files Count

GPORecords

JSON of the Group Policy Objects (GPOs) processed during logon, including per-GPO processing times.

LargeFilesCount

Large Files Count

ModifiedDate

Last update timestamp (UTC).

ProfileSize

Profile Size in Giga bytes

ProfileType

Profile Type (FSLogix, CPM file-based, CPM container, Other)

ProfileVersion

Profile Version

SessionKey

Guid of Session this metrics belongs to

SessionMetrics

Entity type: SessionMetricsView

New added SessionMetrics View to union SessionMetrics table and SessionMetricsV2 table.

Properties

Id

Autogenerated id for Session Metrics record

CollectedDate

Date this object was collected from source

IcaRttMS

ICA round-trip time in milliseconds (client to VDA). Healthy values are under 100 ms.

IcaLatency

One-way ICA (session) latency in milliseconds. Null on older VDAs.

ClientL7Latency

WClient L7 latency (WAN Latency)

ServerL7Latency

Server L7 latency (DC Latency)

SessionId

Unique identifier (GUID) of the session.

ConnectionState

Session State

InputBandwidthUsed

The input (client to server) bandwidth in bits-per-second used on the current connection.

OutputBandwidthUsed

The output (server to client) bandwidth in bits-per-second used on the current connection.

OutputBandwidthAvailable

The output (server to client) bandwidth in bits-per-second available on the current connection.

Fps

Frames per second (FPS)

InputFps

Input Frames per second (FPS)

OutputFps

Output Frames per second (FPS)

WanLatency

WAN-segment network latency in milliseconds, derived from SD-WAN. Null if no SD-WAN.

DcLatency

Datacenter-segment network latency in milliseconds, derived from SD-WAN. Null if no SD-WAN.

ClientSideFastRTO

Client side fast RTO

ServerSideFastRTO

Server side fast RTO

ClientZeroWinSize

Client side Zero Window size event

ServerZeroWinSize

Server side Zero Window size event

ClientPacketRetransmit

Client Packet Retransmit

ServerPacketRetransmit

Server Packet Retransmit

ServerRetransmitClientDropPercent

Server sent, dropped on client-side hop percentage

ServerRetransmitServerDropPercent

Server sent, dropped on server-side hop percentage

ClientRetransmitClientDropPercent

Client sent, dropped on client-side hop percentage

ClientRetransmitServerDropPercent

Client sent, dropped on server-side hop percentage

Throughput

Network Throughput

Session

The session this SessionMetrics record is associated with

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

SessionMetricsLatest

Entity type: SessionMetricsLatest

The most recent (current) HDX/ICA connection-quality metrics for each active session - one row per session, keyed by SessionKey and updated in place as new measurements arrive, so it always reflects the latest values. Use this entity for real-time (live) dashboards that show what sessions are experiencing right now, such as latency, round-trip time, and throughput. For the historical time-series of these metrics over a session's lifetime, query the SessionMetrics entity instead.

Properties

Session

Navigation property to the related session.

GatewayPopInfo

Navigation property to the gateway PoP (point of presence) information for this session.

ClientL7Latency

Client L7 latency (WAN Latency)

ClientPacketRetransmit

Packet retransmits on client side connection

ClientRetransmitClientDropPercent

Client sent, dropped on client-side hop percentage

ClientRetransmitServerDropPercent

Client sent, dropped on server-side hop percentage

CloudConnectorName

Cloud Connector Name

CreatedDate

Date this object was created

DcLatency

Datacenter-segment network latency in milliseconds, derived from SD-WAN. Null if no SD-WAN.

EdtMtu

The Maximum Transmission Unit (MTU) of the EDT protocol

GatewayIP

IP address of the gateway if used for the session

GatewayPopName

Gateway Service PoP name

GatewayType

Type of gateway associated with the current session. Null = No gateway is associated 0 = Unknown 1 = Gateway 2 = GatewayService

HdxConnectionType

HDX connection type (HDX, HDXDirect, Rendezvous)

HdxProtocolName

The name of the HDX protocol.

IcaLatency

One-way ICA (session) latency in milliseconds. Null on older VDAs.

IcaRttMS

ICA Round Trip Time (RTT) in milliseconds

InputFPS

Input frames per second (FPS) for the session

ModifiedDate

Date this object was updated or modified

OutputBandwidthAvailable

Output bandwidth available for the session

OutputBandwidthUsed

Output bandwidth used for the session

OutputFPS

Output frames per second (FPS) for the session

ServerL7Latency

Server L7 latency (DC Latency)

ServerPacketRetransmit

Packet retransmits on server side connection

ServerRetransmitClientDropPercent

Server sent, dropped on client-side hop percentage

ServerRetransmitServerDropPercent

Server sent, dropped on server-side hop percentage

SessionKey

Unique identifier (GUID) of the session.

SslProxyHost

SSL proxy host used for this session. Null if not reported.

Throughput

Throughput, unit: bps

WanLatency

WAN-segment network latency in milliseconds, derived from SD-WAN. Null if no SD-WAN.

SessionPerformanceSummaries

Entity type: SessionPerformanceSummary

POCO object for session performance consolidation

Properties

SessionKey

Session key (GUID) that this performance summary is associated with

SummaryDate

Summary date (UTC) for this performance summary

CollectedDay

Day of month (1-31) used for partitioning

SessionScore

Overall session performance score

CPUUsageScore

CPU usage performance score

RAMScore

RAM usage performance score

DiskIOScore

Disk I/O performance score

LogonDurationScore

Logon duration performance score

ProtocolLatencyScore

Protocol latency performance score

InputDelayScore

Input delay performance score

CreatedDate

Date when this record was created (UTC)

SessionScoreMetrics

Entity type: SessionScoreMetricsBulkInsertModel

SessionScoreMetrics bulk insert model for database operations Represents aggregated session performance metrics data from UberAgent

Properties

Id

Autogenerated id for SessionScoreMetrics record

SessionKey

Session Key - Guid of session this SessionScoreMetrics record is associated with

CollectedDate

Date this object was collected from source

SumSessionCPUUsagePercent

Sum of session CPU usage percent for a session on the VDA.

SumSessionMemoryUsagePercent

Sum of session memory usage percent for a session on the VDA.

SumSessionIOLatencyMs

Sum of session I/O latency in milliseconds for a session on the VDA.

SumSessionIOCount

Sum of session I/O count for a session on the VDA.

SumSessionRpLatencyMs

Sum of session routing protocol latency in milliseconds for a session on the VDA.

SessionDetailCount

Sum of session detail count for a session on the VDA.

SumSessionInputDelaySumMs

Sum of session input delay in milliseconds for a session on the VDA.

SumSessionInputDelayCount

Sum of session input delay count for a session on the VDA.

SessionTotalLogonTimeMs

The total logon time for the session, in milliseconds.

CollectedDay

Day component of CollectedDate (1-31) for table partitioning

CreatedDate

Created Date time of this record (UTC time, yyyy-MM-dd HH:mm:ss.SSS)

SpaConnectorApplianceAppServerMetrics

Entity type: SpaMonitorConnectorApplianceAppServerMetrics

Reachability metrics from a Citrix Secure Private Access (SPA) Connector Appliance to a backend application server, including round-trip time and the resolved backend host.

Properties

Id

Primary key. Auto-incrementing identity column.

CollectedDate

UTC timestamp when this metrics row was collected.

ConnectorId

Unique identifier (GUID) of the connector appliance.

ConnectorName

Name of the connector appliance.

ResourceLocationId

Identifier (GUID) of the resource location the connector appliance belongs to.

EventTime

UTC timestamp of the measurement event as reported by the connector appliance.

ServerIp

IP address of the backend application server that was probed.

Host

Backend host (FQDN or hostname) the connector resolved before probing the server IP. Nullable; older connectors that do not emit this field store NULL.

RttInMsec

Round-trip time from the connector appliance to the backend application server, in milliseconds. A value of -1 indicates the server was unreachable.

GatewayFqdn

FQDN of the gateway. NULL for cloud rows; non-NULL for hybrid deployments (typical).

GatewaySiteFqdn

FQDN of the gateway site. NULL for cloud rows; optional for hybrid deployments (populated only when GSLB resolves to multiple sites).

SpaConnectorApplianceMetrics

Entity type: SpaMonitorConnectorApplianceMetrics

Per-Connector-Appliance network latency metrics for Citrix Secure Private Access (SPA), measuring round-trip time from a connector appliance to its gateway point of presence (PoP).

Properties

Id

Primary key. Auto-incrementing identity column.

CollectedDate

UTC timestamp when this metrics row was collected.

ConnectorId

Unique identifier (GUID) of the connector appliance.

ConnectorName

Name of the connector appliance.

ResourceLocationId

Identifier (GUID) of the resource location the connector appliance belongs to.

EventTime

UTC timestamp of the measurement event as reported by the connector appliance.

GatewayPopName

Name of the gateway point of presence (PoP) the connector appliance probed.

PublicIp

Public IP address of the connector appliance. Nullable.

RttInMsec

Round-trip time from the connector appliance to the gateway PoP, in milliseconds.

RttProbeIntervalInSec

Interval between round-trip-time probes, in seconds.

SpaLatencyMetrics

Entity type: SpaLatencyMetrics

Client-device-side network latency and link telemetry for Citrix Secure Private Access (SPA). Captures CDN ping latency, gateway latency, and connection characteristics such as ISP, interface type, signal strength, and link speed.

Properties

Id

Primary key. Auto-incrementing identity column.

CollectedDate

UTC timestamp when this metrics row was collected.

DeviceId

Identifier of the client device that reported the measurements.

DeviceName

Name of the client device that reported the measurements.

PublicIPv4

Public IPv4 address of the client device. Nullable.

SpaServerIp

IPv4 address of the SPA server the client device connected to. Nullable.

CdnDestinationFQDN

FQDN of the CDN endpoint used for the ping measurement. Nullable.

CdnPingLatency

Round-trip ping latency from the client device to the CDN endpoint, in milliseconds. Nullable.

CDNPingCollectedTime

UTC timestamp when the CDN ping latency was measured.

IsCorporateNetwork

True if the client device was on the corporate network when the measurements were taken.

InterfaceType

Network interface type of the client connection (for example WiFi or Ethernet), encoded as a byte.

ISPName

Name of the client's internet service provider (ISP). Nullable.

IntranetIPv4

Intranet (private) IPv4 address of the client device. Nullable.

SignalStrength

WiFi signal strength of the client connection. Nullable; populated only for wireless interfaces.

LinkSpeedInMbps

Network link speed of the client connection, in megabits per second (Mbps). Nullable.

GatewayName

Name of the gateway used to reach the SPA application.

GatewayLatency

Round-trip latency from the client device to the gateway, in milliseconds. Nullable.

GatewayLatencyCollectedTime

UTC timestamp when the gateway latency was measured.

GatewayType

Routing path used to reach the SPA application, which determines how gateway latency is measured: 0 = SpaService, 1 = OnPremGateway, 2 = DirectApp. See the GatewayType enum.

CollectedDay

Day of month (1-31) derived from CollectedDate; used as the table partitioning key.

UCAppsOptimizationSummaries

Entity type: UCAppsOptimizationSummary

Unified Communications app optimization status within a session (HDX-optimized media offload vs fallback).

Properties

Session

Session associated with this optimization summary

AppName

Application name

AppVersion

Application version

CreatedDate

Record creation date

Id

Unique identifier for the summary record

ModifiedDate

Record modification date

PluginManagerName

Plugin Manager name

PluginManagerStatus

Plugin Manager status

PluginManagerVersion

Plugin Manager version

PluginStatus

Plugin status

PluginVersion

Plugin version

SessionKey

Session ID as the foreign key

State

State of the optimization

VirtualChannelAllowList

Virtual Channel Allow List status

VirtualChannelStatus

Virtual Channel status

Health

Health - Failures, faults, and service health - find what is broken and why. Use `ConnectionFailureLogs` for per-event connection failures and `ConnectionFailureCategories` / `FailureLogSummaries` for categorized or aggregated views; `MachineFailureLogs` for machine registration and power failures; `ApplicationErrors` and `ApplicationFaults` for app problems; and `VdaHealthMetrics`, `ConnectorApplianceMetrics`, and `LhcReport` (local host cache outages) for infrastructure health.

ApplicationErrors

Entity type: ApplicationError

Record of an application error

Properties

Session

Session this error is associated with

Machine

The machine this Error record is associated with

Id

Unique identifier of the application error

FaultingApplicationPath

Path of the application

ProcessName

Process Name

SessionKey

Unique identifier of the session

Version

Application Version

Description

Error Description

ErrorReportedDate

Date when the application error occurred

BrowserNames

List of Applications running in the session

MachineId

Guid of machine this Error record is associated with

ApplicationFaults

Entity type: ApplicationFault

Record of an application fault

Properties

Session

Session this fault is associated with

Machine

The machine this Fault record is associated with

Id

Unique identifier of the application fault

FaultingApplicationPath

Path of the application

ProcessName

Process Name

SessionKey

Unique identifier of the session

Version

Application Version

Description

Fault Description

FaultReportedDate

Date when the application fault occurred

BrowserNames

List of Applications running in the session

MachineId

Guid of machine this Fault record is associated with

BlockedUsers

Entity type: BlockedUser

A user blocked from launching sessions or published resources, for example after repeated connection failures or via the block-user action.

Properties

Id

Unique identifier for BlockedUser

UserId

User id this failure is associated with

User

User this failure is associated with

PublishedResourceId

PublishedResourceId this failure is associated with

UnifiedResourceId

UnifiedResourceId this failure is associated with

IsBlocked

Is the user blocked?

FirstBlockedTime

Time of the user first blocked

UnblockedTime

Time of the user unblocked

ConnectionFailureLogs

List of past connectionfailures for this blocked user

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

ConnectionFailureCategories

Entity type: ConnectionFailureCategory

ConnectionFailureCategory, grouping for Connection failure types

Properties

Id

Unique identifier

ConnectionFailureEnumValue

Numeric connection failure code received from the broker, identifying the specific connection failure reason.

Category

Category of the failure code. See the ConnectionFailureType enum for possible values

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

ConnectionFailureLogs

Entity type: ConnectionFailureLog

ConnectionFailureLog

Properties

Id

Unique identifier for ConnectionFailureLog

SessionKey

Guid of session associated with the failure log entry

Session

Session associated with the failure log entry.

FailureDate

Time of failure

Connection

Connection this failure is associated with Maps from foreign key column ConnectionId

UserId

User this failure is associated with

User

User this failure is associated with

MachineId

Machine this failure is associated with

Machine

Machine this failure is associated with

ConnectionFailureEnumValue

Numeric connection failure code identifying the specific connection failure reason. The matching human-readable text is in ConnectionFailureText.

ConnectionFailureText

Connection failure Text.

IsInMaintenanceMode

Whether the machine was in maintenance mode at the time of the failure. Null if unknown.

PowerState

Power state of the machine at the time of the connection failure.

RegistrationState

VDA registration state of the machine at the time of the connection failure.

BlockedUserId

BlockedUser id this failure is associated with

BlockedUser

BlockedUser this failure is associated with

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

ConnectorApplianceMetrics

Entity type: ConnectorApplianceMetrics

Health and inventory snapshot of a Citrix Cloud Connector Appliance, captured at a point in time. Covers status, software version, network addressing, Active Directory and domain-join state, and disk capacity.

Properties

Id

Auto-generated primary key of the snapshot record.

ConnectorId

Unique identifier of the Connector Appliance.

ConnectorName

Friendly name of the Connector Appliance.

ConnectorType

Type or category of the Connector Appliance.

ResourceLocationId

Identifier of the resource location the Connector Appliance belongs to.

Version

Software version running on the Connector Appliance.

Status

Overall health status of the Connector Appliance (for example, whether it is healthy or reporting issues).

LastBootTime

UTC date and time when the Connector Appliance last booted. Null when unknown.

PublicIPv4

Public IPv4 address of the Connector Appliance.

PrivateIP

Private (internal) IP address of the Connector Appliance.

ConfiguredForAD

True when the Connector Appliance is configured for Active Directory; false otherwise. Null when unknown.

DomainJoined

Domain-join status of the Connector Appliance, as a text value (for example, the joined domain name(s) or a status message).

DiskSpaceTotal

Total disk capacity of the Connector Appliance, in gigabytes (GB). Null when not reported.

CollectedTime

UTC date and time when this snapshot was collected from the Connector Appliance.

CreatedTime

UTC date and time when this record was created in the Monitor database.

ChildServices

Health details of the individual services running on the Connector Appliance.

ProxyDetails

Proxy configuration entries for the Connector Appliance.

FailureLogSummaries

Entity type: FailureLogSummary

POCO object for failures (connection/machine) rollup/summary per minute/hour/day

Properties

Id

Unique identifier for DesktopGroupSummary

SummaryDate

Time slot to which this summary data is assigned

DesktopGroupId

Guid of Delivery Group this failure log summary is associated with

DesktopGroup

Delivery Group this failure log summary is associated with

FailureCategory

Category for the failure: Connection or Machine. See FailureCategory enum for possible values.

FailureCode

Failure code identifying the specific connection or machine failure reason for this summary.

FailureCount

Number of failures for this desktop group for the corresponding time interval

Granularity

Granularity of this summary item in minutes Length in minutes of the time slot associated with the summary data

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

LhcReport

Entity type: LhcReport

Local Host Cache (LHC) activity report - one row per window when LHC was active (primary broker unavailable).

Properties

Id

Unique identifier for LhcReport

StartDate

UTC timestamp when Local Host Cache became active (start of the outage window).

EndDate

UTC timestamp when Local Host Cache deactivated (end of the outage window).

SessionBrokeredCount

Number of sessions brokered while Local Host Cache was active.

ReconnectedSessionCount

Number of sessions reconnected while Local Host Cache was active.

MachineInZoneCount

Number of machines in the zone while Local Host Cache was active.

MachineRegisteredCount

Number of registered machines while Local Host Cache was active.

ZoneName

Name of the resource zone this report covers.

ControllerName

Name of the Delivery Controller (DDC) that ran Local Host Cache.

MachineFailureLogs

Entity type: MachineFailureLog

Represents the accumulation of machine failures

Properties

Id

Unique identifier for machine failure log entry

MachineId

Guid of the machine associated with the failure log entry

Machine

Machine associated with the failure log entry

FailureStartDate

Failure start time.

FailureEndDate

Failure end time.

FaultState

Fault State of the machine See the enum MachineFaultStateCode for possible values

LastDeregisteredCode

Last deregistration reason for this machine See the enum DeregistrationReasonCode for possible values

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

VdaHealthMetrics

Entity type: VdaHealthMetrics

Health status metrics for a VDA machine, including Windows service states (one row per machine).

Properties

Machine

The machine this VdaHealthMetrics record is associated with

DesktopGroup

The desktop group this VdaHealthMetrics record is associated with

DesktopServiceStatus

Desktop Service Status

ICAServiceStatus

ICA Service Status

GroupPolicyEngineServiceStatus

Group Policy Engine Service Status

ProfileManagementServiceStatus

Profile Management Service Status

MSFTRDSLicenseServiceStatus

MSFTRDSLicense Service Status

WEMAgentServiceStatus

WEM Agent Service Status

RemoteDesktopServiceStatus

Remote Desktop Service Status

UberAgentServiceStatus

Status of the uberAgent monitoring service on this machine (WindowsServiceStatus).

PvsVDiskName

PVS vDisk Name associated with this machine

CreatedDate

UTC timestamp when this health metrics record was created.

ModifiedDate

UTC timestamp when this health metrics record was last updated.

MachineId

Primary key. Foreign key to the Machines entity.

DesktopGroupId

Foreign key to the DesktopGroups entity (delivery group the machine belongs to). Null if not assigned.

Infrastructure

Infrastructure - The managed estate - the machines, catalogs, delivery groups, applications, and hypervisors that other categories reference. Use `Machines`, `Catalogs`, `DesktopGroups`, `Applications`, and `Hypervisors` for core inventory; `MachineSpecs`, `MachineMetric` / `MachineMetricSummary`, and `MachineSummaries` for machine detail; `MachinePowerActionLogs` for power-operation history; and `Hotfixes` / `MachineHotfixLogs` for patch state. These are the dimension entities you typically join to from Usage, Performance, and Health queries.

Applications

Entity type: Application

Represents a published application known to the Monitor service. Each time a user launches this application the run is tracked separately as an ApplicationInstance.

Properties

Id

Unique identifier for the application

Name

Unique administrative name of application

PublishedName

The name published to the end user corresponding to the Broker SDK's "PublishedName" property

ApplicationType

Type of the application, whether HostedOnDesktop or InstalledOnClient, corresponding to the ApplicationType enumeration.

Enabled

Specifies whether or not this application can be launched.

AdminFolder

Admin Folder

LifecycleState

Lifecycle state for the Application user for internal tracking and deletion management.

Path

Path of the application published on the VDA

BrowserName

BrowserName associated with Application

DesktopGroups

The Delivery groups this application is related to.

ApplicationInstances

Navigation collection of the historical and currently running instances (ApplicationInstance) of this application.

ProbeRuleApplications

Contains list of rules containing this application.

ProbeLogs

Contains list of probe logs associated with the application

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

Catalogs

Entity type: Catalog

A machine catalog defining provisioning, allocation, and session support.

Properties

Id

Unique identifier for the Catalog

Name

Name of Catalog Broker name: CatalogName Desktop Director name: Catalog

LifecycleState

Lifecycle state for the Catalog used for internal management and tracking

ProvisioningType

Provisioning type for the Catalog. See Provisioning Type enum for possible values.

PersistentUserChanges

Specifies how user changes are persisted on machines in the catalog. See Get-BrokerCatalog for details. See PersistentUserChangesType enum for possible values.

IsMachinePhysical

Indicates whether machine is physical

AllocationType

Denotes how the the machines in the catalog are allocated to a user. See Get-BrokerCatalog for details. See AllocationType enum for possible values.

SessionSupport

Specifies the session support of the machines in the catalog (single vs multi) See Get-BrokerCatalog for details. See SessionSupportCode enum for possible values.

ProvisioningSchemeId

The GUID of the provisioning scheme (if any) associated with the catalog. This only applies if the provisioning type is MCS.

ZoneUid

Zone Uid for the catalog

ZoneName

Zone name for the catalog Broker name: ZoneName Destop Director name: Resouce Location

CitrixManaged

Whether the catalog is managed by Citrix or the customer.

Machines

List of machines that are part of this catalog

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

DesktopGroups

Entity type: DesktopGroup

Assignment for - get-brokerdesktopgroup cmdlet

Properties

Id

Unique identifier for DesktopGroup

Name

Desktop group name

IsRemotePC

Remote PC indicator

DesktopKind

Indicates if the session is shared or private. Broker name: DesktopKind Desktop Director name: Allocation Type

LifecycleState

Internal property used for navigation and management

SessionSupport

Specifies the session support (single/multi) of the machines in the desktop group See the SessionSupportCode for possible values.

DeliveryType

The type of resources being published. See the enum DeliveryType for possible values.

IsInMaintenanceMode

Maintenance mode indicator

MachineCost

Per-machine cost value configured for this delivery group. Null when unavailable.

CurrencyType

Currency of the MachineCost value, as a CurrencyType enum value (for example, 1=USD, 2=EUR, 7=GBP). Null when unknown.

AutoscaleTagId

Identifier of the tag used to scope Autoscale power management for this delivery group. Null when Autoscale is not restricted to a tag.

Machines

List of Machines that are in the desktop group

Applications

List of Applications that are in this group

DesktopGroupDesktop

List of published desktops that are in this group

ResourceUtilization

Resource utilizations for all machines in this desktop group

VdaHealthMetrics

Vda health metrics values associated with this Desktop Group

MachineInventory

Current-state machine inventory records for machines in this Desktop Group.

ResourceUtilizationSummary

ResourceUtilizationSummary values associated with this Desktop Group

HistoricalApplicationLaunches

The desktop group of the application launched

ApplicationIdDesktopGroupIdMappings

The desktop group of the application id and the desktopgroup id mapping

ApplicationsUsageSummaryData

The desktop group details of applications usage summary

ActiveApplicationLaunches

The desktop group of the active application launch

EndpointSecurityEvents

The endpoint security events associated with this Desktop Group

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

DirectorAgent

Entity type: DirectorAgent

DirectorAgent class

Properties

Id

Unique identifier of the agent

ResourceLocationId

Unique identifier of the resource location the agent belongs to

ResourceLocationName

Name of the resource location the agent belongs to.

Fqdn

FQDN of the machine where agent is installed

Component

Component Type for the agent.

ComponentId

Optional component id to identify the component associated with this agent

ComponentStatus

Component Status to indicate the healthyness of the component

PrivateKey

Private Key to sign calls for this agent

EncryptionKey

Key that can be used for symmetric encryption decryption

LastCollectionDate

Last time the agent was called and data was collected

LastCollectionStatus

Status of the most recent metrics collection for the agent.

RegistrationMode

Registration mode chosen by the admin

Version

Version of the agent installed

CreatedBy

Created by user

ModifiedBy

Last modified by user

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

Hotfixes

Entity type: Hotfix

Hotfix class

Properties

Id

Unique identifier of the hotfix

Name

Name of the hotfix

Article

URL for the article about the hotfix

ArticleName

Name of the article

FileName

File name of the hotfix

FileFormat

File format of the hotfix

Version

Version of the hotfix installed

ComponentName

Name of the component

ComponentVersion

Version of the component

MachineHotfixLogs

Historical list of the all the machines that have this hotfix installed/ removed

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

Hypervisors

Entity type: Hypervisor

Assignment for - get-BrokerHypervisorConnection cmdlet

Properties

Id

Unique identifier for Hypervisor

Name

Name of hypervisor

Type

Type of hypervisor

LifecycleState

Lifecycle state for the Hypervisor - can be active or deleted See the LifecycleState enum for possible values

Machines

Machines hosted by this hypervisor

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

MachineHotfixLogs

Entity type: MachineHotfixLog

HotfixHistory class relates the machine and hotfixes installed/ removed

Properties

Id

Unique identifier for each history entry

MachineId

Unique identifier of the machine a hotfix has been installed to or removed form.

HotfixId

Unique identifier of the hotfix

ChangeType

Whether the hotfix was removed or added

CurrentState

Is the hotfix currently installed

Machine

Machine associated with a hotfix

Hotfix

The hotfix associated with Machine

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

MachineMetric

Entity type: MachineMetric

Machine-level resource metrics such as IOPS and latency for a particular machine, with its related machine.

Properties

Machine

The machine this MachineMetric record is associated with

CollectedDate

Date this object was created

Iops

Iops on the machine

Latency

Latency on the machine

MachineId

Guid of machine this MachineMetric record is associated with

MachineMetricSummary

Entity type: MachineMetricDaySummary

Summary table for MachineMetric

Properties

SummaryDate

Beginning timeslot (to the minute) this Summary date represent

MachineId

Machine unique id

Machine

Actual Machine object

AvgIops

Average IOPS for given SummaryDate Eg: Lets say iops for this machine available at times 10:00,11:00,...,21:00 Lets say summary is calculated for every 1 DAY(i.e., granularity) SummaryDate will be DAY x 00:00 and Average will be calculated for above records

PeakIops

Peak IOPS given SummaryDate Eg: Lets say iops for this machine available at times 10:00,11:00,...,21:00 Lets say summary is calculated for every 1 DAY(i.e., granularity) SummaryDate will be DAY x 00:00 and Peak will be calculated for above records

AvgLatency

Average Latency on the machine for given SummaryDate

MachinePowerActionLogs

Entity type: MachinePowerActionLog

Log of power actions initiated on a machine (initiator, action type, reason, completion state).

Properties

Machine

Navigation property to the related machine.

ActionId

Identifier of the power action this log entry records. Together with MachineId it uniquely identifies the action.

MachineId

Foreign key to the Machines entity - the machine the power action targets.

ActionType

Type of power action performed, stored as the broker PowerActionTypeCode value: 0=Unknown, 1=PowerOn, 2=PowerOff, 3=Shutdown, 4=Reset, 5=Restart, 6=Suspend, 7=Resume.

ActionReason

Reason code indicating why the power action was triggered (for example administrator, Autoscale, or scheduled power management).

FailureReason

Failure reason code recorded when the power action fails. Null if the action succeeded or is still in progress.

ActionStartDate

UTC timestamp when the power action started. Null if only the completion event has been recorded.

ActionEndDate

UTC timestamp when the power action completed. Null while the action is still in progress.

LastPoweredOnDate

UTC timestamp when the machine was last powered on at the time of this action.

ModifiedDate

UTC timestamp when this log entry was last updated.

Machines

Entity type: Machine

Represents a Machine in the site

Properties

Id

Unique identifier for Machine

Sid

SID of the machine

Name

Machine name Broker name: MachineName Director name: Name

DnsName

DNS name for this Machine, typically FQDN Broker name: DNSName Director name: DNS Name

LifecycleState

Lifecycle state for the Machine. Used internally for data management.

IPAddress

IP Address of the machine, can be either IP v4 or IP v6 depending on how the machine is set up Broker name: IPAddress Desktop Director name: IP Address

HostedMachineId

Hypervisor identifier for this Machine

HostingServerName

DNS name of the hypervisor that is hosting the machine if managed. Broker name: HostingServerName Desktop Director name: Server

HostedMachineName

The friendly name of a hosted machine as used by its hypervisor. This is not necessarily the DNS name of the machine. Broker name: HostedMachineName Desktop Director name: VM

IsAssigned

Denotes whether a private desktop has been assigned to a user/users, or a client name/address Broker name: IsAssigned Desktop Director name: Is Allocated

IsInMaintenanceMode

Denotes if the machine is in maintenance mode. Broker name: InMaintenanceMode Desktop Director name: Maintenance Mode

IsPendingUpdate

Denotes if the VM image for a hosted machine is out of date. Broker name: ImageOutOfDate Desktop Director name: Pending Update

AgentVersion

The version of the VDA agent installed on this machine. Assigning to this property automatically refreshes the derived AgentVersionYYMM so the two columns stay in sync without each caller having to remember.

AgentVersionYYMM

Normalized VDA version in YYMM.Patch form (decimal(10,5)); null when AgentVersion is N/A or unparseable. Derived from AgentVersion. The setter is private so the column can only be mutated through AgentVersion's setter or RefreshAgentVersionYYMM. EF6 materializes private setters via reflection, so persistence is unaffected.

AssociatedUserFullNames

Full names of the users that have been associated with the machine (usually in the form "Firstname Lastname"). Associated users are the current user(s) for shared machines and the assigned users for private machines.

AssociatedUserNames

Usernames of the users that have been associated with the machine (in the form "domain\user"). Associated users are the current user(s) for shared machines and the assigned users for private machines.

AssociatedUserUPNs

The User Principal Names of the users associated with the machine (in the form user@domain). Associated users are the current user(s) for shared machines and the assigned users for private machines.

CurrentRegistrationState

Current Registration state of this machine. See enum RegistrationState for possible values

RegistrationStateChangeDate

Time stamp of change to current registation state

LastDeregisteredCode

Last deregistration reason for this machine. See enum DeregistrationReasonCode for possible values

LastDeregisteredDate

Time of the last machine deregistration from the controller.

CurrentPowerState

Current power state of this machine. See enum PowerStateCode for possible values

CurrentSessionCount

Number of sessions running on machine. Populated each minute from Session Activity consolidation task

ControllerDnsName

The DNS host name of the controller that the machine is registered to. Can be null if not brokered.

PoweredOnDate

Time of last powering on event for this machine

PowerStateChangeDate

Time of change of current power state

ResumedDate

Time of last resuming event for this machine

FunctionalLevel

Functional Level of machine See enum FunctionalLevelCode for possible values

FailureDate

If the machine is in a failure state, the time the failure started. Otherwise, null

WindowsConnectionSetting

The logon mode reported by Windows itself (multi-session machines only). For single-session machines the value is always hardwired to LogonEnabled. See enum WindowsConnectionSettingCode for possible values

IsPreparing

Current PvD State of this machine (currently only used for IsPreparing value)

FaultState

Summary state of any current fault state of the machine. See enum MachineFaultStateCode for possible values

DrainingReason

Reason why a machine is in a draining state. Value corresponds to DrainingReason enum from Broker SDK.

ConnectorId

The UUID of the Cloud Connector associated with this machine when registered (DaaS only). Broker name: ConnectorId

ConnectorName

FQDN of the Cloud Connector matching ConnectorId. Resolved at poll time from the cached DirectorAgent.ComponentId -> Fqdn map (DirectorAgentFqdnCache, 1h TTL).

OSType

A string that can be used to identify the operating system that is running on the machine. Broker name: OsType Desktop Director name: OS

CurrentLoadIndex

Most recent Load index values of machine (null if no data)

CurrentLoadIndexId

Current LoadIndex identifier for this machine

CatalogId

Guid of Catalog this machine belongs to

DesktopGroupId

Guid of Delivery Group this machine belongs to

HypervisorId

Guid of Hypervisor this machine is running on

LastPowerActionType

Last Power Action Type

LastPowerActionReason

Last Power Action Reason

LastPowerActionFailureReason

Last failure reason for this machine during the power action. See enum DeregistrationReasonCode for possible values

LastPowerActionCompletedDate

Last PowerAction Completed Date

LastUpgradeState

Last upgrade state of this machine. See enum UpgradeState for possible values

LastUpgradeStateChangeDate

Time of the last machine upgrade state change from the VUS.

Tags

Names of the tags applied to this machine.

CommissionDate

UTC date on which the machine was commissioned (brought into service). Null if unknown.

DecommissionDate

UTC date on which the machine was decommissioned (removed from service). Null if still in service.

IsRebootScheduled

Indicates whether a reboot is scheduled for this machine

LastRebootStatusChange

Time when the reboot status last changed

Catalog

Catalog this machine was created from

DesktopGroup

Delivery group this desktop is part of

Hypervisor

The hypervisor that this machine is associated with - can be null - not all machines are powered by hypervisors

MachineCost

A MachineCost refers to a machine

Sessions

List of past and present sessions for this Machine

ConnectionFailureLogs

List of past and present connectionfailures for this Machine

LoadIndex

LoadIndex values associated with this machine

ResourceUtilization

ResourceUtilizations for this machine

VdaHealthMetrics

VDA Health Metrics values associated with this machine

MachineInventory

Current-state inventory record for this machine (1:0..1 shared-PK on MachineId).

ProcessInfo

ProcessInfo values associated with this machine

ProcessUtilization

ProcessUtilization values associated with this machine

ProcessUtilizationMinuteSummary

ProcessUtilizationMinuteSummary values associated with this machine

ProcessUtilizationHourSummary

ProcessUtilizationHourSummary values associated with this machine

ProcessUtilizationDaySummary

ProcessUtilizationDaySummary values associated with this machine

MachineFailures

Failures associated with this machine

MachineMetric

IOPS Utilization values associated with this machine

MachineMetricSummary

IOPS Utilization values associated with this machine

Hash

Holds the hash of the hotfixes on the machine

MachineRole

Indicates whether a machine is VDA, DDC or both See the enum MachineRole for possible values

MachineHotfixLogs

List of hotfix logs (instalation and removal) that have been applied to this machine

ApplicationFaults

Application faults associated wth this machine

ApplicationErrors

Application errors associated wth this machine

HistoricalApplicationLaunches

The machine on which the application is launched for local apps

ActiveApplicationLaunches

The machine on which the application is launched for local apps

ConsecutiveFailuresCount

Consecutive connection failures count for the machine

ZombieFailuresCount

Zombie connection failures count for the machine i.e. session launch failures on single session machines by same user

DiagnosticInsightsAlerts

List of Diagnostic Insights alerts associated with this machine

DiagnosticInsights

Latest Diagnostic Insights associated with this machine

MachineTags

List MachineTags associated with this machine

ResourceUtilizationSummaryLatest

Latest resource utilization summary for this machine

MachineConfigLogs

List of configuration changes associated with this machine

MachinePowerActionStatuses

List of MachinePowerActionStatuses associated with this machine

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

MachineSpecs

Entity type: MachineSpec

Represents the specs of machines

Properties

Id

Unique identifier for machine spec entry

CloudProvider

Cloud Provider

CloudRegion

Cloud Region

VmSeries

Cloud VM series or size family of the machine (for example, an Azure VM series such as "Standard_D2s_v3").

CreatedDate

Created Date

MachineCosts

One spec corelates to many machines and their costs

MachineSummaries

Entity type: MachineSummary

POCO object for machine rollup/summary per hour/day

Properties

Id

Unique identifier

SummaryDate

Time stamp associated with this summary data

DesktopGroupId

Guid of desktopgroup this summary is associated with

DesktopGroup

DesktopGroup this summary is associated with

PoweredOnMachinesCount

Number of powered-on machines for this desktop group at the time of consolidation

RegisteredMachinesCount

Number of registered machines for this desktop group at the time of consolidation

MachinesInMaintenanceModeCount

Number of machines in maintenance mode for this desktop group at the time of consolidation

MachinesCount

Number of machines in this desktop group at the time of consolidation

Granularity

Granularity of this summary item in minutes Size of the time windows in minutes for this summary

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

Alerting

Alerting - Proactive notification and alerting configuration and history. Use `NotificationRules` with `NotificationRuleParameters`, `NotificationRuleTargets` / `NotificationRuleTargetValues`, and `NotificationRuleActions` to define rules; `NotificationEmailServerConfigurations`, `NotificationSnmpConfigurations`, and `NotificationWebhookProfiles` for delivery configuration; and `Notifications` / `NotificationsLogs` to review what has actually fired.

NotificationActionEmails

Entity type: NotificationActionEmail

Email action configuration linking a notification rule action to its recipient addresses and SMTP server settings.

Properties

Id

Unique Action Id

Action

Action to which this action email belongs

EmailAddresses

List of email addresses to send to for this action

ServerConfiguration

Server to send emails with

CultureName

Culture name to identify language to send emails in

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

NotificationEmailAddresses

Entity type: NotificationEmailAddress

A single notification email recipient address belonging to an email action.

Properties

Id

Primary key for the email recipient record.

EmailAddress

Recipient email address.

NotificationActionEmail

Navigation property to the parent notification email action.

NotificationActionEmailId

Foreign key to the parent NotificationActionEmail (NotificationActionEmails entity).

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

NotificationEmailServerConfigurations

Entity type: NotificationEmailServerConfiguration

SMTP server configuration for sending notification emails.

Properties

Id

Unique identifier of the NotificationEmailServerConfiguration.

Protocol

Mail protocol

HostName

Server address

Port

TCP port used to connect to the SMTP server.

Sender

From address used when sending notification emails.

RequiresAuthentication

Whether the server requires authentication

UserName

Mail UserName

Site

Mail UserName

EncryptedPassword

Encrypted password for the SMTP account used to send emails.

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

NotificationRuleActions

Entity type: NotificationRuleAction

An action to execute when a rule fires (currently Email).

Properties

Id

Unique identifier of the NotificationRuleAction.

Name

Name of the notification rule action.

NotificationRuleActionType

Type of NotificationAction

NotificationRules

List of NotificationRules that use this NotificationRuleAction

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

NotificationRuleGroups

Entity type: NotificationRuleGroup

Logical grouping of notification rules (an alert policy) with shared webhook/SNMP/email settings.

Properties

Id

Unique identifier of the NotificationRuleGroup.

Name

Name of the notification rule group (alert policy).

Description

Description of NotificationRule

Webhook

webhook URL for the NotificationRuleGroup

IsSnmpEnabled

The boolean value to check if SNMP is enabled

IsEmailAttachmentEnabled

The boolean value to check if email attachment is enabled

IsWebhookAttachmentEnabled

The boolean value to check if webhook attachment is enabled

IsSystemAlert

The boolean value to check if this alert is a system alert

NotificationGroupState

State of the notification group

NotificationRules

List of rules in the group

NotificationWebhookProfileId

WebhookProfileId for the NotificationRuleGroup

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

NotificationRuleParameterChangeLogs

Entity type: NotificationRuleParameterChangeLog

Audit-trail entry for rule parameter modifications (timestamp + snapshot of parameter values at change time).

Properties

Id

Unique identifier of the NotificationRuleParameterChangeLog.

ChangeTime

When the change happened.

NotificationRule

Navigation property to the notification rule whose parameters changed.

NotificationRuleId

Parent rule id

NotificationRuleParameters

List of parameters for this NotificationRule

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

NotificationRuleParameters

Entity type: NotificationRuleParameter

A single configurable value for a rule (threshold, interval, percentage), typed by parameter type.

Properties

Id

Unique identifier of the NotificationRuleParameter.

TemplateParameterId

TemplateParameterId A string representation of the text Id that references the template parameter Id in the Rule Template XML file This is not a database foreign key

NotificationRuleParameterType

indicates the datatype of the Value attribute

Value

string representation of the data for this parameter value

NotificationRuleId

foreign key identifier to the NotificationRule explicitly included for PowerPivot functionality

NotificationRule

navigation object reference to the NotificationRule

NotificationRuleParameterChangeLogId

Optional rule parameter change log

NotificationRuleParameterChangeLog

Optional rule parameter change log

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

NotificationRules

Entity type: NotificationRule

An alert policy definition (condition template, data source, scope, parameters, targets, and actions).

Properties

Id

Unique identifier (primary key) for the notification rule.

Enabled

Whether this rule is active. When true the rule is evaluated by the alerting engine; when false it is retained but does not fire notifications.

IsAggregate

Whether the rule's targets are evaluated in aggregate (true) or individually (false). When true the condition is checked across all targets together; when false it is checked per target.

Name

Display name of the notification rule (for example, "High CPU Alert").

Description

Human-readable description of what this rule monitors.

NotificationTemplateId

Text identifier of the condition template (defined in the Rule Template XML file) that this rule is based on. This is a text reference, not a database foreign key.

NotificationRuleParameters

Collection of parameter values that configure this rule's condition (for example, threshold and duration).

NotificationRuleTargets

Collection of targets (such as delivery groups or sites) that this rule evaluates.

NotificationRuleActions

Collection of actions to run when this rule's condition is met (for example, sending an email).

NotificationRuleGroup

Optional notification rule group (alert policy) that this rule belongs to.

NotificationRuleGroupId

Foreign key of the optional notification rule group that this rule belongs to.

DataSource

Data source that this rule monitors, as a NotificationRuleDataSource value (0=Unknown, 1=Machines, 2=Sessions, 3=PVS, 4=StoreFront, 5=Delivery Controller, 6=Cloud Connector, 7=Connector Appliance, 8=SPA).

ScopeType

Scope at which the rule is applied, as a NotificationRuleScopeType value (0=Unknown, 1=DesktopGroup, 2=Site, 3=DirectorAgent, 4=PvsSite).

ActionDefinitionId

Foreign key of the optional ActionDefinition describing automated remediation to run when this rule fires.

ActionDefinition

Optional action definition describing the automated remediation triggered when this rule fires.

NotifyOnActionCompletion

Whether a notification is sent when the action triggered by this rule (see ActionDefinition) completes.

NextDueAt

Time at which this rule is next due for evaluation. Computed at runtime and not persisted to the database.

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

NotificationRuleTargets

Entity type: NotificationRuleTarget

A category of infrastructure objects a rule monitors; child target-values hold the object IDs.

Properties

Id

Unique identifier of the NotificationRuleTarget.

Name

Name of the notification rule target.

NotificationRuleTargetType

TargetType A string representation of the text Id that references the template in the Rule Template XML file This is not a database foreign key

NotificationRuleId

foreign key identifier to the NotificationRule explicitly included for PowerPivot functionality

NotificationRuleTargetValues

List of target values for this NotificationRuleTarget

NotificationRuleSubTargetType

Sub-target used to further scope the rule (NotificationRuleSubTargetType): 0=Unknown, 1=Machine, 2=DesktopGroup.

NotificationRuleApplyingFilterType

Whether the sub-target is included or excluded (NotificationRuleApplyingFilterType): 0=Unknown, 1=Include, 2=Exclude.

NotificationRuleSubTargetValue

Filter value identifying the sub-target object.

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

NotificationRuleTargetValues

Entity type: NotificationRuleTargetValue

A single target object ID within a NotificationRuleTarget.

Properties

Id

Unique identifier for the NotificationRuleTargetValue

Value

Value portion of NotificationRuleTargetValue value pair

NotificationRuleTargetId

NotificationRuleTarget object with which this value is associated explicitly included for PowerPivot functionality

NotificationRuleTarget

references the NotificationRuleTarget instance to which this value belongs NOTE: there will be "n" rows per NotificationRuleTarget record

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

Notifications

Entity type: Notification

A fired alert instance, created when a rule condition evaluates true for a target; tracks lifecycle through trigger and completion.

Properties

Id

Unique identifier of the Notification.

FirstTimeConditionTrue

first time in this cycle the condition for this rule was evaluated true

FirstTimeNotificationTriggered

first time in this cycle the condition was true and the waiting period had expired

LastReannouncementTime

last time this was reannounced

LastTimeConditionTrue

last time this was reannounced

LifecycleState

Lifecycle state of the notification as a NotificationLifecycle value (0=Unknown, 1=NotificationActive, 2=NotificationDismissed, 3=NotificationComplete), indicating whether the notification is active, dismissed, or complete.

NotificationRuleId

foreign key to the NotificationRule instance explicitly included for PowerPivot functionality

NotificationRule

references the NotificationRule instance upon which this current notification is based

NotificationTarget

Active target tracked in this rule notification

NotificationTargetId

Active target tracked in this rule notification

NotificationPriority

Priority of the notification being referenced

ScopeEntities

Scope entities for this notification

NotificationLogs

List of historical notifications for this Notification

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

NotificationsLogs

Entity type: NotificationLog

Historical log entry for a notification state change (Began -> Pending -> Triggered -> Completed).

Properties

Id

Unique identifier of the NotificationLog.

NotificationState

state of this NotificationLog object

NotificationStateChangeDate

UTC timestamp when this notification state change occurred.

IsReannouncement

IsReannouncement - will be true if this is a triggered event and it has been previously noted

NotificationRule

navigation object reference to the NotificationRule

NotificationRuleId

foreign key identifier to the NotificationRule explicitly included for PowerPivot functionality

NotificationPriority

Priority of the notification being referenced

NotificationId

foreign key identifier to the Notification object explicitly included for PowerPivot functionality

Notification

references most current Notification instance that relates to this NotificationLog record

NotificationTarget

Active target tracked in this rule notification

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

NotificationSnmpConfigurations

Entity type: NotificationSnmpConfiguration

SNMP trap destination configuration (v2c community string, v3 auth/privacy passwords).

Properties

Id

Unique identifier of the NotificationSnmpConfiguration.

HostName

Server address

Port

Port on the SNMP trap receiver that traps are sent to.

Sender

SNMP UserName

AuthPassword

Auth password

PrivatePassword

Privacy password

AuthPasswordProtocol

Auth Protocol used for encrypting

PrivatePasswordProtocol

Privacy protocol used for encryption

EngineId

SNMPv3 engine ID identifying the trap sender.

CommunityString

community string

Protocol

snmp protocol

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

NotificationTargets

Entity type: NotificationTarget

The specific infrastructure object that triggered a Notification.

Properties

Id

Unique identifier of the NotificationTarget.

NotificationRuleTargetType

TargetType A string representation of the text Id that references the template in the Rule Template XML file This is not a database foreign key

NotificationId

Foreign key to the Notification that this target belongs to. Explicitly included for PowerPivot functionality.

Notification

Navigation property to the Notification that this target belongs to.

NotificationTargetValue

Target Value

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

NotificationWebhookProfiles

Entity type: NotificationWebhookProfile

Reusable webhook delivery configuration (static or custom key-value payloads).

Properties

Id

webhook profile id

Name

Name of the webhook profile

Description

Description of the webhook profile

Url

Url of the webhook

Headers

all headers of the webhook

PayloadFormat

Payload format of the webhook

MethodType

Method Type of the webhook (post/put)

Type

Type of the webhook (api/webhook)

Platform

Type of the webhook platform (slack/msteams/servicenow/others)

IsCustomPayload

When true, the webhook uses a custom key-value mapping payload instead of the default static { "text": "..." } format.

CustomPayloadMappings

JSON array of { key, field } mapping objects when IsCustomPayload = true. NULL for all static profiles (IsCustomPayload = false). Example:

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

Cost

Cost - Cost and savings attribution. Use `MachineCosts` and `MachineCostAllocationSummaries` for per-machine spend, `MachineCostSavingsSummaries` for Autoscale savings, and `MonthlyCostSummaries` for monthly roll-ups. `AutoScalePredictions` covers forecasting, and `UserMachineLogSummaries` / `UserResourceUtilizationSummary` attribute cost and usage to individual users.

AutoScalePredictions

Entity type: AutoScalePrediction

Autoscale prediction record containing forecasted values used to drive proactive power management for a delivery group.

Properties

DesktopGroupId

Guid of the desktop group this entry is associated with.

PredictionDate

Prediction Date

SameHourEma

The same hour ema component

PredictedMachineCount

The predicated machine count for the desktop group

QuickAdderPrediction

QuickAdapter used for statistic model `w1 * (preweek1SameHOur - preWeek1PrevHour) + ... + w5 * (preweek5SameHour - preWeek5PrevHour)`

CombinedPrediction

CombinedPrediction used for statistic model

CreatedDate

Created Date

UpdatedDate

Updated Date

DesktopGroup

foreign key reference for desktop group

MachineCostAllocationSummaries

Entity type: MachineCostAllocationSummary

Represents cost and savings incurred while running a machine

Properties

SummaryDate

Date time value at the start of the aggregation time window

MachineId

Machine ID as the Unique identifier

Granularity

Enum denoting the granularity - hour/day/month

DesktopGroupId

Guid of desktopgroup this summary is associated with

TotalComputeCost

Total compute cost incurred

TotalStorageCost

Total storage cost incurred

TotalAutoscaleComputeSavings

Total autoscale compute savings

TotalAutoscaleStorageSavings

Total autoscale storage savings

TotalEndUserComputeSavings

Total end user compute savings

TotalEndUserStorageSavings

Total end user storage savings

LastPowerOffActionType

Enum denoting the last power off action type

LastPowerOffActionReason

Enum denoting the last power off action reason

Currency

Enum denoting the type of currency for the machine cost stored

CostSourceType

Enum denoting the source of cost used for aggregation

UptimeInMinutes

Uptime of the machine in minutes

Machine

Machine associated with the UserMachineLogSummary entity

DesktopGroup

Desktop group associated with the UserMachineLogSummary entity

MachineCosts

Entity type: MachineCost

Model entity of the cost of a VM

Properties

MachineId

Machine ID as the Unique identifier

SpecId

Machine Spec ID

CostPerHour

Machine per hour Cost

Currency

Currency of the cost values, as a CurrencyType enum value (for example, 1=USD, 2=EUR, 7=GBP).

CostSource

Source of the cost figures, as a CostType enum value (for example, 1=AssumedCost, 2=ConfiguredCostFromStudio, 3=AzureRetailAPI). Null when unknown.

PowerOnComputeCostPerHour

Machine per hour Cost

PowerOnStorageCostPerHour

Machine per hour Cost

PowerOffStorageCostPerHour

Machine per hour Cost

Machine

Machine associated with the machine cost entity

MachineSpec

Spec associated with the machine cost entity

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

MachineCostSavingsSummaries

Entity type: MachineCostSavingsSummary

Aggregated cost-savings per delivery group from power management (AutoScale + end-user actions).

Properties

DesktopGroupId

Guid of desktopgroup this summary is associated with

SummaryDate

date time value at the start of the aggregation time window

Granularity

enum denoting the granularity - hour/day/month

HypervisorType

enum that stores information on the hypervisor type

TagId

foreign key reference for

TotalMachinesCount

no of machines present in the delivery group

PowerManagedMachinesOff

no of power managed machines which are off at the time of aggregation

PowerManagedMachinesInHibernate

no of power managed machines which are in hibernate state at the time of aggregation

PowerManagedMachinesOnWithSessions

no of power managed machines which are on and have sessions at the time of aggregation

PowerManagedMachinesOnWithoutSessions

no of power managed machines which are on without having any sessions at the time of aggregation

PowerManagedMachineMinutesTurnedOff

total downtime (in minutes) of all power managed machine during the window of aggregation

TotalScaleInActions

total no of successful scale in (power off) actions during the window of aggregation

TotalHibernateActions

total no of successful hibernate actions during the window of aggregation

TotalScaleOutActions

total no of successful scale out (power on) actions during the window of aggregation

TotalPeakConcurrentSessions

max number of concurrent sessions during the window of aggregation

AverageLogonDurationInSec

average logon duration in seconds

AveragePowerManagedMachinesCount

no of power managed machines

AverageMachineCostPerHour

average machine cost per hour

CostType

enum denoting the source of cost used for aggregation

CurrencyType

enum denoting the type of currency for the machine cost stored

TotalAmountSaved

total amount saved during the window of aggregation

TotalCostIfNoPowerManagement

total cost that would have incurred if there is no powermanagement

TotalAutoscaleComputeSavings

total compute savings due to autoscale Actions

TotalAutoscaleStorageSavings

total storage savings due to autoscale Actions

TotalEndUserComputeSavings

total compute savings due to EndUser Actions

TotalEndUserStorageSavings

total storage savings due to EndUser Actions

AverageComputeCostPerHour

Average Compute Cost Per Hour

AverageStorageCostPerHour

Average Storage Cost Per Hour

TotalComputeCost

Total Compute Cost

TotalStorageCost

Total Storage Cost

PowerManagedMachinesFailedWithoutSessions

no of power managed machines which are in failed state without having any sessions at the time of aggregation

PowerManagedMachinesUnregisteredWithSessions

no of power managed machines which are in Unregistered state and sessions at the time of aggregation

DesktopGroup

foreign key reference for desktop group

MonthlyCostSummaries

Entity type: MonthlyCostSummary

Represents historical data of total cost, savings and unique users for a month

Properties

SummaryDate

Date time value at the start of the aggregation time window

Currency

Enum denoting the type of currency

TotalCost

Total cost incurred across all delivery groups

TotalSavings

Total savings across all delivery groups

TotalUniqueUsers

Total unique users

DesktopGroupId

Delivery group identifier. NULL represents aggregate data across all delivery groups.

UserMachineLogSummaries

Entity type: UserMachineLogSummary

Represents logs for session launched by a user on a machine

Properties

SummaryDate

Date time value at the start of the aggregation time window

UserId

Id of User entry for the user logged on

MachineId

Machine ID as the Unique identifier

Machine

Machine associated with the UserMachineLogSummary entity

UserResourceUtilizationSummary

Entity type: UserResourceUtilizationSummary

Summary table for UserResourceUtilization

Properties

SummaryDate

Beginning timeslot (to the minute) this Summary date represent

UserId

User unique id

Users

Actual User object

MachineId

Machine unique id

Machine

Actual Machine object

DesktopGroupId

Guid of DesktopGroup this UserResourceUtilizationSummary record is associated with

DesktopGroup

The DesktopGroup this UserResourceUtilizationSummary record is associated with

AvgSessionDurationInMins

Average duration of all sessions in minutes

TotalSessionTimeInMinutes

User's total session duration

DisconnectTimeInMinutes

The time in minutes that user had session but without connection

SessionType

Type of session (e.g., desktop, application)

PeakPercentCpu

Peak percentage of CPU for given SummaryDate Eg: Lets say CPU for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Average will be calculated for above 10 records

PeakPercentMemory

Peak percentage of Memory for given SummaryDate Eg: Lets say memory for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Average will be calculated for above 10 records

TotalSessionCount

Total sessions running for given SummaryDate

Granularity

Granularity of this summary item in minutes (how many minutes of data included in this time slot)

P95PercentCpu

P95 of the hourly CPU peaks, at a day level

P95PercentMemory

P95 of the hourly Memory peaks, at a day level

AvgPercentCpu

Avg of the hourly CPU peaks, at a day level

AvgPercentMemory

Avg of the hourly Memory peaks, at a day level

Process

Process - Per-process CPU and memory utilization inside sessions on VDAs. Use `Processes` and `ProcessUtilization` for raw process data, and the pre-bucketed roll-ups `ProcessUtilizationMinuteSummary`, `ProcessUtilizationHourSummary`, and `ProcessUtilizationDaySummary` for trends. Pick the coarsest summary that satisfies your time range to keep result sets small.

Processes

Entity type: ProcessInfo

A process instance running on a machine, with its related machine, session, and process utilization summaries.

Properties

Machine

The machine this ResourceUtilization record is associated with

Session

The session this ResourceUtilization record is associated with

ProcessUtilization

ProcessUtilization values associated with this process

ProcessUtilizationMinuteSummary

ProcessUtilizationMinuteSummary values associated with this process

ProcessUtilizationHourSummary

ProcessUtilizationHourSummary values associated with this process

ProcessUtilizationDaySummary

ProcessUtilizationDaySummary values associated with this process

ProcessKey

Composite key part. Surrogate key that uniquely identifies this process instance.

ProcessId

Operating system process identifier (PID).

ProcessName

Executable name of the process (e.g., "chrome.exe").

ProcessCreationDate

Date this process was created

ApplicationName

Published application name associated with this process, if any.

MachineId

Guid of machine this ProcessInfo record is associated with

SessionId

FK to Sessions. Null for system-level processes not tied to a user session.

ProcessUtilization

Entity type: ProcessUtilization

Per-process CPU and memory utilization readings for a sampling interval, with its related process and machine.

Properties

ProcessInfo

The process this ProcessUtilization record is associated with.

Machine

Actual Machine object

CollectedDate

Date this object was created

PercentCpu

CPU usage for this process as a percentage (0-100).

PercentMemory

Memory usage for this process as a percentage (0-100).

ProcessKey

Composite key part. FK to Processes identifying the process instance.

MachineId

Machine unique id

ProcessUtilizationDaySummary

Entity type: ProcessUtilizationDaySummary

Day level Summary table for ProcessUtilization

Properties

SummaryDate

Beginning timeslot (to the minute) this Summary date represent

ProcessKey

Composite key part. FK to Processes identifying the process instance.

ProcessInfo

The process this ProcessUtilizationDaySummary record is associated with.

MachineId

Machine unique id

Machine

Actual Machine object

AvgPercentCpu

Average percentage of CPU for given SummaryDate Eg: Lets say CPU for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Average will be calculated for above 10 records

PeakPercentCpu

Peak percentage of CPU for given SummaryDate Eg: Lets say CPU for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Peak will be the highest value of above 10 records

AvgPercentMemory

Average of Memory used for given SummaryDate Eg: Lets say memory for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Average will be calculated for above 10 records

PeakPercentMemory

Peak of Memory used for given SummaryDate Eg: Lets say Memory for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Peak will be the highest value of above 10 records

ProcessUtilizationHourSummary

Entity type: ProcessUtilizationHourSummary

Hour level Summary table for ProcessUtilization

Properties

SummaryDate

Beginning timeslot (to the minute) this Summary date represent

ProcessKey

Composite key part. FK to Processes identifying the process instance.

ProcessInfo

The process this ProcessUtilizationHourSummary record is associated with.

MachineId

Machine unique id

Machine

Actual Machine object

AvgPercentCpu

Average percentage of CPU for given SummaryDate Eg: Lets say CPU for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Average will be calculated for above 10 records

PeakPercentCpu

Peak percentage of CPU for given SummaryDate Eg: Lets say CPU for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Peak will be the highest value of above 10 records

AvgPercentMemory

Average of Memory used for given SummaryDate Eg: Lets say memory for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Average will be calculated for above 10 records

PeakPercentMemory

Peak of Memory used for given SummaryDate Eg: Lets say Memory for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Peak will be the highest value of above 10 records

ProcessUtilizationMinuteSummary

Entity type: ProcessUtilizationMinuteSummary

Minute level Summary table for ProcessUtilization

Properties

SummaryDate

Beginning timeslot (to the minute) this Summary date represent

ProcessKey

Composite key part. FK to Processes identifying the process instance.

ProcessInfo

The process this ProcessUtilizationMinuteSummary record is associated with.

MachineId

Machine unique id

Machine

Actual Machine object

AvgPercentCpu

Average percentage of CPU for given SummaryDate Eg: Lets say CPU for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Average will be calculated for above 10 records

PeakPercentCpu

Peak percentage of CPU for given SummaryDate Eg: Lets say CPU for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Peak will be the highest value of above 10 records

AvgPercentMemory

Average of Memory used for given SummaryDate Eg: Lets say memory for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Average will be calculated for above 10 records

PeakPercentMemory

Peak of Memory used for given SummaryDate Eg: Lets say Memory for this machine available at times 10:00,10:01,...,10:09 Lets say summary is calculated for every 10 minutes(i.e., granularity) SummaryDate will be 10:00 and Peak will be the highest value of above 10 records

Probe

Probe - Synthetic probe (proactive availability testing) automation for applications, desktops, and endpoints. Use `ProbeRules` (with `ProbeRuleApplications`, `ProbeRuleDesktop`, `ProbeRuleEndpoints`) for configuration, `ProbeResults` / `ProbeResultDesktop` for outcomes, and `ProbeStages`, `ProbeLogs`, and `ProbeLogDesktop` for step-by-step drill-down.

ProbeDesktop

Entity type: ProbeDesktop

Probe Desktop

Properties

Id

Unique identifier of the probe desktop.

DesktopBrokerId

Desktop Broker Id

DesktopName

Name of the published desktop that can be targeted by desktop probes.

DesktopGroupId

Identifier of the delivery group (DesktopGroup) this desktop belongs to.

LifecycleState

Lifecycle state of the desktop (0=Active, 1=Deleted, 2=RequiresResolution, 3=Stub).

LastModifiedDate

Last modified Date

DesktopGroup

The Delivery group this desktop is related to.

ProbeDesktops

Contains mapping to the probe desktops

ProbeLogsDesktop

Contains list of probe logs associated with the desktop

ProbeEndpoints

Entity type: ProbeEndPoint

ProbeEndPoint

Properties

Id

Unique identifier of the probe endpoint.

ClientAddress

Client Address

ClientName

Display name of the Citrix Probe Agent endpoint machine.

Version

Version of the Citrix Probe Agent installed on the endpoint.

LastActivity

Timestamp of the endpoint's most recent heartbeat/activity.

TimezoneOffset

Endpoint timezone offset from UTC, in minutes.

ProbeRuleEndpoints

Contains list of probe rules

ProbeLogs

Contains list of probe logs

ProbeLogsDesktop

Contains list of desktop probe logs

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

ProbeLogDesktop

Entity type: ProbeLogDesktop

Probe Log Desktop

Properties

Id

Unique identifier of the desktop probe log entry.

UserName

User identity under which the desktop probe was executed.

ProbeStartTime

UTC time at which the desktop probe run started.

ProbeEndPoint

Contains mapping to the probe End point

EndPointId

Identifier of the probe endpoint (ProbeEndPoint) that ran this desktop probe.

RuleId

Identifier of the probe rule this log belongs to; null for ad-hoc runs.

DesktopId

Identifier of the probe desktop (ProbeDesktop) targeted by this probe run.

ProbeLogResult

Probe Log Result

PendingSessionMapping

Pending Session Mapping Bit

SessionKey

Identifier of the session mapped to this probe run; null until the session is mapped.

CreatedDate

Created Date

ProbeRule

Contains mapping to the Probe Rule

Session

Contains mapping to the Session

Desktop

Contains mapping to the desktop

ProbeResultDesktops

Contains mapping to the probe rules

ProbeLogs

Entity type: ProbeLog

A single application probe execution log; one row per application launch attempt run from a probe endpoint during an application probe.

Properties

Id

Unique identifier of the probe log entry.

UserName

User identity under which the probe was executed.

ProbeStartTime

UTC time at which the probe run started.

ProbeEndPoint

Contains mapping to the probe End point

EndPointId

Identifier of the probe endpoint (ProbeEndPoint) that ran this probe.

RuleId

Identifier of the probe rule this log belongs to; null for ad-hoc runs.

ApplicationId

Application Id

ProbeLogResult

Probe Log Result

PendingSessionMapping

Pending Session Mapping Bit

SessionKey

Identifier of the session mapped to this probe run; null until the session is mapped.

CreatedDate

Created Date

ProbeRule

Contains mapping to the Probe Rule

Session

Contains mapping to the Session

Application

Contains mapping to the Application

ProbeResults

Contains mapping to the probe rules

ProbeResultDesktop

Entity type: ProbeResultDesktop

Probe Result

Properties

Id

Unique identifier of the desktop probe result record.

ProbeLogId

Desktop Probe Log Key

StageId

Identifier of the probe stage (ProbeStage) this desktop probe result corresponds to.

ProbeStage

Contains mapping to the probe stage

StageResult

Stage Result

StageLog

Diagnostic log output or error message produced during this desktop probe stage.

StageTimeTaken

Stage Time Taken

CreatedDate

Created Date

ProbeLogDesktop

Contains mapping to the probe log

ProbeResults

Entity type: ProbeResult

Probe Result

Properties

Id

Unique identifier of the probe result record.

ProbeLogId

Application Probe Log Key

StageId

Identifier of the probe stage (ProbeStage) this result corresponds to.

ProbeStage

Contains mapping to the probe stage

StageResult

Stage Result

StageLog

Diagnostic log output or error message produced during this probe stage.

StageTimeTaken

Stage Time Taken

CreatedDate

Created Date

ProbeLog

Contains mapping to the probe log

ProbeRuleApplications

Entity type: ProbeRuleApplication

Probe Rule Application

Properties

RuleId

Identifier of the probe rule (ProbeRule) this application mapping belongs to.

ApplicationId

Application Id

ProbeRule

Contains mapping to the probe rule

Application

Contains mapping to the probe application

ProbeRuleDesktop

Entity type: ProbeRuleDesktop

Probe Rule Desktop

Properties

RuleId

Identifier of the probe rule (ProbeRule) this desktop mapping belongs to.

DesktopId

Identifier of the probe desktop (ProbeDesktop) mapped to the rule.

ProbeRule

Contains mapping to the probe rule

Desktop

Contains mapping to the probe desktop

ProbeRuleEndpoints

Entity type: ProbeRuleEndPoint

Probe Rule Target

Properties

RuleId

Identifier of the probe rule (ProbeRule) this endpoint mapping belongs to.

EndPointId

Identifier of the probe endpoint (ProbeEndPoint) mapped to the rule.

ProbeRule

Rule that the target is mapped to

ProbeEndPoint

Rule that the end point is mapped to

ProbeRules

Entity type: ProbeRule

A configured probe rule that schedules automated application or desktop launch tests, defining the execution schedule, targets, and notification settings.

Properties

Id

Unique identifier of the probe rule.

Name

Display name of the probe rule.

Description

Human-readable description of the probe rule.

ExecutionTime

Execution Time

ProbeType

Type of probe the rule runs (for example, application vs. desktop).

EmailAddress

Email Address

LifecycleState

Lifecycle state of the probe rule (for example, active or deleted).

ExecutionEndTime

End Time of the probe repetition

Days

Days on which the scheduled probe must be run

RepeatInterval

Repeat interval duration of probe

ProbeRuleEndpoints

Contains list of probe endpoints

ProbeRuleApplications

Contains list of probe applications with the rule

ProbeLogs

Contains list of probe logs with the rule

ProbeRuleDesktops

Contains list of probe desktop with the rule

ProbeLogsDesktop

Contains list of probe logs desktop with the rule

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

ProbeStages

Entity type: ProbeStage

A named stage/step within a probe run's lifecycle (for example, StorefrontReachable, IcaFileDownload, ApplicationLaunch).

Properties

Id

Unique identifier of the probe stage; matches the ProbeStageName enum value (0=All, 1=StorefrontReachable, 2=StorefrontAuthentication, 3=StorefrontEnumeration, 4=IcaFileDownload, 5=ApplicationLaunch, 6=AnyFailure).

Name

Display name of the probe stage.

ProbeResults

Contains mapping to the probe result

ProbeResultsDesktop

Contains mapping to the Desktop probe result

Endpoint

Endpoint - End-user endpoint and access telemetry. Use `EndpointMetrics` for endpoint device metrics, `EndpointSecurityEvents` for security-posture events, `ServiceContinuityMetrics` for Service Continuity (offline access) events, and `SessionAccessDenied` for denied access attempts.

EndpointMetrics

Entity type: EndpointMetrics

Client endpoint performance metrics collected during a session (WiFi, throughput, CPU, memory, GPU, beacon latency).

Properties

Session

The session this EndpointMetrics record is associated with

Id

Autogenerated id for EndpointMetrics record

SessionKey

Session key this EndpontMetrics record is associated with

CollectedDate

Date time this object was collected from source (UTC time, yyyy-MM-dd HH:mm:ss.SSS)

WifiSignalStrength

Endpoint Wifi Signal Strength

ThroughputIncoming

Endpoint Throughput Incoming

ThroughputOutgoing

Endpoint Throughput Outgoing

PercentCPU

Endpoint CPU Usage

PercentMemory

Endpoint Memory Usage

PercentGPU

Endpoint GPU Usage

BeaconLatency

Beacon Latency

LatencyUnit

Latency unit for Beacon Latency

LinkSpeed

Network link speed of the client connection, expressed in the unit given by SpeedUnit (e.g., Mbps). Null if not measured.

SpeedUnit

Speed unit for Link Speed

CreatedDate

Created Date time of this record (UTC time, yyyy-MM-dd HH:mm:ss.SSS)

EndpointSecurityEvents

Entity type: EndpointSecurityEvents

Security events reported from client endpoints via Citrix Workspace App or deviceTRUST.

Properties

Session

Session associated with this EndpointSecurityEvents

DesktopGroup

Desktop group of the machine associated with this EndpointSecurityEvents

AdditionalData

Additional data in JSON or other structured format

ComponentType

Component type (e.g., AppProtection)

CreatedDate

Record creation timestamp

CwaVersion

Citrix Workspace App version

DesktopGroupId

Desktop group identifier associated with the VDA to which the Endpoint is connected

DeviceName

Endpoint device identifier

EventTimestamp

Timestamp when the event occurred

EventType

Event type (e.g., screenCapture, keyLogger, recall)

Id

Unique identifier for the endpoint security event

IpAddress

IP address of the endpoint

OsVersion

Operating system version

PartitionDay

Month from EventTimestamp * 100 + Day for table partitioning

PayloadType

Payload type (e.g., Detected, Protected)

SessionKey

Session key - foreign key reference to Session table

UserName

User name associated with the event

ServiceContinuityMetrics

Entity type: ServiceContinuityMetrics

Service Continuity Metrics entity for database operations. Represents detailed per-device metrics for Service Continuity feature tracking. This includes device readiness, app/desktop availability, client-side lease sync status, and related telemetry data.

Properties

Id

Autogenerated unique identifier for ServiceContinuityMetrics record.

CollectedDate

Date and time when this metric was collected from the source.

CollectedDay

Day component of CollectedDate (1-31) for table partitioning. Used for partition key in MonitorData_PS_DayOfMonth partition scheme.

CreatedDate

Created date time of this record (UTC time, yyyy-MM-dd HH:mm:ss.SS).

DeviceId

Unique identifier of the device/endpoint. Nullable to support scenarios where device ID may not be available.

UserName

User name associated with the Service Continuity metrics. Required field for tracking per-user metrics.

UserOid

User Object Identifier (OID) from identity provider. Nullable to support various authentication scenarios.

EventId

The unique message identifier from the event envelope (top-level id field). Nullable as this field is not guaranteed to be present in all event types.

AccessMethod

Access method used by the user (e.g., Native, Browser, etc.).

OSType

Operating system type of the endpoint (e.g., Windows, macOS, iOS, Android).

BrowserName

Browser name used for access (e.g., Safari, Chrome, Microsoft Edge, Firefox). Nullable as not all access methods use a browser.

OSVersion

Operating system version of the endpoint. Nullable as version information may not always be available.

ClientType

Client type used for access (e.g., Citrix Workspace App, Browser). Nullable to support various client scenarios.

CWAVersion

Citrix Workspace App version. Nullable as not all clients provide version information. For browser events, this is the CWA version from the payload (if reported).

ExtensionAvailable

Indicates whether the browser extension is available for Service Continuity. True when installed, false when not, or null for non-hybrid (native CWA) access.

ShieldEnabled

Indicates whether Shield (security feature) is enabled. Null when the field is absent from the event payload.

StoreConfigUrl

Store configuration URL used by the client. Required field for tracking store-specific metrics.

ClSyncFailures

Number of client-side lease synchronization failures. Nullable as sync may not have occurred yet.

ClSyncLastSuccess

Timestamp of the last successful client-side lease synchronization. Nullable if no successful sync has occurred.

ClSyncTriggers

Number of client-side lease synchronization triggers/attempts. Nullable as sync may not have been triggered yet.

TotalApps

Total number of applications available to the user. Nullable because older CWA versions (e.g. some Mac releases) may omit this field. A null value indicates that this data was not provided by the client (for example, by an older CWA version).

LeasableApps

Number of applications that support leasing (offline availability). Nullable because older CWA versions (e.g. some Mac releases) may omit this field. A null value indicates that this data was not provided by the client (for example, by an older CWA version).

TotalDesktops

Total number of desktops available to the user. Nullable because older CWA versions (e.g. some Mac releases) may omit this field. A null value indicates that this data was not provided by the client (for example, by an older CWA version).

LeasableDesktops

Number of desktops that support leasing (offline availability). Nullable because older CWA versions (e.g. some Mac releases) may omit this field. A null value indicates that this data was not provided by the client (for example, by an older CWA version).

TotalLeaseFiles

Total number of lease files present on the client. Nullable as this information may not be available in all scenarios.

TotalExpiredFiles

Total number of expired lease files on the client. Nullable as this information may not be available in all scenarios.

Readiness

Indicates whether the device is ready for Service Continuity. True when all prerequisites are met, false otherwise.

SessionAccessDenied

Entity type: SessionAccessDenied

deviceTRUST-initiated access-denial events where a session was blocked due to endpoint policy violation.

Properties

Id

Unique identifier for SessionAccessDenied

SessionKey

Guid of session associated with the access denied entry

Session

Session associated with this access denied entry.

ConnectionId

Id of the connection record associated with this access denied entry.

Connection

Connection this access denied entry is associated with Maps from foreign key column ConnectionId

UserId

User Id this access denied entry is associated with

User

User this access denied entry is associated with

TransactionId

Transaction ID associated with the connection

DeviceName

Device name that is denied access

DeviceOs

Device OS that is denied access

DeviceClientVersion

deviceTRUST client version

Context

deviceTRUST context list acted by an Action

ActionName

deviceTRUST action name that is executed

Title

The message title displayed to the user

Message

The message displayed to the user

Timeout

The timeout period that the message is displayed to the user

DeniedDate

The time when the access was denied to a session

CreatedDate

Date this object was created

Configuration

Configuration - Reference and lookup data used to interpret other entities - resolve ids and labels here. Use `ApplicationNameIds` and `PublishedDesktopNames` for name-to-id mappings, `Tags` / `MachineTags` for tagging, `DirectorUIThresholdConfiguration` for Director UI thresholds, `LocationCoordinates` / `GatewayPopInfo` for geolocation, and `SessionRecordingServers` for recording-server details.

ApplicationNameIds

Entity type: ApplicationNameId

Lightweight lookup mapping an application identifier string to its display name (local/uberAgent-discovered apps).

Properties

HistoricalApplicationLaunches

Application launches data

ApplicationIdDesktopGroupIdMappings

Application and DesktopGroup mapping

ApplicationsUsageSummaryData

Application Usage Summary data

ActiveApplicationLaunches

Active Application Launch data

AppId

Application Id

AppName

Application Name

CreatedDate

Time of creation of the application

ModifiedDate

Time of modification of the application

DirectorUIThresholdConfiguration

Entity type: DirectorUIThresholdConfiguration

A configurable warning and critical threshold for a metric shown in the Citrix Director UI. Thresholds drive color-coding and alerting when a metric's value crosses the configured levels.

Properties

Id

Unique identifier (primary key) for this threshold configuration.

DataSource

Identifier of the data source that supplies the metric this threshold applies to.

MetricName

Name of the metric that this threshold is evaluated against.

Name

Display name of this threshold configuration.

Description

Human-readable description of what this threshold represents.

Unit

Unit of measurement of the metric this threshold applies to (for example, percent or ms).

IsEnabled

Whether this threshold is active. When true, the metric is evaluated against the configured warning and critical values.

CriticalThreshold

Current critical threshold value in effect. Null when no critical level is configured.

WarningThreshold

Current warning threshold value in effect. Null when no warning level is configured.

DefaultCriticalThreshold

Product-supplied default critical threshold value. Null when no default is defined.

DefaultWarningThreshold

Product-supplied default warning threshold value. Null when no default is defined.

IsSystemDefault

Whether this threshold is system-provided (true) rather than user-defined (false).

UpdatedBy

Identifier of the user who last changed this threshold configuration.

Type

Threshold type derived from the default values: Predefined when product defaults exist, otherwise Custom.

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

GatewayPopInfo

Entity type: GatewayPopInfo

Represents a mappings between Pop ID and Pop location.

Properties

GatewayPopName

Unique name of the Gateway Pop

GatewayPopCountry

Country of the Gateway Pop

GatewayPopLocation

Location of the Gateway Pop

SessionMetricsLatest

Associated SessionMetricsLatest records

LocationCoordinates

Entity type: LocationCoordinates

Represents geographic location data with city, country, and coordinates.

Properties

Id

Unique identifier of the location.

City

Name of the city.

Country

Name of the country.

Latitude

Latitude coordinate.

Longitude

Longitude coordinate.

MachineTags

Entity type: MachineTag

A tag association linking a machine to a tag. Join entity with a composite key of (MachineId, TagId).

Properties

TagId

Composite key part. Foreign key to the associated Tag.

MachineId

Composite key part. Foreign key to the associated Machine.

Machine

Machine associated with the MachineTag entity

Tag

Tag associated with the MachineTag entity

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

ProcessDataLimitedMachines

Entity type: ProcessDataLimitedMachines

A machine that is configured to collect and send per-process resource utilization data.

Properties

Id

Unique identifier for the Process Data Limited Machines

MachineId

Guid of machine

LastModifiedDate

Date this object was modified last time

Machine

Actual Machine object

PublishedDesktopNames

Entity type: PublishedDesktopName

Lookup table mapping published desktop IDs to their display names.

Properties

Id

Unique identifier for the PublishedDesktopName

PublishedName

The name of the published desktop

Sessions

List of sessions for this DesktopName

SessionRecordingServers

Entity type: SessionRecordingServer

Maps recorded sessions to the Session Recording Server that captured them.

Properties

SessionKey

Unique identifier (GUID) of the session.

SessionRecordingServerName

The name of the sessionRecordingServer

CreatedDate

The created date of the entry

Session

Actual Session object

Tags

Entity type: Tag

A tag definition that can be applied to machines, delivery groups, or applications for filtering and policy targeting.

Properties

Id

Primary key. Unique identifier for the tag.

BrokerTagId

Broker Tag ID

TagName

Tag name (for example, "GPU-Enabled" or "Finance-Dept").

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

Diagnostics

Diagnostics - Diagnostic findings and background-task auditing for the Monitor service. Use `MachineDiagnosticAlerts` and `MachineDiagnosticInsights` for machine-level diagnostic findings, and `TaskLogs` for the history of Monitor data-management tasks.

MachineDiagnosticAlerts

Entity type: MachineDiagnosticAlerts

Machine Diagnostic Insights Alerts Entity Class

Properties

Id

Unique identifier of the machine diagnostic alert.

MachineId

Guid of the Machine this insight belongs to

Machine

Machine this insight belongs to

DesktopGroupId

Guid of Delivery Group this machine belongs to

Type

Type of insight for a machine

Status

Lifecycle state for the Insight. Used internally for data management.

LastReannouncementTime

Last time this was reannounced

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

MachineDiagnosticInsights

Entity type: MachineDiagnosticInsights

Machine Diagnostic Insights Entity Class

Properties

Id

Unique identifier of the machine diagnostic insight.

MachineId

Guid of the Machine this insight belongs to

Machine

Machine this insight belongs to

DesktopGroupId

Guid of Delivery Group this machine belongs to

IsBlackhole

Indicates whether the machine is in a Blackhole state i.e. continuously failing to launch sessions

IsZombie

Indicates whether the single session machine is in a Zombie state i.e. have an active session but not allowing session to migrate to different endpoint

IsOverloaded

Indicates whether the machine is in an Overloaded state i.e. sustained high CPU and Memory usage

ConsecutiveFailuresCount

Consecutive connection failures count for the machine

ZombieFailuresCount

Zombie connection failures count for the machine

IsCPUSpike

Indicates whether the machine has been marked Overloaded because of sustained CPU spikes

IsMemorySpike

Indicates whether the machine has been marked Overloaded because of sustained Memory spikes

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

TaskLogs

Entity type: TaskLog

Represents the task execution log

Properties

Id

Unique identifier for TaskLog entry

RunDate

Time stamp indicating when the task was started

TaskCategory

Category of the task run. See the TaskCategory enum for possible values

Task

Numeric identifier of the specific data-management task that was run.

Result

Result from having run the task. See the TaskResult enum for possible values

ErrorMessage

Empty if task ran successsfully, otherwise a string describing the error that occurred.

CreatedDate

Date this object was created

ModifiedDate

Date this object was updated or modified

Enumerations

Enumerated types used by the fields above. Each field that stores an enum value references the matching enumeration here.

ActionDefinitionActionFamily

Categorizes an automated action definition by the family of action it performs.

Unknown

Unknown or unspecified action family

MachinePowerAction

Machine power management actions (PowerOn, PowerOff, Restart, etc.)

ActionSummarySourceType

Specifies the source that triggered the automated action

Unknown

Unknown or unspecified source

AlertEngine

Action triggered by alert engine based on configured notification rules

Aidrien

Action triggered by Citrix Aidrien (AI-driven)

ActionSummaryStatus

Specifies the status of an automated action execution

Unknown

Unknown or unspecified status

InProgress

Action is currently in progress

Completed

Action completed for all targets

NotRun

Action was not run (failed to trigger)

Incomplete

Action was triggered but the power action service lost track of it before all targets resolved

AllocationType

Denotes how the the machines in the catalog are allocated to a user.

Unknown

Unknown. When the Broker does not send an allocation type.

Static

Machines get assigned to a user either by the admin or on first use. This relationship is static and changes only if an admin explicitly changes the assignments.

Random

Machines are allocated to users randomly from a pool of available machines.

Permanent

Equivalent to 'Static'

AppDetailsSortBy

ApplicationDetailsSortBy

Unknown

Unknown value for sort field

SessionCount

Time at which fault occurred

FailedProbeRuns

Number of failed probe runs

ApplicationErrorSortBy

ApplicationErrorSortBy

Unknown

Unknown value for sort field

Timestamp

Time at which error occurred

ApplicationFaultSortBy

ApplicationFaultSortBy

Unknown

Unknown value for sort field

Timestamp

Time at which fault occurred

ApplicationInstanceSortBy

ResourceUsageSortBy

Unknown

Unknown

PublishedName

PublishedName

AssociatedUserName

AssociatedUserName

MachineName

MachineName

SessionState

SessionState

SessionIdleTime

Session idle time since

ApplicationProbeResultsSortBy

AppliationProbeResultsSortBy

Unknown

Unknown

ProbeStartTime

Probe Start Time

ApplicationName

Application Name

EndpointName

EndpointId

DesktopName

Desktop Name

ProbeRuleName

Desktop Name

ApplicationState

State of the application : enabled or disabled

Unknown

Referring to applications either in enabled or disabled state

Enabled

Application is in enabled state

Disabled

Application is in disabled state

ApplicationType

Set of application type values denoting how an application is hosted

HostedOnDesktop

The application is hosted from a desktop.

InstalledOnClient

The application is installed on a client.

ApplicationUsageSortBy

DesktopUsageSortBy

Unknown

Unknown

ApplicationName

ApplicationName

PeakConcurrentApplicationInstances

PeakConcurrentApplicationInstances.

TotalApplicationInstances

TotalApplicationInstances

TotalApplicationLaunches

TotalApplicationLaunches

ApplicationUsageDurationInHours

ApplicationUsageDurationInHours

DistinctUsers

DistinctUsers

ApplicationFolder

ApplicationFolder

AppPerfDistributionType

Enum to represent the distribution type

DistinctUsers

Break down application performance by distinct users.

DistinctMachines

Break down application performance by distinct machines.

AppPerfMetricsType

Identifies the type of application performance metric being measured (CPU, memory, disk, network, or input delay).

CpuUsage

CPU usage, as a percentage.

MemoryUsage

Memory usage, as a percentage.

DiskIops

Disk I/O operations per second.

DiskLatency

Disk latency, in milliseconds.

NetworkLatency

Network latency, in milliseconds.

InputDelay

Input delay, in milliseconds.

AppProbesSortBy

ApplicationProbesSortBy

Unknown

Unknown

Name

Name of the rule

EndPointCount

Number of endpoints

ModifiedDate

Modifed Date

AutomatedMachinePowerActionFailureReason

Failure reasons for automated machine power actions. Combines dispatcher-side failure codes with broker-reported deregistration reason codes from DeregistrationReasonCode. Stored in ActionFailureReason.

BrokerUnreachable

The broker call failed after exhausting all retry attempts, or the circuit breaker fast-failed the machine because the broker was unreachable.

MachineSidNotFound

The machine SID could not be resolved from the database or cache.

InternalError

An internal error prevented the action from being dispatched (e.g. state cache re-hydration failure, broker client unavailable).

ActionTimeout

The broker did not report a result within the configured timeout period.

AgentShutdown

From CBP DeregisterReason: Shutdown.

AgentSuspended

From CBP DeregisterReason: Suspending.

AgentRequested

From CBP DeregisterReason: Failback.

IncompatibleVersion

The agent version is incompatible with the broker.

AgentAddressResolutionFailed

The agent address could not be resolved.

AgentNotContactable

The agent is not contactable.

AgentWrongActiveDirectoryOU

The agent is in the wrong Active Directory OU.

EmptyRegistrationRequest

The registration request was empty.

MissingRegistrationCapabilities

Required registration capabilities are missing.

MissingAgentVersion

The agent version is missing from the registration request.

InconsistentRegistrationCapabilities

The registration capabilities are inconsistent.

NotLicensedForFeature

The agent is not licensed for the requested feature.

UnsupportedCredentialSecurityVersion

The credential security version is unsupported.

InvalidRegistrationRequest

The registration request is invalid.

SingleMultiSessionMismatch

Single/multi-session mismatch between the agent and the delivery group.

FunctionalLevelTooLowForCatalog

The catalog functional level is too low.

FunctionalLevelTooLowForDesktopGroup

The desktop group functional level is too low.

OSNotCompatibleWithDdc

The OS is not compatible with the DDC.

VMNotCompatibleWithDdc

The VM is not compatible with the DDC.

PowerOff

The machine was powered off.

DesktopRestart

The desktop was restarted.

DesktopRemoved

The desktop was removed.

AgentRejectedSettingsUpdate

The agent rejected a settings update.

SendSettingsFailure

Sending settings to the agent failed.

SessionAuditFailure

A session audit operation failed.

SessionPrepareFailure

A session prepare operation failed.

ContactLost

Contact with the agent was lost.

SettingsCreationFailure

Settings creation failed on the broker side.

UnknownError

An unknown error occurred.

BrokerRegistrationLimitReached

The broker registration limit has been reached.

None

For power action case, no deregistration.

HypervisorReportedFailure

For power action case, hypervisor request failed.

HypervisorRateLimitExceeded

For power action case, hypervisor request refused due to quotas or rate limits.

HardRegistrationPending

A hard registration is pending.

SoftRegistered

The machine is soft-registered.

Unknown

The reason is unknown.

AutomatedMachinePowerActionStatus

Status values for automated machine power actions. Values match the byte values stored in the column of ..

Queued

Machine action is queued but not yet sent to the broker.

Triggered

Machine action has been sent to the broker.

Success

Machine action completed successfully.

Failed

Machine action failed.

Skipped

Machine action was skipped before execution.

AutomatedPowerActionSkipReason

Reason an automated machine power action was skipped or rejected.

None

No skip reason - action was accepted.

MachineNotPowerManaged

Machine is not power-managed (e.g., physical machine or VM without hypervisor connection).

RecentAction

Another action is in progress or was triggered within the cooldown period.

MachineActionsDailyLimitReached

Machine has reached daily limit of 3 actions.

GlobalHourlyLimitReached

Global hourly limit of 100 actions reached.

MachineNotFound

Machine not found in the system.

InvalidActionType

Invalid action type specified.

InternalError

An internal error occurred while processing the request.

BatchSizeLimitExceeded

Request batch exceeds the configured maximum allowed size, which is limited to twice the maximum actions allowed per hour. When that configured maximum is 10,000 machines, this limit is 10,000.

AzureCostPlanType

Represents the types of cost plans available in Azure.

Reserved

Reserved instance

Savings

Savings plan

BrokerLicensesStatus

Overall Citrix licensing status reported by the Broker, covering grace-period, license-server, and license-availability conditions.

Ok

Licensing is healthy and within compliance.

AllLicensesExhausted

All current licensing grace periods have expired; no further license requests will be granted. All available licenses in use. Alert Condition: DdcLicenseGracePeriodExpired

OOBGraceActive

One or more grace periods are currently active or expired. Grace licenses will be granted. Licence Server is in out-of-box grace period. Alert Condition: DdcLicenseGracePeriodActive

OOBGraceActiveWithLicFailure

License server has failed and is in out-of-box grace period with one or more grace periods are currently active or expired. Grace licenses will be granted. Alert Condition: DdcLicenseGracePeriodActive

SupplementalGraceActive

One or more grace periods are currently active or expired. Grace licenses will be granted. All available licenses in use. Alert Condition: DdcLicenseGracePeriodActive

UnknownGraceActive

One or more grace periods are currently active or expired. Grace licenses will be granted. Alert Condition: DdcLicenseGracePeriodActive

EmergencyGraceActive

License server has failed and cannot communicate with Delivery Controllers with one or more grace periods are currently active or expired. Grace licenses will be granted. Alert Condition: DdcLicenseGracePeriodActive

NotConnectedToLS

Broker not connected to license server Alert Condition: DdcLicenseServerNotConnected

OOBExpired

All current licensing grace periods have expired; no further license requests will be granted. Licence Server is in out-of-box grace period. Alert Condition: DdcLicenseGracePeriodExpired

OOBExpiredFailed

License server has failed with all current licensing grace periods have expired; no further license requests will be granted. Licence Server is in out-of-box grace period. Alert Condition: DdcLicenseGracePeriodExpired

FailedEmergencyGracePeriodExpired

License server has failed with all current licensing grace periods have expired; no further license requests will be granted and Delivery Controllers cannot communicate with license server. Alert Condition: DdcLicenseGracePeriodExpired

LSNotSpecified

License server/port not yet specified Alert Condition: DdcLicenseServerNotConfigured

IncompatibleLS

Delivery Controller is incompatible with license server. Alert Condition: DdcLicenseServerIncompatible

NoLicFoundInLS

No suitable license installed. Alert Condition: DdcNoLicenseInstalled

FailedToFetch

Failed to fetch license server status

CatalogType

Type of Catalog Broker name: CatalogKind Desktop Director name: Machine Type The type of machines the catalog will contain.

ThinCloned

A thin-cloned catalog is used for original golden VM images that are cloned when they are assigned to a VM, and users' changes to the VM image are retained after the VM is restarted.

SingleImage

A single-image catalog is used when multiple machines provisioned with Provisioning Services for VMs all share a single golden VM image when they run and, when restarted, they revert to the original VM image state.

PowerManaged

This catalog kind is for managed machines that are manually provisioned by administrators. All machines in this type of catalog are managed, and so must be associated with a hypervisor connection.

Unmanaged

This catalog kind is for unmanaged machines, so there is no associated hypervisor connection.

Pvs

This catalog kind is for managed machines that are provisioned using Provisioning Services. All machines in this type of catalog are managed, and so must be associated with a hypervisor connection. Only shared desktops are suitable for this catalog kind.

Pvd

A personal vDisk catalog is similar to a single-image catalog, but it also uses personal vDisk technology.

PvsPvd

A Provisioning Services-personal vDisk (PvsPvd) catalog is similar to a Provisioning Services catalog, but it also uses personal vDisk technology.

CertStatus

Certificate status

Expired

Certificate is expired

Expiring

Certificate is expiring

Valid

Certificate is valid

NotFound

Certificate not found

CloudProvider

Identifies the public cloud provider hosting the infrastructure (Azure, AWS, or GCP).

Unknown

The cloud provider is not known.

Azure

Microsoft Azure.

AWS

Amazon Web Services.

GCP

Google Cloud Platform.

Component

Represents component types handled by director agent (as part of stack monitoring)

PVS

PVS component

SF

StoreFront component

DDC

Delivery Controller component

CC

Cloud Connector component

CA

Connector Appliances component

ConditionTargetType

What kind of item is targeted

Unknown

The unknown

Site

The site

Controller

The controller

DesktopGroup

The delivery group

Catalog

The catalog

RdsWorker

The RDS worker

Vdi

The vdi

User

User

DirectorAgent

The Director Agent

ConnectionFailureSortBy

SessionDetailsSortBy enum

Unknown

Unknown

UserName

UserName

DeliveryGroupName

DeliveryGroupName.

MachineName

MachineName

FailureTime

FailureTime

FailureType

FailureType

FailureReason

FailureReason

ConnectionFailureType

Type of failures for Connections

None

None

ClientConnectionFailure

Session failed to start

MachineFailure

Machine Failure

NoCapacityAvailable

No available capacity to start/ reconnect to a session

NoLicensesAvailable

No Licenses Available

Configuration

Configuration failure

CommunicationError

Communication failure

ConnectionState

Enum for session connections status

Unknown

Default value - unknown

Connected

Actively connected to desktop

Disconnected

Disconnected from desktop, but session still exists

Terminated

Session has been terminated

PreparingSession

Session is in the preparing state

Active

Session is active

Reconnecting

User is reconnecting to the session

NonBrokeredSession

Session is non-brokered

Other

Connection state is reported as Other

Pending

Connection state is pending

ConnectivityStatus

Connectivity status

Offline

The service is offline

Online

The service is online

Unknown

The service status is unknown

CostSavingsByCitrix

Categories of cost savings delivered by Citrix, split across Autoscale and end-user compute and storage.

AutoscaleComputeSavings

Compute cost savings from Autoscale powering down idle machines.

AutoscaleStorageSavings

Storage cost savings from Autoscale powering down idle machines.

EndUserComputeSavings

Compute cost savings attributed to end-user activity.

EndUserStorageSavings

Storage cost savings attributed to end-user activity.

CostSavingsSummaryGranularity

Enum to denote the granularity of the data record in the MachineCostSavingsSummary table

Hour

Hour

Day

Day

Month

Month

DayLevelInMinutes

Day level granularity in minutes

CostType

Enum to denote the type of cost used in the MachineCostSavingsSummary table

Unknown

Cost type is unknown

AssumedCost

Cost is assumed

ConfiguredCostFromStudio

Cost is the configured cost from Studio

AzureRetailAPI

Cost is based on Azure Retail API

CostFromHostService

Cost is from Citrix Host Service

ActualCost

Actual Cost is MCS Api

CurrencyType

Enum to denote the currency used in the MachineCostSavingsSummary table

Unknown

Currency used is unknown

USD

Currency used is USD

EUR

Currency used is EUR

CAD

Currency used is CAD

CNY

Currency used is CNY

BRL

Currency used is BRL

NZD

Currency used is NZD

GBP

Currency used is GBP

JPY

Currency used is JPY

KRW

Currency used is KRW

AUD

Currency used is AUD

DKK

Currency used is DKK

INR

Currency used is INR

NOK

Currency used is NOK

RUB

Currency used is RUB

SEK

Currency used is SEK

CHF

Currency used is CHF

TWD

Currency used is TWD

DataExportStatus

Data Export Status

Pending

Data export onboarding is in progress

Completed

Data export onboarding is completed

Deleted

Data export already deboard

DeliveryType

Specifies whether desktops, applications, or both, can be delivered from machines contained within the new desktop group. Desktop groups with a DesktopKind of Private cannot be used to deliver both desktops and applications. Defaults to DesktopsOnly if not specified.

DesktopsOnly

Only desktops are published.

AppsOnly

Only applications are published.

DesktopsAndApps

Both desktops and applications are published.

DesktopKind

The kind of desktops within a delivery group.

Private

Private

Shared

Shared

DesktopType

Specifies whether desktops, applications, or both, can be delivered from machines contained within the new desktop group. Desktop groups with a DesktopKind of Private cannot be used to deliver both desktops and applications. Defaults to DesktopsOnly if not specified.

None

None

Vdi

VM Hosted Desktop .

RemotePc

UnManaged desktop RemotePC.

Rds

VM Hosted RDS

Unknown

unknown type

DesktopUsageSortBy

DesktopUsageSortBy

Unknown

Unknown

DeliveryGroupName

DeliveryGroupName

MachineName

MachineName.

UserName

UserName

PeakConcurrentDesktopInstances

PeakConcurrentDesktopInstances

TotalDesktopInstances

TotalDesktopInstances

TotalDesktopLaunches

TotalDesktopLaunches

DesktopUsageDurationInHours

DesktopUsageDurationInHours

AverageDesktopUsageInHours

AverageDesktopUsageInHours

DistinctUsers

DistinctUsers.

EndpointSecurityPayloadType

Whether an endpoint security event represents a detected or a protected threat.

Detected

Detected

Protected

Protected

FailureCategory

Category for failure types

Unknown

Default value - unknown

Connection

Connection failure category

Machine

Machine failure category

GatewayType

Identifies the routing path used to reach a Secure Private Access (SPA) application, which determines how the gateway latency is measured.

SpaService

Traffic is routed through the Citrix Secure Private Access cloud service.

OnPremGateway

Traffic is routed through an on-premises Citrix Gateway (NetScaler).

DirectApp

The application is reached directly, without an intermediate gateway.

HotfixChangeType

Enum to determine whether a hotfix was added or removed.

Add

Added

Remove

Removed

HypervisorType

Enum to denote the type of Hypervisor

None

No hypervisor

Unknown

Hypervisor is unknown

Azure

Microsoft Azure

AWS

Amazon Web Services

GCP

Google Cloud Platform

XenServer

Citrix Xenserver

HyperV

Microsoft Hyper-V

AHV

Nutanix AHV

VSphere

VMWare vSphere

SCVMM

Microsoft SCVMM

Windows365

Windows 365

AmazonWorkSpaces

Amazon WorkSpaces (AmazonWorkSpacesCoreMachineManagerFactory)

AWSMachineManager

AWS MCS provisioned machines (AWSMachineManagerFactory)

InfraMonitorRegistrationAction

Enum to represent the registration action of the infra monitor agent

Install

Agent Install

Upgrade

Agent Upgrade

InfraMonitorRegistrationMode

Enum to represent the registration mode of the infra monitor agent

Manual

Manual registration

Auto

Auto registration

InfrastructureRightsizingRankByType

The resource dimension (CPU or memory) used to rank infrastructure rightsizing recommendations.

CPU

CPU

Memory

Memory

InstantiatedRuleChangeType

Kind of change represented

Unknown

The unknown

Add

The add

Modify

The modify

Remove

The remove

InteractiveSessionStep

Defines the steps in the interactive session process.

PreUserInit

The time taken to complete the pre user init step.

UserInit

The time taken to complete the user init step.

Shell

The time taken to complete the shell step.

AppxAssociation

The time taken to complete Appx File Associations

AppxLoadPackage

The time taken to complete Appx Load Packages

LasActivationStatus

Activation status of the DDC against the License Activation Service (LAS), as reported by the Broker via the LasActivationStatus controller property.

Unknown

Status is not known - the Broker has not yet reported an activation event, or the value was absent/empty/unrecognised.

Activated

The DDC is activated against LAS. Corresponds to the Broker string value "Activated".

NotActivated

The DDC is not activated against LAS. Corresponds to the Broker string value "NotActivated".

Expired

The DDC's LAS activation has expired. Corresponds to the Broker string value "Expired" (future).

LasConnectionStatus

Connection status between the License Server and the License Activation Service (LAS), as reported by the Broker via the LasConnectionStatus controller property.

Unknown

Status is not known - the Broker has not yet reported a LAS connection event, LAS is disabled for this site, or the value was absent/empty.

Ok

The License Server has an active connection to LAS. Corresponds to the Broker string value "OK".

NotConnected

The connection between the License Server and LAS has been lost. Corresponds to the Broker string value "NotConnected".

LifecycleState

Enum tracking state of XenDesktop site objects

Active

Default value - entity is active

Deleted

Object was deleted

RequiresResolution

Object was created, but values are missing, so a background process should poll to update missing values

Stub

Stub object - for example, a Machine or Session that didn't really exist but is created by internal processing logic to preserve data relationships

LogOnBreakdownType

Enum for logon breakdown api calls

None

Default value of none

UsersLastSession

User's last session information

UsersSessionAverage

Average across the user's sessions

DesktopGroupAverage

Average for the desktop group

LogOnDetailsSortBy

DesktopUsageSortBy

Unknown

Unknown

UserName

UserName

DeliveryGroupName

DeliveryGroupName.

MachineName

MachineName

LogOnDate

LogOnDate

Brokering

Brokering

VMStart

VMStart

HdxConnection

HdxConnection

Authentication

Authentication

Gpos

Gpos

LogOnScripts

LogOnScripts

ProfileLoad

ProfileLoad

InteractiveSessions

InteractiveSessions

TotalLogOnDuration

TotalLogOnDuration

VMPowerOn

VMPowerOn

VMRegistration

VMRegistration

ClientLogOnDuration

ClientLogOnDuration

AppxAssociation

AppxAssociation

AppxLoadPackage

AppxLoadPackage

IcaFileDownloadToLaunch

Time from ICA file download to user launch

LogOnStep

Defines the steps in the logon process.

Total

Total

Brokering

The time taken to complete the process of brokering the session.

VMStart

In case the session required a machine to be started, the time taken to start the VM.

Hdx

The time taken to complete the steps required in setting up the HDX connection from the client to the VM.

Authentication

The time taken to complete authentication to the remote session.

Gpos

In case any Group Policy settings have been enabled on the machines, the time taken for the GPOs to be applied.

LogOnScripts

In case logon scripts are configured for the session, the time taken for the logon scripts to be executed.

ProfileLoad

In case profile settings are configured for the user or the machine, the time taken for the profile to be loaded.

Interactive

The time taken to handoff keyboard and mouse control to the user.

UserInit

The time taken to complete the user init step.

Shell

The time taken to complete the shell step.

VMPowerOn

In case the session required a machine to be started, the time taken to power on the VM.

VMRegistration

In case the session required a machine to be started, the time taken to registrate the VM.

ClientLogOn

The time taken to complete VDA Client logon

AppxAssociation

The time taken to complete Appx File Associations

AppxLoadPackage

The time taken to complete Appx Load Packages

IcaFileDownloadToLaunch

Time from ICA file download to user launch

MachineDiagnosticInsightStatus

Current status of the raised insight, default is unhealthy (at time of row creation as well) and eventually it will be healthy and grommed

Unhealthy

Represent unhealthy insight status

Healthy

Represent healthy insight status

MachineDiagnosticInsightType

Enum which represent which type of diagnostic insight is being generated

Unknown

Unknown insight type. Default value but should not be used

Blackhole

Machine is identified as black hole which means there are consecutive connection failures reported for this machine

Zombie

Machine is identified as zombie which means there is a not ended session on machine but its also reporting connection failures

Overloaded

Machine is identified as overloaded which means CPU and Memory spikes in configured interval is crossing configured threshold

MachineDistributionType

The field by which machines are grouped when producing a machine distribution breakdown.

VDAVersion

Group machines by the installed VDA (Virtual Delivery Agent) version.

DeliveryGroup

Group machines by the delivery group they belong to.

MachineCatalog

Group machines by the machine catalog they belong to.

RegistrationState

Group machines by their VDA registration state.

MaintenanceMode

Group machines by whether maintenance mode is enabled.

ResourceLocation

Group machines by the resource location they belong to.

DeliveryController

Group machines by the delivery controller they are registered with.

vDiskName

Group machines by the provisioning (PVS/MCS) vDisk name.

HypervisorConnectionName

Group machines by the name of the hypervisor host connection.

FailureType

Group machines by the type of failure recorded.

FailureReason

Group machines by the reason for the failure.

PowerState

Group machines by their current power state.

ConnectorName

Group machines by the name of the Cloud Connector they use.

MachineFaultState

set of broker machine fault states

Unknown

Unknown

None

None

FailedToStart

Failed To Start

StuckOnBoot

Stuck On Boot

Unregistered

Unregistered

MaxCapacity

MaxCapacity

VirtualMachineNotFound

VirtualMachineNotFound

MachinePerformanceMetricType

Enum representing the performance metrics for machines.

CpuUsage

CPU usage, as a percentage.

MemoryUsage

Memory usage, as a percentage.

DiskIops

Disk I/O operations per second.

DiskLatency

Disk latency, in milliseconds.

GpuUsage

GPU usage, as a percentage.

LoadIndex

VDA load index.

MachinePowerActionType

The type of power action performed on a machine (turn on, turn off, shutdown, reset, restart, suspend, or resume).

TurnOn

Hard power-on of the machine.

TurnOff

Hard power-off of the machine.

Shutdown

Graceful shutdown of the machine's operating system.

Reset

Hard reset of the machine.

Restart

Graceful restart of the machine.

Suspend

Suspend the virtual machine.

Resume

Resume a suspended virtual machine.

MachineRole

Enum to determine where machine is VDA or DDC

Vda

Vda machine

Ddc

Ddc machine

Both

Machine acting as VDA and DDC

MachineUptimePeriodType

machine uptime period type

HoursPerDay

HoursPerDay

HoursPerWeek

HoursPerWeek

HoursPerMonth

HoursPerMonth

MetricsCollectionStatus

Collection Status for the metrics from Director Agent

Error

Agent is in Error state (caused by install/upgrade)

Success

Agent is reachable and all metrics are collected

PartialSuccess

Agent is reachable but some metrics are having issues in collection

Failure

Agent is not reachable and no metrics are collected

Ready

Agent is ready and awaiting first metrics collection

Downloading

Agent installer is downloaded

Copying

Agent installer is copied to the target machine

Installing

Agent is installed on the target machine

Registering

Agent is installed on the target machine

MetricThresholdDataSourceType

Data Source Type for Metric Thresholds

Sessions

Filter Session metrics

Machines

Filter Machine metrics

Connections

Filter Connection metrics

Applications

Filter Application metrics

DDC

Infra DDC metrics

CC

Infra Cloud Connector metrics

PVS

Infra PVS metrics

SF

Infra SF metrics

MetricThresholdMetric

Identifies the machine, session, endpoint, connection, or application metric that a metric threshold applies to.

CPUUsagePercent

Percentage of CPU capacity in use on the machine (0-100).

MemoryUsagePercent

Percentage of physical memory in use on the machine (0-100).

DiskIOPS

Disk input/output operations performed per second (IOPS).

DiskLatencyMs

Disk input/output latency, in milliseconds.

GPUUsagePercent

Percentage of GPU capacity in use on the machine (0-100).

NetworkUtilizationPercent

Percentage of available network bandwidth in use (0-100).

LoadEvaluatorIndexPercent

VDA load index expressed as a percentage of full load (0-100).

DiskUsagePercent

Percentage of disk space in use (0-100).

ProfileDiskUsagePercent

Percentage of the user profile disk space in use (0-100).

CPUIdlenessPercent

Percentage of time the CPU is idle (0-100).

PageFileUsagePercent

Percentage of the page file in use (0-100).

CPUFrequencyPercent

Current CPU frequency as a percentage of its rated maximum (0-100).

ConsecutiveFailuresCount

Number of consecutive failures recorded.

IcaRttMS

ICA round-trip time, in milliseconds.

NetworkLatencyMs

End-to-end network latency, in milliseconds.

L7ClientLatencyMs

Layer-7 (application) latency measured on the client side, in milliseconds.

L7ServerLatencyMs

Layer-7 (application) latency measured on the server side, in milliseconds.

DCLatencyMs

Latency across the datacenter network segment, in milliseconds.

WANLatencyMs

Latency across the WAN network segment, in milliseconds.

ClientRetransmitts

Number of TCP packet retransmits on the client side.

ServerRetransmitts

Number of TCP packet retransmits on the server side.

SessionAutoReconnects

Number of times the session automatically reconnected.

ClientRetransmitClientDropPercent

Percentage of client-side retransmitted packets dropped on the client hop (0-100).

ClientRetransmitServerDropPercent

Percentage of client-side retransmitted packets dropped on the server hop (0-100).

ServerRetransmitClientDropPercent

Percentage of server-side retransmitted packets dropped on the client hop (0-100).

ServerRetransmitServerDropPercent

Percentage of server-side retransmitted packets dropped on the server hop (0-100).

LogonDurationMs

Total session logon duration, in milliseconds.

EndpointSignalStrength

Wireless signal strength reported by the endpoint device, as a percentage (0-100).

EndpointBeaconLatency

Network latency to the endpoint network beacon, in milliseconds.

BrokeringDurationMs

Time the broker took to broker the session, in milliseconds.

WorkingSetMB

Application working-set (physical) memory, in megabytes.

InputDelayMs

Session input delay, in milliseconds.

PageFaultsPerSecond

Number of memory page faults per second.

P95CPUUsagePercent

95th-percentile CPU usage, as a percentage (0-100).

P95MemoryUsagePercent

95th-percentile memory usage, as a percentage (0-100).

P95InputDelayMs

95th-percentile session input delay, in milliseconds.

TotalReconnectCount

Total number of session reconnects.

TotalRejectCount

Total number of session connection rejects.

MetricThresholdType

Represents the category of a UI threshold configuration.

Predefined

Indicates a threshold that is derived from system default values.

Custom

Indicates a threshold that is user-defined.

NetworkInterfaceType

Enum to Network Interface Type

Unknown

Network Interface Type is Unknown

Ethernet

Network Interface Type is Ethernet

Wifi

Network Interface Type is Wifi

NotificationActionType

Specifies the type of target for to which the rule is applied

Unknown

Unknown action

Email

Send an email

NotificationGroupState

What state is the notification group in?

Enabled

Default value - entity is active

Disabled

Object was disabled

Deleted

Object was deleted

NotificationHistorySortBy

NotificationHistorySortBy enum

Unknown

unknown

Date

Time

Severity

Severity

NotificationLifecycle

Is it Dismissed or Active?

Unknown

Unknown.

NotificationActive

Notification is not dismissed

NotificationDismissed

Notification is dismissed

NotificationComplete

No longer active

NotificationRuleActionType

Denotes how the the machines in the catalog are allocated to a user.

Unknown

Unknown.

Email

Send an email notification when the rule fires.

NotificationRuleApplyingFilterType

Whether a notification rule filter includes or excludes the objects it matches.

Unknown

The filter type is not specified.

Include

The filter includes only the objects it matches.

Exclude

The filter excludes the objects it matches.

NotificationRuleDataSource

Represents the data source for alert rule templates and alerts

Unknown

Data source is unknown

Machines

Data source is machines

Sessions

Data source is sessions

PVS

Data source is PVS

SF

Data source is StoreFront

DDC

Data source is Delivery Controller

CC

Data source is Cloud Connector

CA

Data source is Connector Appliance

SPA

Data source is SPA

NotificationRuleParameterType

datatype of the NotificationRuleParameter

Unknown

Unknown. For convention's sake. Should never occur.

Int32

The parameter value is a 32-bit signed integer.

UInt32

The parameter value is a 32-bit unsigned integer.

Int64

The parameter value is a 64-bit signed integer.

UInt64

The parameter value is a 64-bit unsigned integer.

Float

The parameter value is a single-precision floating-point number.

Double

The parameter value is a double-precision floating-point number.

String

The parameter value is a text string.

Uuid

The parameter value is a GUID.

Date

The date

TimeSpan

The time span

Enum

The enum

NotificationRulePriorityType

datatype of the NotificationRulePriorityType

Alarm

Alarm priority - the more severe notification level.

Alert

Alert priority - the less severe notification level.

NotificationRuleScopeType

The scope at which a notification rule applies (delivery group, site, Director agent, or PVS site).

Unknown

Unknown scope type

DesktopGroup

Scope is a Desktop Group

Site

Scope is a XenApp Site

DirectorAgent

Scope is a Director Agent

PvsSite

Scope is a PVS site

NotificationRuleSubTargetType

The type of sub-target object a notification rule applies to (machine or delivery group).

Unknown

The sub-target type is not specified.

Machine

The rule applies to a specific machine within the target.

DesktopGroup

The rule applies to a delivery group within the target.

NotificationRuleTargetType

Denotes how the the machines in the catalog are allocated to a user.

Unknown

Unknown. When the Broker does not send an allocation type.

Site

The rule targets the site.

Controller

The rule targets a delivery controller.

DesktopGroup

The rule targets a delivery group.

Catalog

The rule targets a machine catalog.

RdsWorker

The rule targets a multi-session (server OS) machine.

Vdi

The rule targets a single-session (desktop OS) machine.

User

The rule targets a user.

DirectorAgent

The rule targets a Director agent.

NotificationRuleTemplateType

Gets the numeric code for notification rule template types (alert categories). Mirrors the RuleTypes enum from Citrix.Monitor.AnnouncementBus for use in telemetry payloads.

Unknown

Unknown Condition

SessionsConcurrentCount

SessionsConcurrentCount Condition

SessionsPeakconnectedCount

SessionsPeakconnectedCount Condition

SessionsPeakDisconnectedCount

SessionsPeakDisconnectedCount Condition

AverageLogonDuration

AverageLogonDuration Condition

RDSLoadEvaluator

RDSLoadEvaluator Condition

ConnectionFailuresRate

ConnectionFailuresRate Condition

ConnectionFailuresCount

ConnectionFailuresCount Condition

FailedServerMachineCount

FailedServerMachineCount Condition

FailedDesktopMachineCount

FailedDesktopMachineCount Condition

LogonDuration

LogonDuration Condition

IcaRoundtripTime

IcaRoundtripTime Condition

IcaRoundtripTimeAverage

IcaRoundtripTimeAverage Condition

IcaRoundtripTimeSessionCount

IcaRoundtripTimeSessionCount Condition

IcaRoundtripTimeSessionPercent

IcaRoundtripTimeSessionPercent Condition

MemoryUsage

MemoryUsage Condition

CpuUsage

CpuUsage Condition

DiskUsage

DiskUsage Condition

FailedMachinePercentage

Machine failure percentage condition

LocalHostCacheNotification

LocalHostCacheNotification Condition

LocalHostCacheConfigSyncFailure

LocalHostCacheConfigSyncFailure Condition

LocalHostCacheConfigSyncServiceFailure

Local host cache config sync service failure alert condition

UnregisteredMachinesPercentage

Unregistered Machines percentage condition

FailedPowerOnAction

Failed power on action condition

FailedPowerOffAction

Failed power off action condition

MachineUptime

Machine Uptime condition

DiskIO

Disk IO for an infra monitored component

DiskLatency

Disk Latency for an infra monitored component

CCHeartbeatFailure

Reachability failure for a Cloud Connector

CCConnectionLeaseExchangeService

Cloud Connector Connection Lease Exchange Service

CCADProvider

Cloud Connector AD Provider Service

CCAgentDiscovery

Cloud Connector Agent Discovery Service

CCCredentialProvider

Cloud Connector Credential Provider Service

CCNetScalerCloudGateway

Cloud Connector NetScaler Cloud Gateway Service

CCAgentLogger

Cloud Connector Agent Logger Service

CCWebRelayProvider

Cloud Connector WebRelay Provider Service

CCHighAvailabilityService

Cloud Connector High Availability Service

CCRemoteHCLServer

Cloud Connector Remote HCL Server

CCRemoteBrokerProvider

Cloud Connector Remote Broker Provider (XaxdCloudProxy)

CCCDFCaptureService

Cloud Connector CDF Capture Service

CCAgentWatchDog

Cloud Connector Agent WatchDog Service

CCConfigSyncService

Cloud Connector Config Synchronizer Service

CAStatus

Connector Appliance health/connectivity status

CAActiveDirectoryService

Connector Appliance Active Directory Service

CAAppLayeringProvider

Connector Appliance Layering Service

CAForwardProxyService

Connector Appliance Forward Proxy Service

CAGatewayServiceProvider

Connector Appliance Gateway Service

CACoreConnectorServices

Connector Appliance Core Services

SPAAppConfigFailures

SPA application configuration failures

SPAPolicyConfigFailures

SPA policy configuration failures

SPAAppServerFailures

SPA application server failures

SPADNSResolutionFailures

SPA DNS resolution failures

SPASystemFailures

SPA system failures

SPAPolicyEvaluationDenied

SPA policy evaluation denials

SPAAppPolicyConfigDenied

SPA application policy configuration denials

SPASystemDenied

SPA system denials

SPASessionRevocationDenied

SPA session revocation denials

SPAPerformanceMetricsCDNLatency

ISP latency (Endpoint Client - CDN)

SPAPerformanceMetricsGatewayLatency

Client to Pop latency (Endpoint Client - service PoP)

SPAPerformanceMetricsConnectorApplianceLatency

Pop to connector latency (Connector Appliance - service PoP)

PvsHeartbeatFailure

PVS Heartbeat Failure Condition

PvsSoapService

PVS Soap Service Condition

PvsStreamService

PVS Stream Service Condition

PvsPxeService

PVS PXE Service Condition

PvsTftpService

PVS TFTP Service Condition

PvsDatabaseConnectivity

PVS Database Connectivity Condition

PvsLicenseServerConnectivity

PVS License Server Connectivity Condition

RejectedLoginQuery

Rejected Login Query Condition

BlackholeMachines

Blackhole Machines Condition

ZombieMachines

Zombie Machines Condition

OverloadedMachines

Overloaded Machines Condition

VdaDesktopServiceFailure

Vda Desktop Service Failure Condition

VdaIcaServiceFailure

Vda Ica Service Failure Condition

VdaGroupPolicyEngineServiceFailure

Vda Group Policy Engine Service Failure Condition

VdaProfileManagementServiceFailure

Vda Profile Management Service Failure Condition

VdaMsftRdsLicenseServiceFailure

Vda Msft Rds Licensing Service Failure Condition

VdaWemAgentServiceFailure

Vda WEM Agent Service Failure Condition

VdaRemoteDesktopServiceFailure

Vda Remote Desktop Service Failure Condition

VdaUberAgentServiceFailure

Vda Uber Agent Service Failure Condition

UnregisteredMachinesCount

Unregistered Machines (count) alert condition.

NotificationState

What state is the notification in?

Unknown

Unknown.

NotificationBegan

Notification Began

NotificationPending

Notification Pending

NotificationTriggered

Notification Triggered

NotificationAbandoned

Notification Abandoned

NotificationCompleted

Notification Completed

NotificationSummarySortBy

NotificationSummarySortBy

Unknown

Unknown

Date

Date

NotificationId

NotificationId

NotificationState

NotificationState

PolicyName

PolicyName

PolicyId

PolicyId

Scope

Scope

SourceId

SourceId

SourceName

SourceName

SourceType

SourceType

Category

Category

NotificationSummaryState

Notification summary state

Unknown

Unknown.

Warning

Warning state

Critical

Critical state

Healthy

Healthy state

Dismissed

Dismissed state

OperatorType

Enum to denote the operator type for the filter which helps in including or excluding the deliveryGroupIds in cost savings api

Include

Include the deliveryGroupIds

Exclude

Exclude the deliveryGroupIds

PersistentUserChangesType

Describes if and how user changes are persisted

Unknown

Unknown

Discard

User changes are discarded.

OnLocal

User changes are persisted locally.

OnPvd

User changes are persisted on the Pvd.

PivotType

Denotes the device type such as Allocation (desktop) or MachineOS. used in calculating the cost per user.

MachineOS

device type is MachineOS, to calculate cost per user

Allocation

device type is Allocation, to calculate cost per user

PowerActionFailureReasonCode

Reason code explaining why a machine power action failed.

Any

Default value

HypervisorReportedFailure

HypervisorReportedFailure

HypervisorRateLimitExceeded

HypervisorRateLimitExceeded

PowerActionTriggeredBy

Identifies what triggered a machine power action (end user, administrator, Autoscale, or other).

Others

Default value - others

EndUser

EndUser

Administrator

Administrator

Autoscale

Autoscale

ProbeStageName

Probe Stage Names

All

Unknown

StorefrontReachable

Storefront Reachable

StorefrontAuthentication

Storefront Authentication

StorefrontEnumeration

Storefront Enumeration

IcaFileDownload

Ica File Download

ApplicationLaunch

Application Launch

AnyFailure

Any Failure

ProcessUsageSortBy

ProcessUsageSortBy

Unknown

Unknown

ProcessName

MachineName

AverageProcessorLoad

AverageProcessorLoad

ProcessorLoadPeak

ProcessorLoadPeak

AverageMemoryUtilization

AverageMemoryUtilization

MemoryUtilizationPeak

MemoryUtilizationPeak

ProviderTypeEnum

Shows whether the provider is cloud or onprem

Unknown

The provider type is not known.

Cloud

The provider is cloud-hosted.

Onprem

The provider is on-premises.

ProvisioningType

Describes how the machine was provisioned

Unknown

Unknown

MCS

Machine provisioned by Machine Creation Services (machine must be a VM).

PVS

Machine provisioned by Provisioning Services (may be physical, blade, VM,...).

Manual

No automated provisioning.

RegistrationState

Indicates the registration state of the machine.

Unknown

Unknown

Registered

Machine is currently registered.

Unregistered

Machine has been unregistered.

ResourceUsageSortBy

ResourceUsageSortBy

Unknown

Unknown

MachineName

MachineName

TotalSessionCount

TotalSessionCount.

AverageProcessorLoad

AverageProcessorLoad

ProcessorLoadPeak

ProcessorLoadPeak

AverageMemoryUtilization

AverageMemoryUtilization

MemoryUtilizationPeak

MemoryUtilizationPeak

RuleTemplateParameterValueType

Type of a rule template

Unknown

Unknown. For convention's sake. Should never occur.

Int32

The parameter value is a 32-bit signed integer.

UInt32

The parameter value is a 32-bit unsigned integer.

Int64

The parameter value is a 64-bit signed integer.

UInt64

The parameter value is a 64-bit unsigned integer.

Float

The parameter value is a single-precision floating-point number.

Double

The parameter value is a double-precision floating-point number.

String

The parameter value is a text string.

Uuid

The parameter value is a GUID.

Date

The date

TimeSpan

The time span

Enum

The enum

SavingsActionReason

Enum to denote the type of Action Reason for Cost Savings

AutoScale

AutoScale

EndUserAction

EndUserAction

ServiceConfigurationType

Type of Workspacee Analytics Configuration

EnableSendDataToCitrixAnalytics

Indicates whether analytics is enabled for the customer

AnalyticsCustomerId

Cloud Customer ID

AnalyticsCustomerName

Cloud Customer's Name Name of the customer selected for Analytics.

AnalyticsUserName

Cloud Customer's Username Username of the Cloud login.

DirectoryServiceEndpoint

Directory Service Endpoint to fetch the event hub address

ServiceStateEndpoint

Service State endpoint to check if the entitlement is not expired

AnalyticsServiceName

Analtics Service Name

AnalyticsServiceInstanceId

Analytics Service Instance Id

AnalyticsServiceEncryptedPrivateKey

Encrypted Service Private Key

RoutingTemplateUrl

Template for the CC service URLs

LogServerName

Log server address with protocol and FQDN/IP address (e.g., https://logserver.com, http://192.0.2.100)

LogServerPort

Log server port

LogServerResourceLocationId

Guid of CC resource location proximate to the log server, Cloud only, null for OnPrem

LogServerApiKey

API key for the log server

ServiceContinuityAccessMethod

Identifies the high-level access method for a Service Continuity heartbeat event. The Endpoint OS field carries the full platform detail; this field distinguishes native CWA clients from browser-based access.

Native

Native Citrix Workspace App client (Windows, macOS, Linux, Android, or iOS). Corresponds to prod values matching XA.Receiver.*.

Browser

Browser-based Workspace UI - HTML5 or Workspace Web Extension (IWS.WorkspaceUI).

ServiceContinuityOSType

Normalized operating system type values for Service Continuity metrics.

Unknown

Unknown or unrecognized OS type.

Windows

Microsoft Windows ("Windows").

macOS

Apple macOS or Darwin ("macOS").

Linux

Linux or Ubuntu ("Linux").

ChromeOS

Google ChromeOS ("ChromeOS").

Android

Google Android ("Android").

iOS

Apple iOS / iPadOS ("iOS").

ServiceMode

Represents the operational mode of the Monitor service, determined dynamically from the SpaIndependentServices feature toggle and the MONITOR_SERVICE_MODE environment variable.

Combined

Toggle OFF (default). CVAD and SPA tasks run together in existing workers against the Monitor database. No behavioral change from current production.

Cvad

Toggle ON, running on a DDC (no env var or env var != "Spa"). SPA tasks are skipped; only CVAD workload is processed.

Spa

Toggle ON, running in the SPA container (env var = "Spa"). Only SPA workload is processed against the SPA database.

SessionAutoReconnectSortBy

SessionAutoReconnect Sort by for logs enum

Unknown

Unknown

EventTimestamp

EventTimestamp

ClientIPAddress

ClientIPAddress

ClientName

ClientName

SessionAutoReconnectType

Enum value to hold the Reconnect Type

None

No value

CgpReconnect

CGP/SR Reconnect

AcrReconnect

ACR Reconnect

SessionDetailsSortBy

SessionDetailsSortBy enum

Unknown

Unknown

UserName

UserName

DeliveryGroupName

DeliveryGroupName.

MachineName

MachineName

SessionStart

Session StartDate

SessionEnd

Session EndDate

SessionAutoReconnectCount

Session Auto-Reconnect Count

SessionType

Session Type

SessionDistributionType

The field by which sessions are grouped when producing a session distribution breakdown.

ConnectorName

Group sessions by the name of the Cloud Connector that brokered them.

CitrixWorkspaceAppVersion

Group sessions by the Citrix Workspace app version used to connect.

EndpointCity

Group sessions by the city of the connecting endpoint device.

EndpointCountry

Group sessions by the country of the connecting endpoint device.

EndpointOS

Group sessions by the operating system of the connecting endpoint device.

LaunchedVia

Group sessions by how the session was launched.

InternetServiceProvider

Group sessions by the internet service provider of the connecting endpoint.

MachineName

Group sessions by the name of the machine hosting the session.

PopId

Group sessions by the gateway point-of-presence (PoP) identifier.

Protocol

Group sessions by the connection protocol used.

ResourceLocation

Group sessions by the resource location that served them.

WorkspaceType

Group sessions by the type of workspace.

SessionState

Group sessions by their current session state.

TotalUsers

Return the total number of users without breaking the result down by any dimension.

UCAppOptimizationState

Group sessions by unified-communications (for example, Microsoft Teams) optimization state.

StoreFrontFQDN

Group sessions by the fully qualified domain name (FQDN) of the StoreFront server.

StoreFrontIPAddress

Group sessions by the IP address of the StoreFront server.

SessionPerformanceMetricType

Enum representing the available latency, performance metrics, and session scores.

ClientL7Latency

Layer-7 (application) latency measured on the client side, in milliseconds.

ServerL7Latency

Layer-7 (application) latency measured on the server side, in milliseconds.

WanLatency

Network latency across the WAN segment, in milliseconds.

DcLatency

Network latency across the datacenter segment, in milliseconds.

ClientPacketRetransmit

Number of TCP packet retransmits measured on the client side.

ServerPacketRetransmit

Number of TCP packet retransmits measured on the server side.

IcaRttMS

ICA round-trip time, in milliseconds.

IcaLatency

ICA session latency, in milliseconds.

SessionScore

Overall session experience score (0-100) aggregating the individual sub-scores.

CPUUsageScore

CPU usage sub-score (0-100) contributing to the session experience score.

RAMScore

RAM usage sub-score (0-100) contributing to the session experience score.

DiskIOScore

Disk I/O sub-score (0-100) contributing to the session experience score.

LogonDurationScore

Logon duration sub-score (0-100) contributing to the session experience score.

ProtocolLatencyScore

Protocol latency sub-score (0-100) contributing to the session experience score.

InputDelayScore

Input delay sub-score (0-100) contributing to the session experience score.

SessionType

Indicates if the session is running an Application or Desktop.

Desktop

Desktop session

Application

Application session

SortOrderType

SortOrderType

Unknown

Unknown

Asc

Sort by ascending

Desc

Sort by descending

SpaApplicationFailureStatus

The failure outcome status of a Secure Private Access application access or launch attempt.

Deny

The application access was denied by policy.

Failure

The application access or launch failed.

DnsError

The application launch failed due to a DNS resolution error.

LaunchError

The application failed to launch.

SpaApplicationStatus

The access and launch outcome status of a Secure Private Access application.

Allow

The application access was allowed by policy.

Deny

The application access was denied by policy.

Failure

The application access or launch failed.

DnsError

The application launch failed due to a DNS resolution error.

LaunchError

The application failed to launch.

LaunchSuccess

The application launched successfully.

SurveyQuestionType

Type of an individual question within a survey. Persisted as MonitorData.SurveyQuestion.QuestionType (tinyint). Answer storage: Rating / SingleChoice / MultipleChoice -> SurveyAnswer.AnswerValue FreeText -> SurveyAnswerFreetext.AnswerText

Rating

Numeric rating on a scale (RatingMinValue..RatingMaxValue).

SingleChoice

One option chosen from a predefined list.

MultipleChoice

Multiple options chosen; one SurveyAnswer row per selection.

FreeText

Open-ended text response stored in SurveyAnswerFreetext.

SurveyResponseStatus

State of a per-user survey presentation. Persisted as MonitorData.SurveyResponse.Status (tinyint). IMPORTANT: the numeric values are ordered by PRECEDENCE (weakest -> strongest terminal state): Shown < Snoozed < Dismissed < Submitted. Cross-batch idempotency in the MonitorData.UpsertSurveyResponses proc relies on this ordering - it keeps the stronger state when an incoming state has a lower value (a plain numeric compare), so a weaker late/out-of-order state never downgrades a stronger one. Values leave a single gap between states (1, 3, 5, 7) so an occasional new state can be slotted in at its correct precedence position (e.g. 2, 4, 6) WITHOUT renumbering existing ones - renumbering would rewrite the meaning of already-persisted rows. Keep the values in ascending precedence order; do not reorder. Unknown=0 is a sentinel below the four real states (1, 3, 5, 7).

Unknown

Unrecognized or unset state - the default(enum) value. Lowest precedence, so it never overwrites a known stored state and is discarded by the proc's "incoming >= stored" gate. The wire-to-enum mapping never produces it (unmapped wire states are dropped); it exists only as a safe default/sentinel.

Shown

Survey displayed to user, awaiting action.

Snoozed

User deferred ("remind me later"); will be re-prompted at SurveyLastShownDate + Survey.SnoozeDurationDays.

Dismissed

User dismissed without answering.

Submitted

User completed and submitted the survey.

SurveyScopeCohort

Dynamic-membership marker on SurveyScope.Cohort. Null = explicit list (or Tag scope). Value 0 left unused on purpose. Underlying type is byte to match the MonitorData.SurveyScope.Cohort (tinyint) column; otherwise EF reads the column as System.Byte and fails to materialize an Int32-backed enum property.

AllSingle

Every single-session Delivery Group at read time.

AllMulti

Every multi-session Delivery Group at read time.

All

Every Delivery Group site-wide.

SurveyScopeType

Kind of targeting rule attached to a Survey. Persisted as MonitorData.SurveyScope.ScopeType (tinyint).

DG

Targets a Delivery Group; values live in MonitorData.SurveyDGScope.

Tag

Targets a Tag.

TaskCategory

Enum for identifying the cateogry of a scheduled database task

Unknown

Unknown category

Consolidation

Data Consolidation

Reaping

Reaping of unresolved data

Grooming

Grooming away old/deleted data

Cas

Sending Events to CAS

Telemetry

Sending Telemetry data

TaskResult

Enum for identifying the result of a scheduled database task

Unknown

Unknown result

Success

Successfully run task

Failure

Task failed

Skipped

Task skipped without error

UCaaSConnectionType

Represents external connection types supported for UCaaS monitoring

Teams

Microsoft Teams collaboration connection type

UCAppsOptimizationState

The HDX optimization state of a unified communications application in a session.

NotApplicable

NotApplicable

Optimized

Optimized

NotOptimized

NotOptimized

HDXOptimized

HDXOptimized

UpgradeState

Indicates the upgrade state of the machine.

Unknown

Unknown

Scheduled

VDA upgrade is currently scheduled.

InProgress

VDA upgrade is currently in progress.

Successful

VDA upgrade is currently successful.

Failed

VDA upgrade is currently failed.

Cancelled

VDA upgrade is currently cancelled.

VersionChanged

VDA upgrade is currently version changed.

VdaEventsToEventHub

Vda events to be sent to cas event hub

VdaUpmLogon

vda event payloads for UPM events

VdaHashKey

vda event payload for hotfix hash key

VdaHotfixData

vda event payloads for patch data

VdaDiskOperationData

vda event payloads for machine resource data

LogonMetricsData

vda event payloads for logon metrics data

WindowsServiceStatus

The run state of a Windows service, mirroring ServiceControllerStatus with an added NotInstalled value.

Unknown

The service status could not be determined.

Stopped

The service is not running.

StartPending

The service is starting.

StopPending

The service is stopping.

Running

The service is running.

ContinuePending

The service continue operation is pending.

PausePending

The service pause operation is pending.

Paused

The service is paused.

NotInstalled

The service is not installed on the machine.

WorkspaceType

Enum to Workspace type

Unknown

Workspace type is Unknown

Windows

Workspace type is Windows

Mac

Workspace type is Mac

Linux

Workspace type is Linux

HTML5

Workspace type is HTML5

Chrome

Workspace type is Chrome

Monitor Service Schema

For the details of the Monitor Service schema, refer to the Monitor Service Schema diagram.

The preceding single page Monitor Service Schema diagram is divided into the following four categories. Each contains subcategories, related tables, descriptions, and their respective database schema diagrams.

Resource utilization

Session and application usage

Process utilization within sessions

Failures

Database schema diagrams

Resource utilization

SUBCATEGORY	RELATED TABLES	DESCRIPTION	COLLECTION DETAILS
Single machine related	Machine	Indicates the details related to a specific machine.	Raw data
	MachineMetrics	Indicates metrics such as IOPS and latency for every hour for a particular machine.	Raw data
	ResourceUtilization	Indicates the utilization details of a machine. For example, CPU, memory, session count, and so on.	Raw data

SUBCATEGORY	RELATED TABLES	DESCRIPTION	COLLECTION DETAILS
Single machine consolidated data	MachineMetricDaySummaries	Indicates the consolidated data per day for machine metrics.	Day
	ResourceUtilizationSummaries	Indicates the average of all metrics over time.	Hour, Day
	ServerOSDesktopSummary	Indicates the details related to usage duration and total launch count on multi-session machines.	Minute, Hour, Day
	DesktopOSDesktopSummary	Indicates the details related to usage duration and total launch count on single-session machines.	Minute, Hour, Day
Consolidated data across machines in a desktop group.	MachineSummary	Indicates the total number of powered-on machines, registered machines, machines in maintenance mode, and so on under a desktop group.	Hour, Day

Session and application usage

SUBCATEGORY	RELATED TABLES	DESCRIPTION	COLLECTION DETAILS
Application related	ApplicationInstanceSummary	Indicates the details related to the total	Hour, Day

SUBCATEGORY	RELATED TABLES	DESCRIPTION	COLLECTION DETAILS
		launch count on the application, usage duration, and so on.	
Session related	SessionActivitySummary	Indicates the details related to total connected and disconnected sessions, total logons, and so on.	Hour, Day
	SessionMetric	Indicates the ICARTT duration for that session.	Raw data
	LogOnMetric	Indicates the details related to sessions' UserInit start and end date.	Raw data

Process utilization within sessions

SUBCATEGORY	RELATED TABLES	DESCRIPTION	COLLECTION DETAILS
Process	ProcessUtilization	Indicates the CPU and memory consumption in a session.	Raw data
	ProcessUtilizationMinuteSummary	Indicates the minute-level summary on a process.	Minute
	ProcessUtilizationHourSummary	Indicates the hour-level summary on a process.	Hour

SUBCATEGORY	RELATED TABLES	DESCRIPTION	COLLECTION DETAILS
	ProcessUtilizationDaySummary	Indicates the day-level summary on a process.	Day

Failures

SUBCATEGORY	RELATED TABLES	DESCRIPTION	COLLECTION DETAILS
Application related	ApplicationError	Indicates a problem that is not immediately relevant. Signifies conditions that might cause future problems.	Raw Data
	ApplicationFault	Indicates a significant problem, usually a loss of functionality or data.	Raw data
Session Related	ConnectionFailureLog	Indicates the reasons for failure of the session along with the date.	Raw data
	FailureLogSummary	Indicates details related to the number of failures within each failure category under a desktop group.	Hour, Day
Machine related	MachineFailureLog	Indicates the reasons for deregistration and fault state.	Raw data

Database schema diagrams

- Resource utilization database schema
- Session and application usage database schema
- Process utilization within session database schema
- Failures database schema

To determine the values returned by the Monitor Service OData API, see: API Exploration

Best Practices for performance optimization

Optimizing API calls has been simplified through the effective implementation of parameters within the URL. Here are some useful samples.

Specifying a Custom Time Range

Using the powerful `$filter` function, you can tailor your queries to retrieve data within preset time frames. This results in enhanced efficiency due to reduced network traffic and faster processing.

Be mindful that time-related filtering is typically facilitated using the `ModifiedDate` field, which is prevalent across most entities. For those entities without such a field, kindly consult our comprehensive API Exploration guide for alternative filter options.

Request

```
GET /monitorodata/Connections?$filter=(ModifiedDate ge
2024-06-04T00:00:00Z and ModifiedDate le  2024-06-05T00:00:00Z) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Top N records

In scenarios where only a limited number of sample records are required, it's unnecessary to retrieve the entire dataset from the current entity.

Request

```
GET /monitorodata/Machines?$orderby=Name&$top=10 HTTP/1.1

Host: api.cloud.com
```

```
Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Best Practices for performance optimization

Optimizing API calls has been simplified through the effective implementation of parameters within the URL. Here are some useful samples.

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Request

```
GET /monitorodata/Connections?$filter=(ModifiedDate ge
2024-06-04T00:00:00Z and ModifiedDate le  2024-06-05T00:00:00Z) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Top N records

In scenarios where only a limited number of sample records are required, it's unnecessary to retrieve the entire dataset from the current entity.

Request

```
GET /monitorodata/Machines?$orderby=Name&$top=10 HTTP/1.1

Host: api.cloud.com
```

```
Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

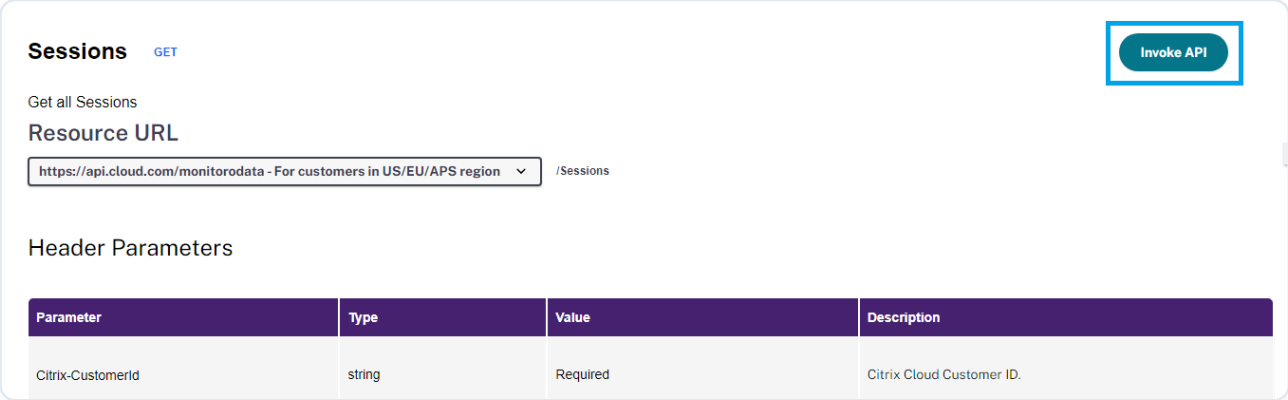
How to invoke API

Use the API Exploration for a quick demo.

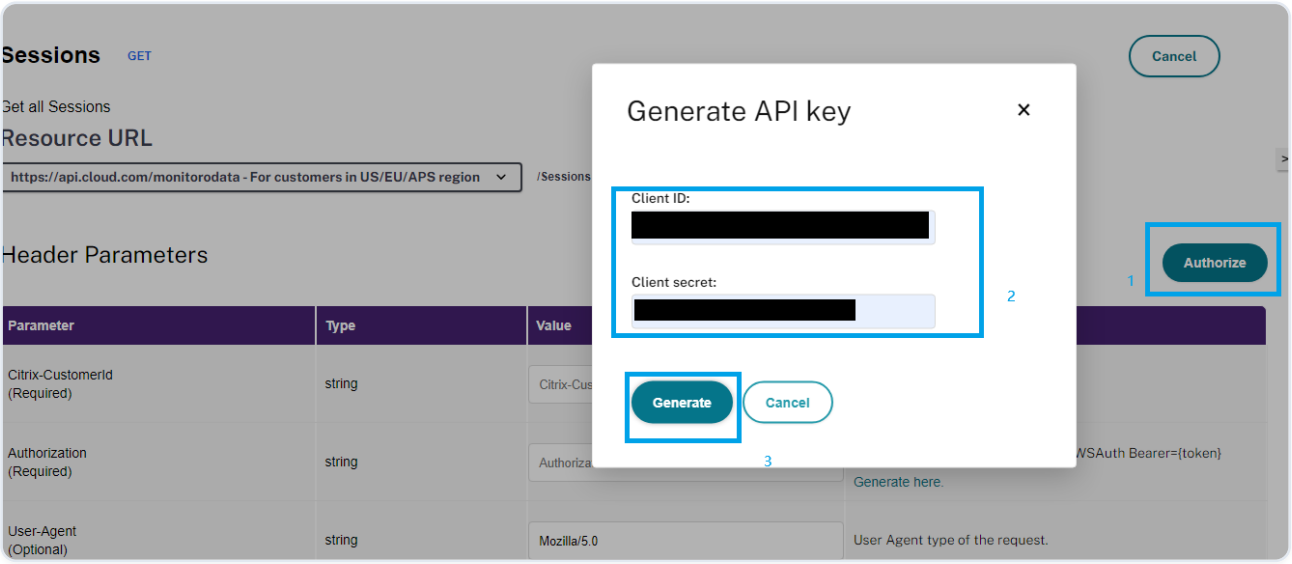
All the query parameters are available for other access methods mentioned in Data Access Methods

Example 1: Step by step guidelines to invoke the API

Use the Get Sessions as an example.

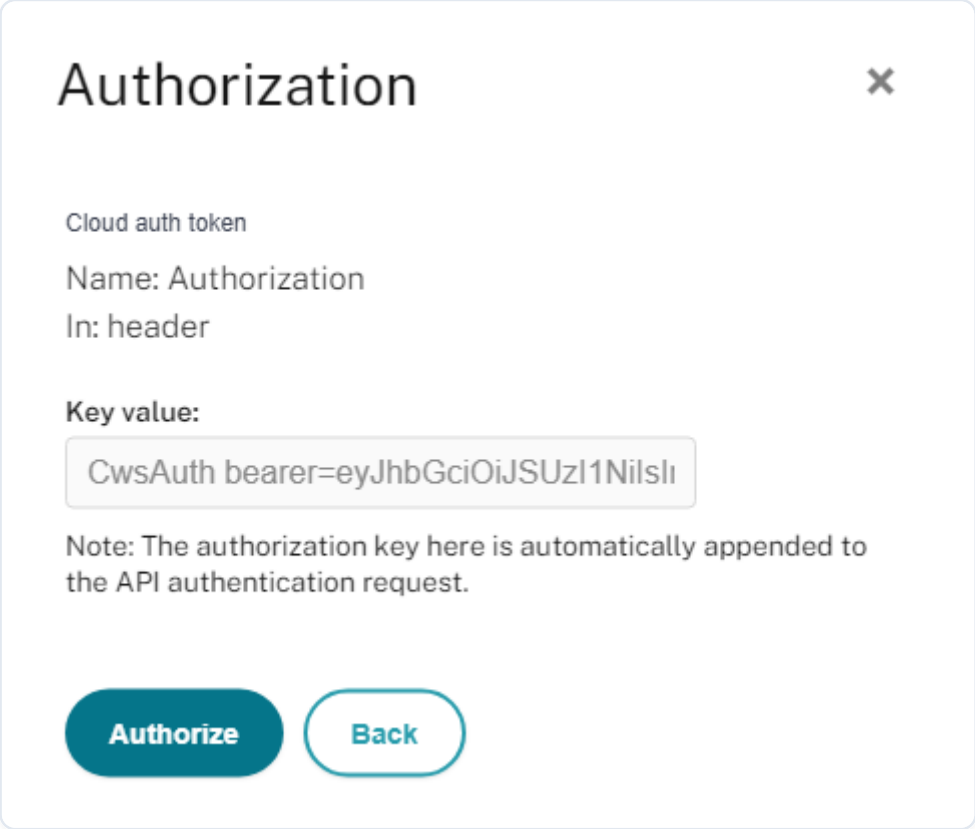


Step 1. Choose the URL based on your region and click `Invoke API`.

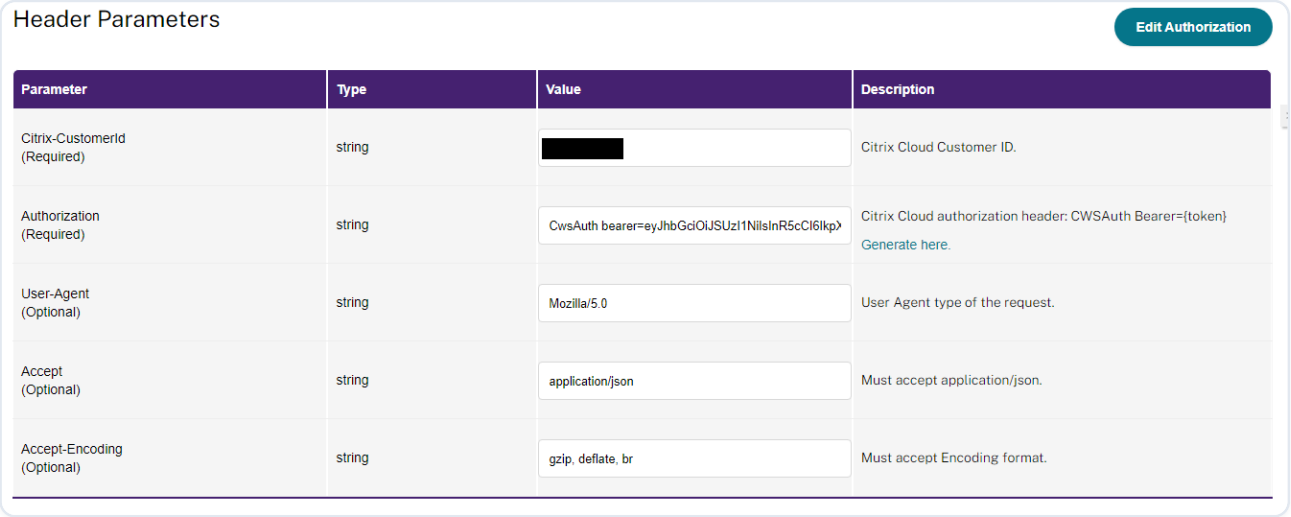


Step 2. Click the `Authorize` and fill in the `Client ID` and `Client secret`, then click `Generate`.

Refer to the Get started with Citrix Cloud APIs section to create the `Client ID` and `Client secret`.



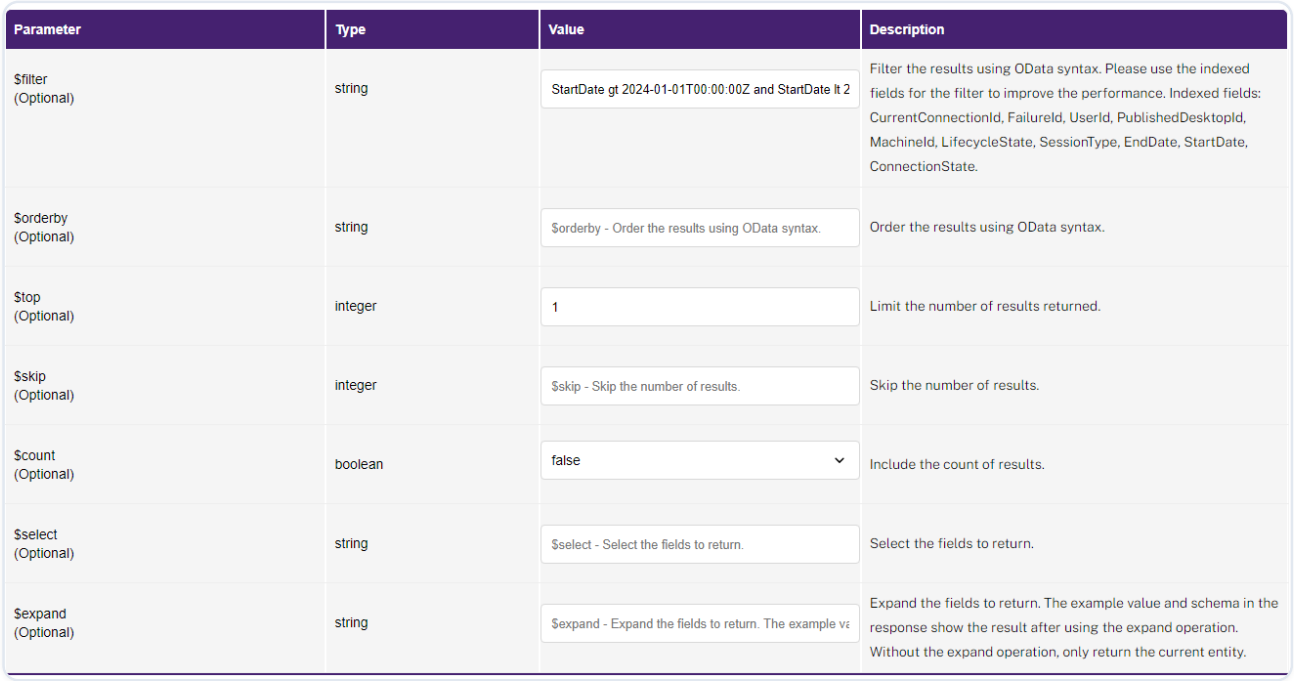
Step 3. Click `Authorize`. The authorization key is automatically appended to the API authentication request.



Step 4. Fill in the header parameters.

- Citrix-CustomerId: Your customerID
- Authorization: Automatically appended in Step3, no need to change.
- User-Agent: Automatically filled, no need to change.
- Accept: Automatically filled, no need to change.

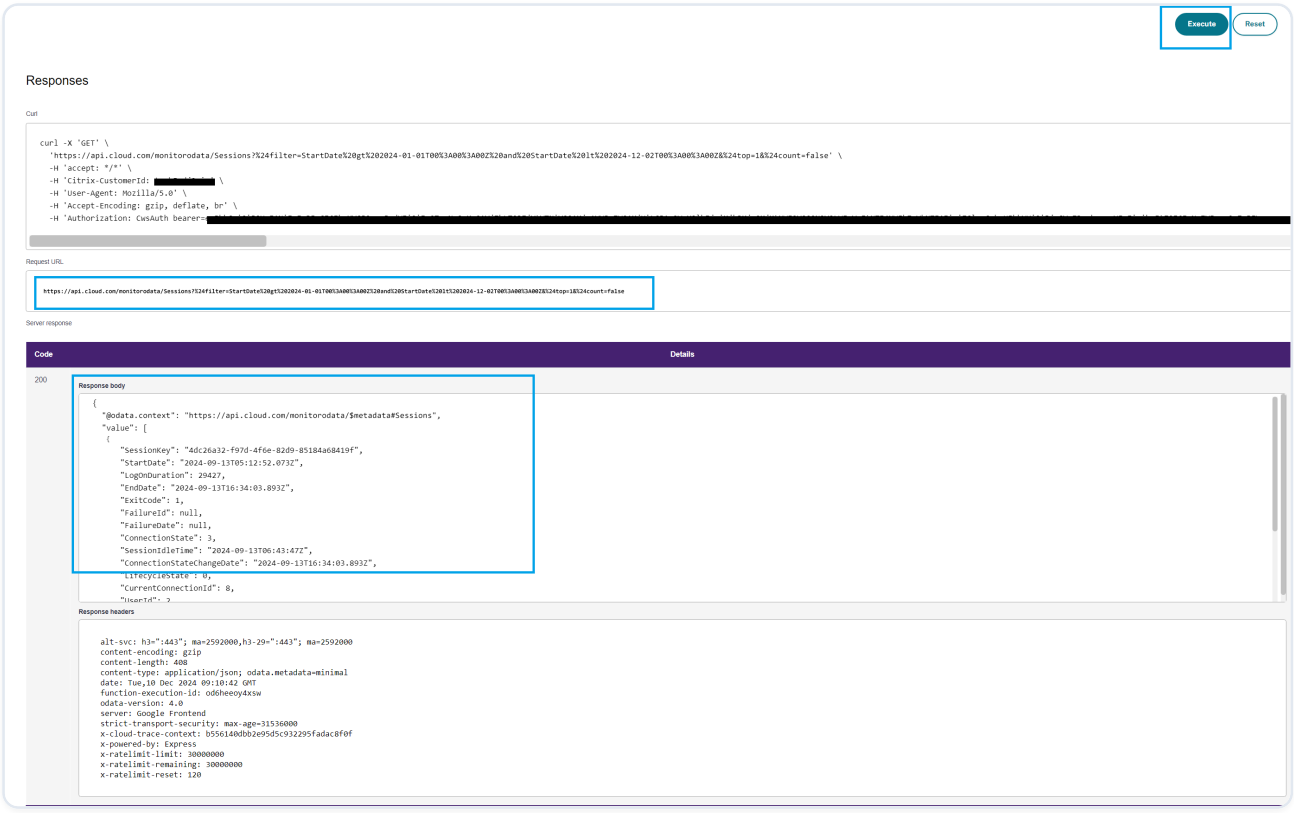
- Accept-Encoding: Automatically filled, no need to change. **Encoding can reduce bandwidth, saving on costs.**



Parameter	Type	Value	Description
$filter (Optional)	string	StartDate gt 2024-01-01T00:00:00Z and StartDate lt 2	Filter the results using OData syntax. Please use the indexed fields for the filter to improve the performance. Indexed fields: CurrentConnectionId, FailureId, UserId, PublishedDesktopId, MachineId, LifecycleState, SessionType, EndDate, StartDate, ConnectionState.
$orderby (Optional)	string	$orderby - Order the results using OData syntax.	Order the results using OData syntax.
$top (Optional)	integer	1	Limit the number of results returned.
$skip (Optional)	integer	$skip - Skip the number of results.	Skip the number of results.
$count (Optional)	boolean	false	Include the count of results.
$select (Optional)	string	$select - Select the fields to return.	Select the fields to return.
$expand (Optional)	string	$expand - Expand the fields to return. The example va	Expand the fields to return. The example value and schema in the response show the result after using the expand operation. Without the expand operation, only return the current entity.

Step 5. Fill in the query parameters.

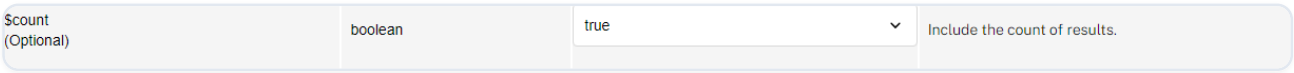
- $filter: Filter the results using OData syntax. **Add a default filter as an example for each entity. Please use the indexed fields for better performance.**
- $orderby: Order the results using OData syntax.
- $top: Limit the number of results returned. Here is 1 for sample, please adjust or remove it as per your requirement.
- $skip: Skip the number of results.
- $count: Include the count of results.
- $select: Select the fields to return. **Use this operation to return the fields required can reduce bandwidth, saving on costs.**
- $expand: Expand the fields to return. The example value and schema in the response show the result after using the expand operation. Without the expand operation, only the current entity will be displayed, and the related entities will not be shown.



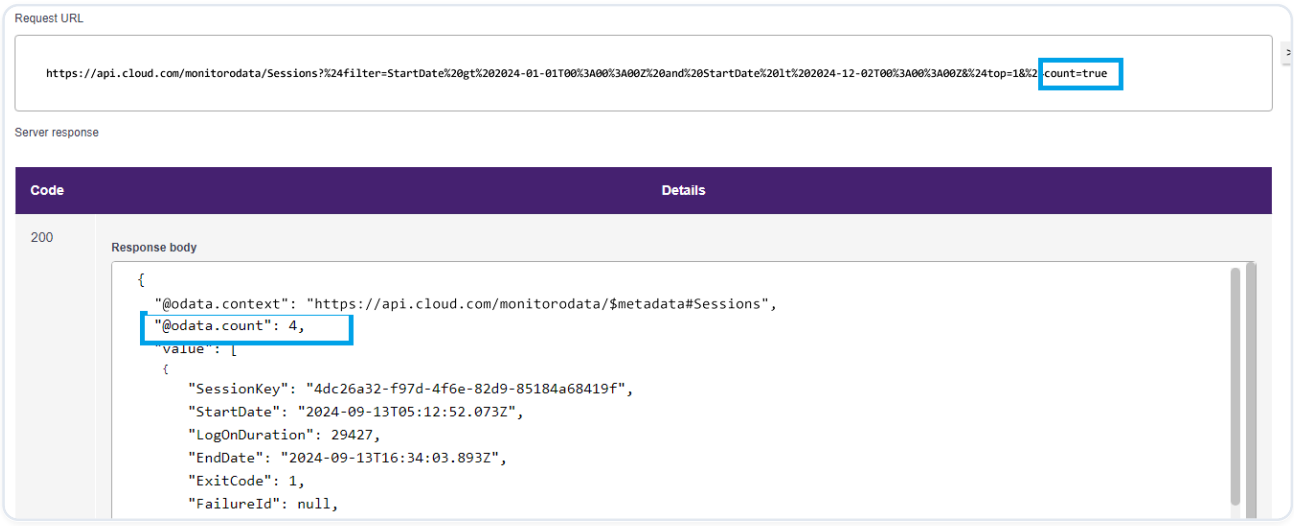
Step 6. Click `Execute` then check the response. All the query parameters will be shown in the `Request URL`

Example 2: The `$count` operation

Try setting `$count=true` in the query parameter.



The response will contain the response record count under field `@odata.count`.

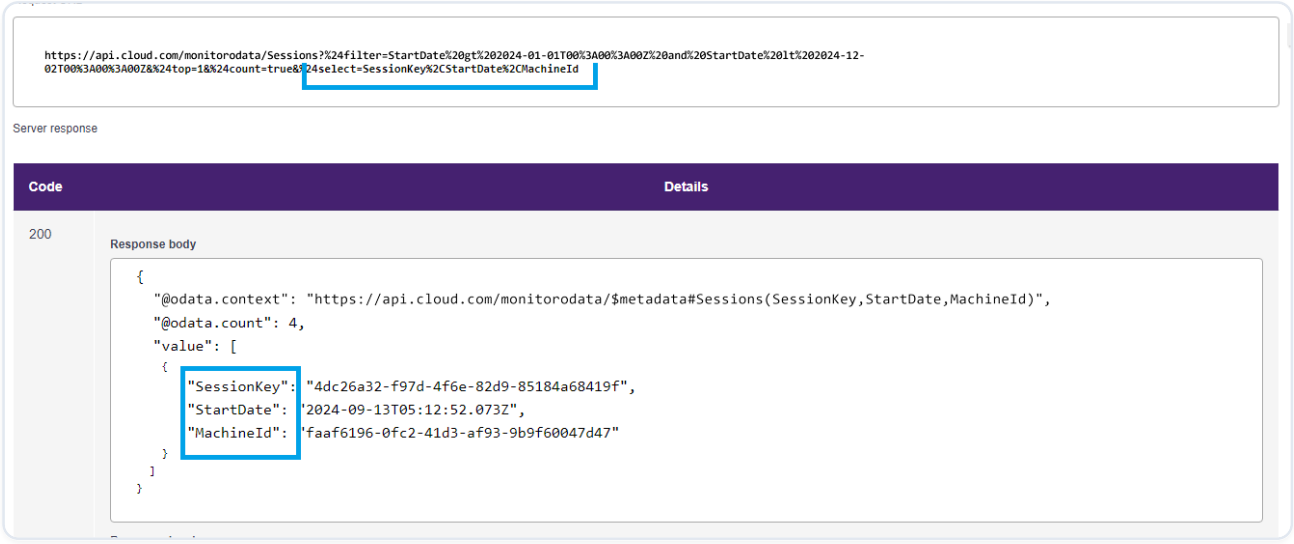


Example 3: The `$select` operation

Try populating the `$select` field in the query parameter.

$select (Optional)	string	SessionKey,StartDate,MachineId	Select the fields to return.

The response will only return the selected fields.

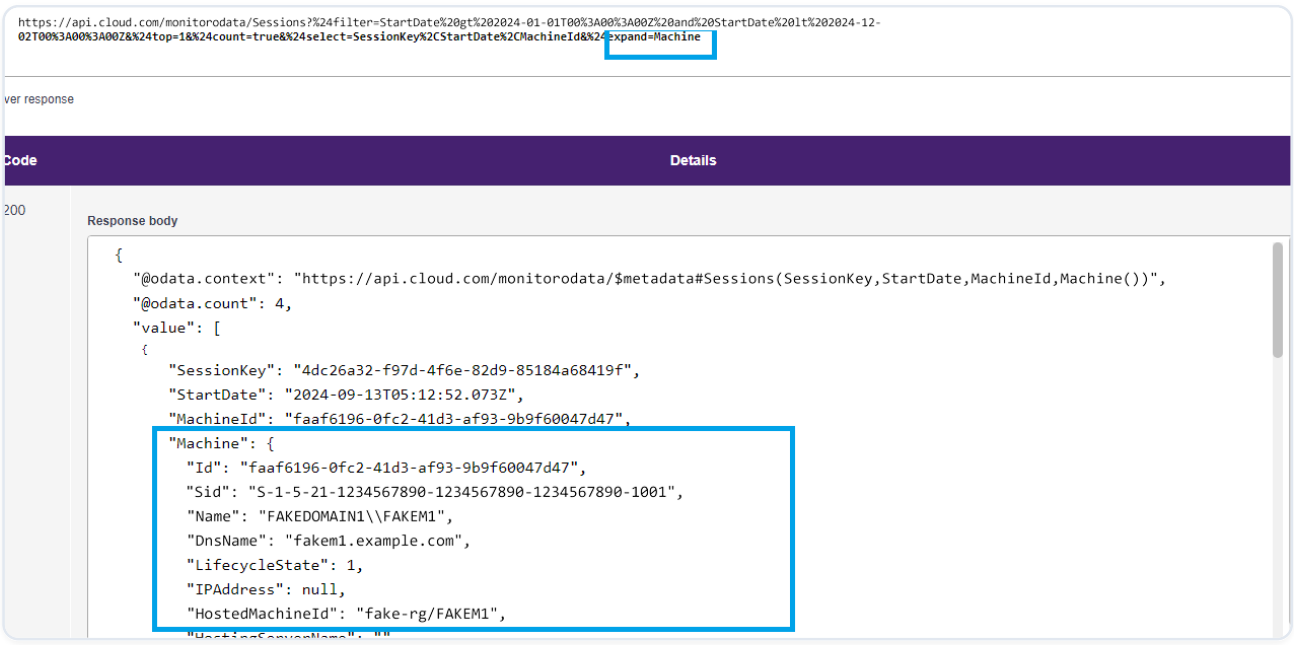


Example 4: The `$expand` operation

Try populating the `$expand` field in the query parameter.

$expand (Optional)	string	Machine	Expand the fields to return. The example value and schema in the response show the result after using the expand operation. Without the expand operation, only return the current entity.

The response only return the expand fields.



Machine data request examples

The Machines entity represents physical or virtual machines in the customer's cloud or on-prem Site. Use Citrix Monitor Service API to get machine data.

> **NOTE:** The request examples of this section target **cloud** setups. However the OData queries also apply to **on-premises** setups. Simply adjust the request URL to be of the form `http[s]://{MonitorServiceHost}/Citrix/Monitor/OData/v4/Data/{ODataQuery}` and change the authentication to NTLM.

Prerequisites

- Read the Get started with Citrix Cloud APIs section to ensure that you have a valid `bearer token`.
- Use the endpoint `https://{ApiGatewayEndpoint}/monitorodata/Machines` for your requests. See Supported API Gateway endpoints for a list of region specific API gateway endpoints.
- Invoke the API described in this document from a client host.

Active machines with count

- `LifecycleState value 0` represents Active machines.
- `$count=true` parameter appends the record count in the response.

Request

```
GET /monitorodata/Machines?$filter=LifecycleState eq 0&$count=true HTTP/
1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>
```

```
Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Machines",

    "@odata.count": 517,

    "value": [

        {

            "Id": "17f8b8f5-0f27-4852-a399-00194801a283",

            "Sid": "S-1-5-21-1234567890-1234567890-1234567890-1001",

            "Name": "FAKEDOMAIN1\\FAKEM1",

            "DnsName": "fakem1.example.com",

            "LifecycleState": 0,

            "IPAddress": null,

            "HostedMachineId": "ccf63697-723c-0845-17fe-ebe1e2e75d31",
```

```
            "HostingServerName": "FAKEvisor",
            "HostedMachineName": "FAKEM1",
            "IsAssigned": false,
            "IsInMaintenanceMode": false,
            "IsPendingUpdate": false,
            "AgentVersion": "2212.0.0.77",
            "AssociatedUserFullNames": "",
            "AssociatedUserNames": "",
            "AssociatedUserUPNs": "",
            "CurrentRegistrationState": 2,
            "RegistrationStateChangeDate": "2024-08-05T22:03:08.31Z",
            "LastDeregisteredCode": 0,
            "LastDeregisteredDate": "2024-08-05T22:02:33.64Z",
            "CurrentPowerState": 2,
            "CurrentSessionCount": 0,
            "ControllerDnsName": "fakeddc2.example.com",
            "PoweredOnDate": "2024-08-05T10:01:50.4Z",
            "PowerStateChangeDate": "2024-08-05T22:03:08.31Z",
            "FunctionalLevel": 10,
            "FailureDate": null,
            "WindowsConnectionSetting": 0,
            "IsPreparing": false,
```

```
            "FaultState": 1,
            "OSType": "Windows 2019",
            "CurrentLoadIndexId": 17863392,
            "CatalogId": "11c5298e-4516-4c1b-b83a-efb219009b71",
            "DesktopGroupId": "ad9e2d3d-44ac-49b0-a34b-7affb5ce3596",
            "HypervisorId": "56ac3d9f-2691-4d2c-aacb-95726611fe79",
            "LastPowerActionType": 3,
            "LastPowerActionReason": 8,
            "LastPowerActionFailureReason": 400,
            "LastPowerActionCompletedDate": "2024-08-05T22:02:50.887Z",
            "Tags": [],
            "Hash": "",
            "MachineRole": 0,
            "CreatedDate": "2020-06-10T14:31:36.183Z",
            "ModifiedDate": "2024-08-05T22:47:00.103Z"
        }
    ]
}
```


Machines in a failure state

- `FailureDate is null` represents machines not in a failure state.
- `FailureDate ne null` represents machines in a failure state.

- `FailureDate ge 2024-07-30T00:00:00Z` helps filter machines in a failure state after `2024-07-30T00:00:00Z`.

Request

```
GET /monitorodata/Machines?$filter=FailureDate ne null and FailureDate ge
2024-07-30T00:00:00Z HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Machines",

    "value": [

        {

            "Id": "70fe7ae3-e933-4f99-aabf-07153c261ee7",

            "Sid": "S-1-5-21-1234567890-1234567890-1234567890-1002",
```

```
            "Name": "FAKEDOMAIN1\\FAKEM2",
            "DnsName": "fakem2.example.com",
            "LifecycleState": 0,
            "IPAddress": null,
            "HostedMachineId": "17934eda-3307-16a1-a7ee-0594d5f65a89",
            "HostingServerName": "FAKEvisor",
            "HostedMachineName": "FAKEM2",
            "IsAssigned": false,
            "IsInMaintenanceMode": false,
            "IsPendingUpdate": false,
            "AgentVersion": "2203.0.0.33220",
            "AssociatedUserFullNames": "",
            "AssociatedUserNames": "",
            "AssociatedUserUPNs": "",
            "CurrentRegistrationState": 2,
            "RegistrationStateChangeDate": "2024-07-30T23:49:47.18Z",
            "LastDeregisteredCode": 207,
            "LastDeregisteredDate": "2024-07-30T23:49:47.187Z",
            "CurrentPowerState": 3,
            "CurrentSessionCount": 0,
            "ControllerDnsName": "fakeddc1.example.com",
            "PoweredOnDate": "2024-07-30T23:35:33.757Z",
```

```
            "PowerStateChangeDate": "2024-07-31T23:45:16.86Z",
            "FunctionalLevel": 9,
            "FailureDate": "2024-07-30T23:49:47.18Z",
            "WindowsConnectionSetting": 0,
            "IsPreparing": false,
            "FaultState": 4,
            "OSType": "Windows 10",
            "CurrentLoadIndexId": 17863154,
            "CatalogId": "8979ff21-701b-4cf6-bb3f-18a77cf46427",
            "DesktopGroupId": "87f4c976-b8f8-4b0e-82c3-dcd7f94c3661",
            "HypervisorId": "56ac3d9f-2691-4d2c-aacb-95726611fe79",
            "LastPowerActionType": 3,
            "LastPowerActionReason": 8,
            "LastPowerActionFailureReason": 401,
            "LastPowerActionCompletedDate": "2024-07-31T23:45:16.827Z",
            "Tags": [],
            "Hash": "",
            "MachineRole": 0,
            "CreatedDate": "2022-09-28T18:16:45.633Z",
            "ModifiedDate": "2024-07-31T23:47:00.173Z"
        }
    ]
```

```
}
```

Get Machine failure details

- The `MachineFailures` entity provides details about Machine failures. Use the `$expand` operation to enrich the response records with these details.

Request

```
GET /monitorodata/Machines?$filter=FailureDate ne null and FailureDate ge
2024-07-30T00:00:00Z&$select=Id&$expand=MachineFailures($filter=FailureSta
rtDate ge 2024-07-30T00:00:00Z) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Machines",
```

```
    "value": [
        {
            "Id": "70fe7ae3-e933-4f99-aabf-07153c261ee7",
            "MachineFailures": [
                {
                    "Id": 1589020,
                    "MachineId": "70fe7ae3-e933-4f99-aabf-07153c261ee7",
                    "FailureStartDate": "2024-07-30T11:13:43.04Z",
                    "FailureEndDate": "2024-07-30T23:34:55.38Z",
                    "FaultState": 4,
                    "LastDeregisteredCode": 207,
                    "CreatedDate": "2024-07-30T11:13:54.95Z",
                    "ModifiedDate": "2024-07-30T23:34:59.7Z"
                },
                {
                    "Id": 1589059,
                    "MachineId": "70fe7ae3-e933-4f99-aabf-07153c261ee7",
                    "FailureStartDate": "2024-07-30T23:49:47.18Z",
                    "FailureEndDate": null,
                    "FaultState": 4,
                    "LastDeregisteredCode": 207,
                    "CreatedDate": "2024-07-30T23:49:49.517Z",
```

```
                    "ModifiedDate": "2024-07-30T23:49:49.517Z"

                }

            ]

        }

    ]

}
```

Find failed machine power actions

- The `LastPowerActionReason` and `LastPowerActionFailureReason` fields can be used to filter for the failed machine power actions. Check page Descriptions for enums and error codes for details.

Request

```
GET /monitorodata/Machines?$filter=LifecycleState eq 0 and DesktopGroup/
SessionSupport eq 1 and (cast(LastPowerActionReason,'Edm.Int32') eq 6 or
cast(LastPowerActionReason,'Edm.Int32') eq 7 or
cast(LastPowerActionReason,'Edm.Int32') eq 8) and
(cast(LastPowerActionFailureReason,'Edm.Int32') eq 300 or
cast(LastPowerActionFailureReason,'Edm.Int32') eq 402 or
cast(LastPowerActionFailureReason,'Edm.Int32') eq 401) and MachineRole eq
0&$orderby=Name&$skip=0&$top=50&$expand=DesktopGroup($select=Name)&$select
=Sid,Id,Name,IsAssigned,IPAddress,FaultState,LastDeregisteredCode,FailureD
ate,CurrentPowerState,CurrentSessionCount,IsInMaintenanceMode,LastPowerAct
ionFailureReason,LastPowerActionCompletedDate HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Machines",

    "value": [

        {

            "Id": "a9db1234-16f6-45c2-bb1b-a6f978fe9810",

            "Sid": "S-1-5-21-1234567890-1234567890-1234567890-1003",

            "Name": "FAKEDOMAIN1\\FAKEM10",

            "IPAddress": null,

            "IsAssigned": true,

            "IsInMaintenanceMode": false,

            "LastDeregisteredCode": 2,

            "CurrentPowerState": 2,

            "CurrentSessionCount": 0,
```

```
            "FailureDate": null,

            "FaultState": 1,

            "LastPowerActionFailureReason": 401,

            "LastPowerActionCompletedDate": "2025-05-13T04:59:50.18Z",

            "DesktopGroup": {

                "Name": "FAKE-DG3"

            }

        }

    ]

}
```

Alive sessions on each machine

- `Sessions` in the `$expand` operation enriches the response records with the sessions running on a machine.
- `EndDate eq null` represents the sessions that are still alive.

```
GET /monitorodata/Machines?
$select=Name,IsInMaintenanceMode,CurrentRegistrationState,CurrentSessionCo
unt,IsPreparing,FaultState&$expand=DesktopGroup($select=Id,Name),Sessions(
$select=SessionKey,ConnectionState;
$filter=EndDate+eq+null)&$filter=Name+ne+null+and+DesktopGroup+ne+null
HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 08:00:05 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 122546

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Machines",

    "value": [

        {

            "Name": "FAKEDOMAIN1\\FAKEM3",

            "IsInMaintenanceMode": false,

            "CurrentRegistrationState": 1,

            "CurrentSessionCount": 1,

            "IsPreparing": false,

            "FaultState": 1,

            "DesktopGroup": {

                "Id": "ad9e2d3d-44ac-49b0-a34b-7affb5ce3596",

                "Name": "FAKEDOMAIN1\\FAKE-DG1"

            },
```

```
            "Sessions": [
                {
                    "SessionKey": "d0d8b5ab-9450-4beb-9f3e-9f7c1577d9bd",
                    "ConnectionState": 2
                }
            ]
        }
    ]
}
```

Active VDA machines associated information

- `LifecycleState eq 0` represents active machines.
- `MachineRole eq 0` represents a VDA machine.
- Use `$expand` to get associated information like catalog, hypervisor and load.

Request

```
GET /monitorodata/Machines?$filter=LifecycleState eq 0 and Name ne null
and DnsName ne '' and CatalogId ne null and MachineRole eq
0&$expand=CurrentLoadIndex,Catalog,Hypervisor HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 08:00:05 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 122546

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Machines",

    "value": [

        {

            "Id": "17f8b8f5-0f27-4852-a399-00194801a283",

            "Sid": "S-1-5-21-1234567890-1234567890-1234567890-1001",

            "Name": "FAKEDOMAIN1\\FAKEM1",

            "DnsName": "fakem1.example.com",

            "LifecycleState": 0,

            "IPAddress": null,

            "HostedMachineId": "ccf63697-723c-0845-17fe-ebe1e2e75d31",

            "HostingServerName": "FAKEvisor",

            "HostedMachineName": "FAKEM1",
```

```
            "IsAssigned": false,
            "IsInMaintenanceMode": false,
            "IsPendingUpdate": false,
            "AgentVersion": "2212.0.0.77",
            "AssociatedUserFullNames": "",
            "AssociatedUserNames": "",
            "AssociatedUserUPNs": "",
            "CurrentRegistrationState": 2,
            "RegistrationStateChangeDate": "2024-08-05T22:03:08.31Z",
            "LastDeregisteredCode": 0,
            "LastDeregisteredDate": "2024-08-05T22:02:33.64Z",
            "CurrentPowerState": 2,
            "CurrentSessionCount": 0,
            "ControllerDnsName": "fakeddc2.example.com",
            "PoweredOnDate": "2024-08-05T10:01:50.4Z",
            "PowerStateChangeDate": "2024-08-05T22:03:08.31Z",
            "FunctionalLevel": 10,
            "FailureDate": null,
            "WindowsConnectionSetting": 0,
            "IsPreparing": false,
            "FaultState": 1,
            "OSType": "Windows 2019",
```

```
"CurrentLoadIndexId": 17863392,
"CatalogId": "11c5298e-4516-4c1b-b83a-efb219009b71",
"DesktopGroupId": "ad9e2d3d-44ac-49b0-a34b-7affb5ce3596",
"HypervisorId": "56ac3d9f-2691-4d2c-aacb-95726611fe79",
"LastPowerActionType": 3,
"LastPowerActionReason": 8,
"LastPowerActionFailureReason": 400,
"LastPowerActionCompletedDate": "2024-08-05T22:02:50.887Z",
"Tags": [],
"Hash": "",
"MachineRole": 0,
"CreatedDate": "2020-06-10T14:31:36.183Z",
"ModifiedDate": "2024-08-05T22:47:00.103Z",
"CurrentLoadIndex": {
    "Id": 17863392,
    "EffectiveLoadIndex": 0,
    "Cpu": 0,
    "Memory": 0,
    "Disk": 0,
    "Network": 0,
    "SessionCount": 0,
    "MachineId": "17f8b8f5-0f27-4852-a399-00194801a283",
```

```
            "CreatedDate": "2024-08-05T22:03:12.277Z",
            "ModifiedDate": "2024-08-06T06:51:36.9277153Z"
        },
        "Catalog": {
            "Id": "11c5298e-4516-4c1b-b83a-efb219009b71",
            "Name": "FAKEDOMAIN1\\FAKE-DG1",
            "LifecycleState": 0,
            "ProvisioningType": 2,
            "PersistentUserChanges": 1,
            "IsMachinePhysical": false,
            "AllocationType": 2,
            "SessionSupport": 1,
            "ProvisioningSchemeId": null,
            "CreatedDate": "2020-05-19T00:02:03.903Z",
            "ModifiedDate": "2022-12-10T13:51:24.173Z"
        },
        "Hypervisor": {
            "Id": "56ac3d9f-2691-4d2c-aacb-95726611fe79",
            "Name": "FAKEvisor1",
            "Type": "XenServer",
            "LifecycleState": 0,
            "CreatedDate": "2020-05-15T12:32:30.587Z",
```

```
                "ModifiedDate": "2024-03-02T00:07:05.303Z"

            }

        }

    ]

}
```

Get VDA machine availability over time

- `MachineSummaries` entity provides aggregate machine metrics at hourly or daily granularity.
- The `$expand` operations enriches the records with Desktop Group information.

Request

```
GET /monitorodata/MachineSummaries?$filter=Granularity eq 60 and
SummaryDate ge
2025-05-01&$select=SummaryDate,PoweredOnMachinesCount,RegisteredMachinesCo
unt,MachinesInMaintenanceModeCount,MachinesCount&$expand=DesktopGroup($sel
ect=Id,Name)&$orderby=DesktopGroup/Name HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 08:00:05 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 2546

Connection: keep-alive
```

```
odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#MachineSummaries",

    "value": [

        {

            "SummaryDate":"2025-05-01T00:00:00Z",

            "PoweredOnMachinesCount":7,

            "RegisteredMachinesCount":5,

            "MachinesInMaintenanceModeCount":0,

            "MachinesCount":8,

            "DesktopGroup":{

                "Id":"002683cd-b3a5-4fc8-913c-9f0d12e4d7cb",

                "Name":"FAKE-DG6"

            }

        },

        {

            "SummaryDate":"2025-05-01T01:00:00Z",

            "PoweredOnMachinesCount":0,

            "RegisteredMachinesCount":0,

            "MachinesInMaintenanceModeCount":1,
```

```
            "MachinesCount":2,
            "DesktopGroup":{
                "Id":"002683cd-b3a5-4fc8-913c-9f0d12e4d7cb",
                "Name":"FAKE-DG6"
            }
        }
    ]
}
```

List of Hotfixes applied to each machine

As part of this example, we query the MachineHotfixLogs entity, which includes records with each of the hotfixes applied to the VDA machines. We enrich the result records with Machine and DesktopGroup information.

- `MachineHotfixLogs` provides a list of the hotfixes.
- Use `$expand` to get associated Machine, DesktopGroup and Hotfix information.

Request

```
GET /monitorodata/MachineHotfixLogs?$filter=CreatedDate ge
2025-02-01&$expand=Machine($select=Name;
$expand=DesktopGroup($select=Name)),Hotfix&$orderby=Machine/DesktopGroup/
Name,Machine/Name HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 08:00:05 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 2546

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#MachineHotfixLogs",

    "value": [

        {

            "Id":10073,

            "MachineId":"6829529e-4126-417c-90a7-a372dc7bcbc7",

            "HotfixId":"33fd700d-d35f-4b6c-81e0-30cd793547f7",

            "ChangeType":1,

            "CurrentState":true,

            "CreatedDate":"2024-11-27T13:24:38.05Z",

            "ModifiedDate":"2024-11-27T13:24:38.05Z",

            "Machine":{

                "Name":"FAKEDOMAIN1\\FAKEM12",
```

```
                "DesktopGroup":{
                "Name":"FAKE-DG9"
                }
            },
            "Hotfix":{
                "Id":"33fd700d-d35f-4b6c-81e0-30cd793547f7",
                "Name":"IdentityAssertionWX64_7_33_5000",
                "Article":"http://support.citrix.com/article/CTX579943",
                "ArticleName":"CTX579943",
                "FileName":"Citrix.Authentication.IdentityAssertion_x64",
                "FileFormat":"MSI",
                "Version":"10.9.5000.8",
                "ComponentName":"Citrix Identity Assertion VDA Plugin",
                "ComponentVersion":"10.9.5000.8",
                "CreatedDate":"2024-06-07T19:42:49.38Z",
                "ModifiedDate":"2024-06-07T19:42:49.38Z"
            }
        }
    ]
}
```

Get a list of all the VDA versions

Query the Machines entity, aggregate over the distinct versions and calculate the number of machines running each of the VDA versions per delivery group.

Request

```
GET /monitorodata/Machines?$apply=filter(AgentVersion ne null and
DesktopGroup/Name ne null)/expand(DesktopGroup,filter(Name ne null))/
groupby((DesktopGroup/Name,AgentVersion),aggregate(Id with countdistinct
as MachineCount)) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 08:00:05 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 2546

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Machines",

    "value": [

        {
```

```
            "@odata.id":null,
            "AgentVersion":"2407.0.10.101",
            "MachineCount":46,
            "DesktopGroup":{
                "@odata.id":null,
                "Name":"FAKE-DG7"
            }
        },
        {
            "@odata.id":null,
            "AgentVersion":"2402.0.100.609",
            "MachineCount":11,
            "DesktopGroup":{
                "@odata.id":null,
                "Name":"FAKE-DG9"
            }
        }
    ]
}
```

Machine data request examples

The Machines entity represents physical or virtual machines in the customer's cloud or on-prem Site. Use Citrix Monitor Service API to get machine data.

> **NOTE:** The request examples of this section target **cloud** setups. However the OData queries also apply to **on-premises** setups. Simply adjust the request URL to be of the form `http[s]://{MonitorServiceHost}/Citrix/Monitor/OData/v4/Data/{ODataQuery}` and change the authentication to NTLM.

Prerequisites

- Read the Get started with Citrix Cloud APIs section to ensure that you have a valid `bearer token`.
- Use the endpoint `https://{ApiGatewayEndpoint}/monitorodata/Machines` for your requests. See Supported API Gateway endpoints for a list of region specific API gateway endpoints.
- Invoke the API described in this document from a client host.

Active machines with count

- `LifecycleState value 0` represents Active machines.
- `$count=true` parameter appends the record count in the response.

Request

```
GET /monitorodata/Machines?$filter=LifecycleState eq 0&$count=true HTTP/
1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Machines",

    "@odata.count": 517,

    "value": [

        {

            "Id": "17f8b8f5-0f27-4852-a399-00194801a283",

            "Sid": "S-1-5-21-1234567890-1234567890-1234567890-1001",

            "Name": "FAKEDOMAIN1\\FAKEM1",

            "DnsName": "fakem1.example.com",

            "LifecycleState": 0,

            "IPAddress": null,

            "HostedMachineId": "ccf63697-723c-0845-17fe-ebe1e2e75d31",

            "HostingServerName": "FAKEvisor",
```

```
            "HostedMachineName": "FAKEM1",

            "IsAssigned": false,

            "IsInMaintenanceMode": false,

            "IsPendingUpdate": false,

            "AgentVersion": "2212.0.0.77",

            "AssociatedUserFullNames": "",

            "AssociatedUserNames": "",

            "AssociatedUserUPNs": "",

            "CurrentRegistrationState": 2,

            "RegistrationStateChangeDate": "2024-08-05T22:03:08.31Z",

            "LastDeregisteredCode": 0,

            "LastDeregisteredDate": "2024-08-05T22:02:33.64Z",

            "CurrentPowerState": 2,

            "CurrentSessionCount": 0,

            "ControllerDnsName": "fakeddc2.example.com",

            "PoweredOnDate": "2024-08-05T10:01:50.4Z",

            "PowerStateChangeDate": "2024-08-05T22:03:08.31Z",

            "FunctionalLevel": 10,

            "FailureDate": null,

            "WindowsConnectionSetting": 0,

            "IsPreparing": false,

            "FaultState": 1,
```

```
            "OSType": "Windows 2019",
            "CurrentLoadIndexId": 17863392,
            "CatalogId": "11c5298e-4516-4c1b-b83a-efb219009b71",
            "DesktopGroupId": "ad9e2d3d-44ac-49b0-a34b-7affb5ce3596",
            "HypervisorId": "56ac3d9f-2691-4d2c-aacb-95726611fe79",
            "LastPowerActionType": 3,
            "LastPowerActionReason": 8,
            "LastPowerActionFailureReason": 400,
            "LastPowerActionCompletedDate": "2024-08-05T22:02:50.887Z",
            "Tags": [],
            "Hash": "",
            "MachineRole": 0,
            "CreatedDate": "2020-06-10T14:31:36.183Z",
            "ModifiedDate": "2024-08-05T22:47:00.103Z"
        }
    ]
}
```


Machines in a failure state

- `FailureDate is null` represents machines not in a failure state.
- `FailureDate ne null` represents machines in a failure state.
- `FailureDate ge 2024-07-30T00:00:00Z` helps filter machines in a failure state after `2024-07-30T00:00:00Z`.

Request

```
GET /monitorodata/Machines?$filter=FailureDate ne null and FailureDate ge
2024-07-30T00:00:00Z HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Machines",

    "value": [

        {

            "Id": "70fe7ae3-e933-4f99-aabf-07153c261ee7",

            "Sid": "S-1-5-21-1234567890-1234567890-1234567890-1002",

            "Name": "FAKEDOMAIN1\\FAKEM2",

            "DnsName": "fakem2.example.com",
```

```
            "LifecycleState": 0,

            "IPAddress": null,

            "HostedMachineId": "17934eda-3307-16a1-a7ee-0594d5f65a89",

            "HostingServerName": "FAKEvisor",

            "HostedMachineName": "FAKEM2",

            "IsAssigned": false,

            "IsInMaintenanceMode": false,

            "IsPendingUpdate": false,

            "AgentVersion": "2203.0.0.33220",

            "AssociatedUserFullNames": "",

            "AssociatedUserNames": "",

            "AssociatedUserUPNs": "",

            "CurrentRegistrationState": 2,

            "RegistrationStateChangeDate": "2024-07-30T23:49:47.18Z",

            "LastDeregisteredCode": 207,

            "LastDeregisteredDate": "2024-07-30T23:49:47.187Z",

            "CurrentPowerState": 3,

            "CurrentSessionCount": 0,

            "ControllerDnsName": "fakeddc1.example.com",

            "PoweredOnDate": "2024-07-30T23:35:33.757Z",

            "PowerStateChangeDate": "2024-07-31T23:45:16.86Z",

            "FunctionalLevel": 9,
```

```
            "FailureDate": "2024-07-30T23:49:47.18Z",
            "WindowsConnectionSetting": 0,
            "IsPreparing": false,
            "FaultState": 4,
            "OSType": "Windows 10",
            "CurrentLoadIndexId": 17863154,
            "CatalogId": "8979ff21-701b-4cf6-bb3f-18a77cf46427",
            "DesktopGroupId": "87f4c976-b8f8-4b0e-82c3-dcd7f94c3661",
            "HypervisorId": "56ac3d9f-2691-4d2c-aacb-95726611fe79",
            "LastPowerActionType": 3,
            "LastPowerActionReason": 8,
            "LastPowerActionFailureReason": 401,
            "LastPowerActionCompletedDate": "2024-07-31T23:45:16.827Z",
            "Tags": [],
            "Hash": "",
            "MachineRole": 0,
            "CreatedDate": "2022-09-28T18:16:45.633Z",
            "ModifiedDate": "2024-07-31T23:47:00.173Z"
        }
    ]
}
```

Get Machine failure details

- The `MachineFailures` entity provides details about Machine failures. Use the `$expand` operation to enrich the response records with these details.

Request

```
GET /monitorodata/Machines?$filter=FailureDate ne null and FailureDate ge
2024-07-30T00:00:00Z&$select=Id&$expand=MachineFailures($filter=FailureSta
rtDate ge 2024-07-30T00:00:00Z) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Machines",

    "value": [

        {

            "Id": "70fe7ae3-e933-4f99-aabf-07153c261ee7",
```

```
            "MachineFailures": [
                {
                    "Id": 1589020,
                    "MachineId": "70fe7ae3-e933-4f99-aabf-07153c261ee7",
                    "FailureStartDate": "2024-07-30T11:13:43.04Z",
                    "FailureEndDate": "2024-07-30T23:34:55.38Z",
                    "FaultState": 4,
                    "LastDeregisteredCode": 207,
                    "CreatedDate": "2024-07-30T11:13:54.95Z",
                    "ModifiedDate": "2024-07-30T23:34:59.7Z"
                },
                {
                    "Id": 1589059,
                    "MachineId": "70fe7ae3-e933-4f99-aabf-07153c261ee7",
                    "FailureStartDate": "2024-07-30T23:49:47.18Z",
                    "FailureEndDate": null,
                    "FaultState": 4,
                    "LastDeregisteredCode": 207,
                    "CreatedDate": "2024-07-30T23:49:49.517Z",
                    "ModifiedDate": "2024-07-30T23:49:49.517Z"
                }
            ]
```

```
        }

    ]

}
```

Find failed machine power actions

- The `LastPowerActionReason` and `LastPowerActionFailureReason` fields can be used to filter for the failed machine power actions. Check page Descriptions for enums and error codes for details.

Request

```
GET /monitorodata/Machines?$filter=LifecycleState eq 0 and DesktopGroup/
SessionSupport eq 1 and (cast(LastPowerActionReason,'Edm.Int32') eq 6 or
cast(LastPowerActionReason,'Edm.Int32') eq 7 or
cast(LastPowerActionReason,'Edm.Int32') eq 8) and
(cast(LastPowerActionFailureReason,'Edm.Int32') eq 300 or
cast(LastPowerActionFailureReason,'Edm.Int32') eq 402 or
cast(LastPowerActionFailureReason,'Edm.Int32') eq 401) and MachineRole eq
0&$orderby=Name&$skip=0&$top=50&$expand=DesktopGroup($select=Name)&$select
=Sid,Id,Name,IsAssigned,IPAddress,FaultState,LastDeregisteredCode,FailureD
ate,CurrentPowerState,CurrentSessionCount,IsInMaintenanceMode,LastPowerAct
ionFailureReason,LastPowerActionCompletedDate HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506
```

```
Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Machines",

    "value": [

        {

            "Id": "a9db1234-16f6-45c2-bb1b-a6f978fe9810",

            "Sid": "S-1-5-21-1234567890-1234567890-1234567890-1003",

            "Name": "FAKEDOMAIN1\\FAKEM10",

            "IPAddress": null,

            "IsAssigned": true,

            "IsInMaintenanceMode": false,

            "LastDeregisteredCode": 2,

            "CurrentPowerState": 2,

            "CurrentSessionCount": 0,

            "FailureDate": null,

            "FaultState": 1,

            "LastPowerActionFailureReason": 401,

            "LastPowerActionCompletedDate": "2025-05-13T04:59:50.18Z",

            "DesktopGroup": {
```

```
                "Name": "FAKE-DG3"

            }

        }

    ]

}
```

Alive sessions on each machine

- `Sessions` in the `$expand` operation enriches the response records with the sessions running on a machine.
- `EndDate eq null` represents the sessions that are still alive.

```
GET /monitorodata/Machines?
$select=Name,IsInMaintenanceMode,CurrentRegistrationState,CurrentSessionCo
unt,IsPreparing,FaultState&$expand=DesktopGroup($select=Id,Name),Sessions(
$select=SessionKey,ConnectionState;
$filter=EndDate+eq+null)&$filter=Name+ne+null+and+DesktopGroup+ne+null
HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 08:00:05 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 122546

Connection: keep-alive

odata-version: 4.0
```

```
{
    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Machines",
    "value": [
        {
            "Name": "FAKEDOMAIN1\\FAKEM3",
            "IsInMaintenanceMode": false,
            "CurrentRegistrationState": 1,
            "CurrentSessionCount": 1,
            "IsPreparing": false,
            "FaultState": 1,
            "DesktopGroup": {
                "Id": "ad9e2d3d-44ac-49b0-a34b-7affb5ce3596",
                "Name": "FAKEDOMAIN1\\FAKE-DG1"
            },
            "Sessions": [
                {
                    "SessionKey": "d0d8b5ab-9450-4beb-9f3e-9f7c1577d9bd",
                    "ConnectionState": 2
                }
            ]
```

```
        }

    ]

}
```

Active VDA machines associated information

- `LifecycleState eq 0` represents active machines.
- `MachineRole eq 0` represents a VDA machine.
- Use `$expand` to get associated information like catalog, hypervisor and load.

Request

```
GET /monitorodata/Machines?$filter=LifecycleState eq 0 and Name ne null
and DnsName ne '' and CatalogId ne null and MachineRole eq
0&$expand=CurrentLoadIndex,Catalog,Hypervisor HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 08:00:05 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 122546

Connection: keep-alive

odata-version: 4.0
```

```
{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Machines",

    "value": [

        {

            "Id": "17f8b8f5-0f27-4852-a399-00194801a283",

            "Sid": "S-1-5-21-1234567890-1234567890-1234567890-1001",

            "Name": "FAKEDOMAIN1\\FAKEM1",

            "DnsName": "fakem1.example.com",

            "LifecycleState": 0,

            "IPAddress": null,

            "HostedMachineId": "ccf63697-723c-0845-17fe-ebe1e2e75d31",

            "HostingServerName": "FAKEvisor",

            "HostedMachineName": "FAKEM1",

            "IsAssigned": false,

            "IsInMaintenanceMode": false,

            "IsPendingUpdate": false,

            "AgentVersion": "2212.0.0.77",

            "AssociatedUserFullNames": "",

            "AssociatedUserNames": "",

            "AssociatedUserUPNs": "",

            "CurrentRegistrationState": 2,
```

```
        "RegistrationStateChangeDate": "2024-08-05T22:03:08.31Z",
        "LastDeregisteredCode": 0,
        "LastDeregisteredDate": "2024-08-05T22:02:33.64Z",
        "CurrentPowerState": 2,
        "CurrentSessionCount": 0,
        "ControllerDnsName": "fakeddc2.example.com",
        "PoweredOnDate": "2024-08-05T10:01:50.4Z",
        "PowerStateChangeDate": "2024-08-05T22:03:08.31Z",
        "FunctionalLevel": 10,
        "FailureDate": null,
        "WindowsConnectionSetting": 0,
        "IsPreparing": false,
        "FaultState": 1,
        "OSType": "Windows 2019",
        "CurrentLoadIndexId": 17863392,
        "CatalogId": "11c5298e-4516-4c1b-b83a-efb219009b71",
        "DesktopGroupId": "ad9e2d3d-44ac-49b0-a34b-7affb5ce3596",
        "HypervisorId": "56ac3d9f-2691-4d2c-aacb-95726611fe79",
        "LastPowerActionType": 3,
        "LastPowerActionReason": 8,
        "LastPowerActionFailureReason": 400,
        "LastPowerActionCompletedDate": "2024-08-05T22:02:50.887Z",
```

```
            "Tags": [],
            "Hash": "",
            "MachineRole": 0,
            "CreatedDate": "2020-06-10T14:31:36.183Z",
            "ModifiedDate": "2024-08-05T22:47:00.103Z",
            "CurrentLoadIndex": {
                "Id": 17863392,
                "EffectiveLoadIndex": 0,
                "Cpu": 0,
                "Memory": 0,
                "Disk": 0,
                "Network": 0,
                "SessionCount": 0,
                "MachineId": "17f8b8f5-0f27-4852-a399-00194801a283",
                "CreatedDate": "2024-08-05T22:03:12.277Z",
                "ModifiedDate": "2024-08-06T06:51:36.9277153Z"
            },
            "Catalog": {
                "Id": "11c5298e-4516-4c1b-b83a-efb219009b71",
                "Name": "FAKEDOMAIN1\\FAKE-DG1",
                "LifecycleState": 0,
                "ProvisioningType": 2,
```

```
                "PersistentUserChanges": 1,
                "IsMachinePhysical": false,
                "AllocationType": 2,
                "SessionSupport": 1,
                "ProvisioningSchemeId": null,
                "CreatedDate": "2020-05-19T00:02:03.903Z",
                "ModifiedDate": "2022-12-10T13:51:24.173Z"
            },
            "Hypervisor": {
                "Id": "56ac3d9f-2691-4d2c-aacb-95726611fe79",
                "Name": "FAKEvisor1",
                "Type": "XenServer",
                "LifecycleState": 0,
                "CreatedDate": "2020-05-15T12:32:30.587Z",
                "ModifiedDate": "2024-03-02T00:07:05.303Z"
            }
        }
    ]
}
```


Get VDA machine availability over time

- `MachineSummaries` entity provides aggregate machine metrics at hourly or daily granularity.
- The `$expand` operations enriches the records with Desktop Group information.

Request

```
GET /monitorodata/MachineSummaries?$filter=Granularity eq 60 and
SummaryDate ge
2025-05-01&$select=SummaryDate,PoweredOnMachinesCount,RegisteredMachinesCo
unt,MachinesInMaintenanceModeCount,MachinesCount&$expand=DesktopGroup($sel
ect=Id,Name)&$orderby=DesktopGroup/Name HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 08:00:05 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 2546

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#MachineSummaries",

    "value": [

        {

            "SummaryDate":"2025-05-01T00:00:00Z",

            "PoweredOnMachinesCount":7,
```

```
            "RegisteredMachinesCount":5,
            "MachinesInMaintenanceModeCount":0,
            "MachinesCount":8,
            "DesktopGroup":{
                "Id":"002683cd-b3a5-4fc8-913c-9f0d12e4d7cb",
                "Name":"FAKE-DG6"
            }
        },
        {
            "SummaryDate":"2025-05-01T01:00:00Z",
            "PoweredOnMachinesCount":0,
            "RegisteredMachinesCount":0,
            "MachinesInMaintenanceModeCount":1,
            "MachinesCount":2,
            "DesktopGroup":{
                "Id":"002683cd-b3a5-4fc8-913c-9f0d12e4d7cb",
                "Name":"FAKE-DG6"
            }
        }
    ]
}
```

List of Hotfixes applied to each machine

As part of this example, we query the MachineHotfixLogs entity, which includes records with each of the hotfixes applied to the VDA machines. We enrich the result records with Machine and DesktopGroup information.

- `MachineHotfixLogs` provides a list of the hotfixes.
- Use `$expand` to get associated Machine, DesktopGroup and Hotfix information.

Request

```
GET /monitorodata/MachineHotfixLogs?$filter=CreatedDate ge
2025-02-01&$expand=Machine($select=Name;
$expand=DesktopGroup($select=Name)),Hotfix&$orderby=Machine/DesktopGroup/
Name,Machine/Name HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 08:00:05 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 2546

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#MachineHotfixLogs",
```

```
"value": [
    {
        "Id":10073,
        "MachineId":"6829529e-4126-417c-90a7-a372dc7bcbc7",
        "HotfixId":"33fd700d-d35f-4b6c-81e0-30cd793547f7",
        "ChangeType":1,
        "CurrentState":true,
        "CreatedDate":"2024-11-27T13:24:38.05Z",
        "ModifiedDate":"2024-11-27T13:24:38.05Z",
        "Machine":{
            "Name":"FAKEDOMAIN1\\FAKEM12",
            "DesktopGroup":{
            "Name":"FAKE-DG9"
            }
        },
        "Hotfix":{
            "Id":"33fd700d-d35f-4b6c-81e0-30cd793547f7",
            "Name":"IdentityAssertionWX64_7_33_5000",
            "Article":"http://support.citrix.com/article/CTX579943",
            "ArticleName":"CTX579943",
            "FileName":"Citrix.Authentication.IdentityAssertion_x64",
            "FileFormat":"MSI",
```

```
                "Version":"10.9.5000.8",

                "ComponentName":"Citrix Identity Assertion VDA Plugin",

                "ComponentVersion":"10.9.5000.8",

                "CreatedDate":"2024-06-07T19:42:49.38Z",

                "ModifiedDate":"2024-06-07T19:42:49.38Z"

            }

        }

    ]

}
```

Get a list of all the VDA versions

Query the Machines entity, aggregate over the distinct versions and calculate the number of machines running each of the VDA versions per delivery group.

Request

```
GET /monitorodata/Machines?$apply=filter(AgentVersion ne null and
DesktopGroup/Name ne null)/expand(DesktopGroup,filter(Name ne null))/
groupby((DesktopGroup/Name,AgentVersion),aggregate(Id with countdistinct
as MachineCount)) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 08:00:05 GMT
```

```
Content-Type: application/json; odata.metadata=minimal

Content-Length: 2546

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Machines",

    "value": [

        {

            "@odata.id":null,

            "AgentVersion":"2407.0.10.101",

            "MachineCount":46,

            "DesktopGroup":{

                "@odata.id":null,

                "Name":"FAKE-DG7"

            }

        },

        {

            "@odata.id":null,

            "AgentVersion":"2402.0.100.609",

            "MachineCount":11,
```

```
            "DesktopGroup":{
                "@odata.id":null,
                "Name":"FAKE-DG9"
            }
        }
    ]
}
```

Machine resource utilization request examples

Use Citrix Monitor Service API to get machine level CPU and memory usage.

> **NOTE:** The request examples of this section target **cloud** setups. However the OData queries also apply to **on-premises** setups. Simply adjust the request URL to be of the form `http[s]://{MonitorServiceHost}/Citrix/Monitor/OData/v4/Data/{ODataQuery}` and change the authentication to NTLM.

Prerequisites

- Read the Get started with Citrix Cloud APIs section to ensure that you have a valid `bearer token`.
- Use the endpoint `https://{ApiGatewayEndpoint}/monitorodata/ResourceUtilizationSummary` for your requests. See Supported API Gateway endpoints for a list of region specific API gateway endpoints.
- Invoke the API described in this document from a client host.

Powered on machine CPU and memory usage at hourly level

- `Granularity = 60` represents hourly level metrics.
- `UptimeInMinutes > 0` represents the machine powered on in this hour.

Request

```
GET /monitorodata/ResourceUtilizationSummary?$filter=Granularity eq 60 and
SummaryDate eq 2024-07-30T08:00:00Z and UptimeInMinutes gt
0&$expand=Machine($select=Name,AgentVersion),DesktopGroup($select=Name)
HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#ResourceUtilizationSummary",

    "value": [

        {

            "MachineId": "31a02fb0-b673-4520-b94d-017fa2acd3b8",

            "Granularity": 60,

            "SummaryDate": "2025-05-05T08:00:00Z",
```

```
            "DesktopGroupId": "ad9e2d3d-44ac-49b0-a34b-7affb5ce3596",
            "AvgPercentCpu": 0.99298245335618651,
            "PeakPercentCpu": 3.5789473056793213,
            "AvgUsedMemory": 7918633224.9824562,
            "PeakUsedMemory": 7937829187.3684206,
            "AvgTotalMemory": 17170366464.0,
            "TotalSessionCount": 1,
            "AvgIcaRttInMs": null,
            "AvgLogOnDurationInMs": null,
            "UptimeInMinutes": 60,
            "UpTimeWithoutSessionInMinutes": 0,
            "DisconnectTimeInMinutes": 60,
            "CreatedDate": "2024-07-30T09:13:46.247Z",
            "ModifiedDate": "2024-07-30T09:13:46.247Z",
            "Machine": {
                "Name": "FAKEDOMAIN1\\FAKEM11",
                "AgentVersion": "2407.0.100.274"
            },
            "DesktopGroup": {
                "Name": "FAKE-DG4"
            }
        }
```

```
    ]

}
```

Powered on machine CPU and memory usage at day level

- `Granularity = 1440` represents day level metrics.
- `UptimeInMinutes > 0` represents the machine powered on in this day.

Request

```
GET /monitorodata/ResourceUtilizationSummary?$filter=Granularity eq 1440
and SummaryDate eq 2024-07-30T00:00:00Z and UptimeInMinutes gt 0 HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#ResourceUtilizationSummary",
```

```
"value": [
    {
        "MachineId": "17f8b8f5-0f27-4852-a399-00194801a283",
        "Granularity": 1440,
        "SummaryDate": "2025-05-05T00:00:00Z",
        "DesktopGroupId": "ad9e2d3d-44ac-49b0-a34b-7affb5ce3596",
        "AvgPercentCpu": 1.1274837264250215,
        "PeakPercentCpu": 14.733333587646484,
        "AvgUsedMemory": 4474693852.6077623,
        "PeakUsedMemory": 4756543078.4,
        "AvgTotalMemory": 17170366464.0,
        "TotalSessionCount": 0,
        "AvgIcaRttInMs": null,
        "AvgLogOnDurationInMs": null,
        "UptimeInMinutes": 724,
        "UpTimeWithoutSessionInMinutes": null,
        "DisconnectTimeInMinutes": null,
        "IdleTimeInMinutes": null,
        "CreatedDate": "2024-07-31T00:13:46.027Z",
        "ModifiedDate": "2024-07-31T00:13:46.027Z",
        "Machine": {
            "Name": "FAKEDOMAIN1\\FAKEM11",
```

```
                "AgentVersion": "2407.0.100.274"

            },

            "DesktopGroup": {

                "Name": "FAKE-DG4"

            }

        }

    ]

}
```

Machine resource utilization aggregates by delivery group

The query is more complex, as we first need to compute percentage values based on the used and total memory metrics. We group by the DesktopGroup name and the hourly timestamp and calculate average and max values.

- `$apply` operation includes a `filter` stage, a `compute` stage, an `expand` stage and a `groupby/aggregate` stage. See the OData documentation for usage details.

Request

```
GET /monitorodata/ResourceUtilizationSummary?$apply=filter(Granularity eq
60 and SummaryDate ge 2025-05-03 and UptimeInMinutes gt 0 and
AvgTotalMemory gt 0 and AvgUsedMemory gt 0 and PeakUsedMemory gt 0)/
compute(100 mul AvgUsedMemory div AvgTotalMemory as AvgPercentMemory, 100
mul PeakUsedMemory div AvgTotalMemory as PeakPercentMemory)/
expand(DesktopGroup,filter(Name ne null))/groupby((DesktopGroup/
Name,SummaryDate),aggregate(AvgPercentCpu with average as AvgPercentCpu,
PeakPercentCpu with max as PeakPercentCpu, AvgPercentMemory with average
as AvgPercentMemory, PeakPercentMemory with max as PeakPercentMemory))
HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>
```

```
Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#ResourceUtilizationSummary",

    "value": [

        {

            "@odata.id": null,

            "SummaryDate": "2025-05-03T00:00:00Z",

            "PeakPercentMemory": 14.249562365700822,

            "AvgPercentMemory": 14.176066487959879,

            "PeakPercentCpu": 1.7819637060165405,

            "AvgPercentCpu": 0.64738541841506958,

            "DesktopGroup": {

                "@odata.id": null,
```

```
                "Name": "FAKE-DG4"
            }
        },
        {
            "@odata.id": null,
            "SummaryDate": "2025-05-03T01:00:00Z",
            "PeakPercentMemory": 14.241976541431665,
            "AvgPercentMemory": 14.18313095499029,
            "PeakPercentCpu": 2.2718720436096191,
            "AvgPercentCpu": 0.65315361817677819,
            "DesktopGroup": {
                "@odata.id": null,
                "Name": "FAKE-DG4"
            }
        }
    ]
}
```


Daily average uptime by delivery group

The query gets the daily resource utilization summaries and averages the UptimeInMinutes by Desktop Group over the defined time period.

- `$apply` operation includes a `filter` stage, an `expand` stage and a `groupby/aggregate` stage. See the OData documentation for usage details.

Request

```
GET /monitorodata/ResourceUtilizationSummary?$apply=filter(Granularity eq
1440 and SummaryDate ge 2025-05-01 and SummaryDate le 2025-05-10)/
expand(Machine,expand(DesktopGroup,filter(Name ne null)))/
groupby((DesktopGroupId, DesktopGroup/Name),
aggregate(cast(UptimeInMinutes, Edm.Int32) with average as
AvgUptimeInMinutes)) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#ResourceUtilizationSummary",

    "value": [

        {

            "@odata.id": null,

            "DesktopGroupId": "97123b25-ad22-4a37-a6bd-0355952fdfe1",
```

```
            "AvgUptimeInMinutes": 1222.7,
            "DesktopGroup": {
                "@odata.id": null,
                "Name": "FAKE-DG5"
            }
        },
        {
            "@odata.id": null,
            "DesktopGroupId": "e3123b36-6807-490c-b71e-2af99bbfb0d8",
            "AvgUptimeInMinutes": 1437.75,
            "DesktopGroup": {
                "@odata.id": null,
                "Name": "FAKE-DG10"
            }
        },
        {
            "@odata.id": null,
            "DesktopGroupId": "4e123ac2-99d8-49a9-a082-3949284b0e8d",
            "AvgUptimeInMinutes": 993.9785714285714,
            "DesktopGroup": {
                "@odata.id": null,
                "Name": "FAKE-DG11"
```

```
            }

        }

    ]

}
```

Unused machines over time period

In this example, we calculate the total number of sessions running on each of the machines over the selected time period and then filter for the machines with no sessions. Note that we have to cast the TotalSessionCount to a larger integer type (an Int16) for the aggregation to succeed.

Request

```
GET /monitorodata/ResourceUtilizationSummary?$apply=filter(Granularity eq
60 and SummaryDate ge 2025-05-05 and UptimeInMinutes gt 0)/
expand(Machine,expand(DesktopGroup,filter(Name ne null)))/
compute(cast(TotalSessionCount,Edm.Int64) as TotalSessionCountInt64 )/
groupby((DesktopGroup/Name,MachineId,Machine/
Name),aggregate(TotalSessionCountInt64 with sum as TotalSessionCountSum))/
filter(TotalSessionCountSum eq 0)&$count=true HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive
```

```
odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#ResourceUtilizationSummary",

    "value": [

        {

            "@odata.id":null,

            "MachineId":"5bf5d243-2395-46d1-bd7e-83f77ae65db3",

            "TotalSessionCountSum":0,

            "Machine": {

                "@odata.id": null,

                "Name": "FAKEDOMAIN1\\FAKEM12"

            },

            "DesktopGroup":{

                "@odata.id":null,

                "Name":"FAKE-DG9"

            }

        },

        {

            "@odata.id":null,

            "MachineId":"a9dbe063-16f6-45c2-bb1b-a6f978fe9810",
```

```
            "TotalSessionCountSum":0,
            "Machine": {
                "@odata.id": null,
                "Name": "FAKEDOMAIN1\\FAKEM13"
            },
            "DesktopGroup":{
                "@odata.id":null,
                "Name":"FAKE-DG8"
            }
        }
    ]
}
```

Session data request examples

The Session entity represents a user connected to a desktop or an application.

Use Citrix Monitor Service API to get the data for entity session.

> **NOTE:** The request examples of this section target **cloud** setups. However the OData queries also apply to **on-premises** setups. Simply adjust the request URL to be of the form `http[s]://{MonitorServiceHost}/Citrix/Monitor/OData/v4/Data/{ODataQuery}` and change the authentication to NTLM.

Prerequisites

- Read the Get started with Citrix Cloud APIs section to ensure that you have a valid `bearer token`.

- Use the endpoint `https://{ApiGatewayEndpoint}/monitorodata/Sessions` for your requests. See Supported API Gateway endpoints for a list of region specific API gateway endpoints.
- Invoke the API described in this document from a client host.

ApplicationInstances for active sessions

- `ConnectionState eq 5` represents the sessions with active connection state. Please reference ConnectionState for a description of each connection state value.
- `ModifiedDate` represents the target time range.

Request

```
GET /monitorodata/Sessions?
$expand=ApplicationInstances&$filter=(ConnectionState eq 5) and
(ModifiedDate gt 2024-08-06T07:00:00Z and ModifiedDate le
2024-08-06T07:10:00Z ) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{
```

```
    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Sessions(ApplicationInstances())",

    "value": [

        {

            "SessionKey": "4569fdfd-54c4-44c8-81a9-40688a2771d6",

            "StartDate": "2024-07-31T11:22:37.473Z",

            "LogOnDuration": null,

            "EndDate": null,

            "ExitCode": 1,

            "FailureId": null,

            "FailureDate": null,

            "ConnectionState": 5,

            "SessionIdleTime": null,

            "ConnectionStateChangeDate": "2024-08-06T07:08:50.72Z",

            "LifecycleState": 0,

            "CurrentConnectionId": 887132,

            "UserId": 6,

            "MachineId": "7eb414f9-533c-498f-a72f-b4459625100e",

            "SessionType": 0,

            "IsAnonymous": false,

            "PublishedDesktopId": 93,

            "CreatedDate": "2024-07-31T11:22:37.473Z",
```

```
            "ModifiedDate": "2024-08-06T07:08:50.72Z",

            "ApplicationInstances": []

        }

    ]

}
```

Connection and machine information of each session

- Connection represents an initial connection or reconnect for a session.
- Use `$expand` operation to get the connection state for each session.

Request

```
GET /monitorodata/Sessions?
$select=StartDate,LogOnDuration,EndDate&$expand=Machine($select=DesktopGro
upId),Connections($select=LogOnStartDate,LogOnEndDate,BrokeringDuration,VM
StartStartDate,VMStartEndDate,HdxStartDate,HdxEndDate,AuthenticationDurati
on,GpoStartDate,GpoEndDate,LogOnScriptsStartDate,LogOnScriptsEndDate,Profi
leLoadStartDate,ProfileLoadEndDate,InteractiveStartDate,InteractiveEndDate
;
$filter=IsReconnect+eq+false)&$filter=LogOnDuration+ne+null+and+StartDate+
gt+cast(2024-07-31T02:56:57.996Z,
+Edm.DateTimeOffset)&$orderby=StartDate+desc HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT
```

```
Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Sessions(StartDate,LogOnDuration,EndDate,Machine(DesktopGroupId)
,Connections(LogOnStartDate,LogOnEndDate,BrokeringDuration,VMStartStartDat
e,VMStartEndDate,HdxStartDate,HdxEndDate,AuthenticationDuration,GpoStartDa
te,GpoEndDate,LogOnScriptsStartDate,LogOnScriptsEndDate,ProfileLoadStartDa
te,ProfileLoadEndDate,InteractiveStartDate,InteractiveEndDate))",

    "value": [

        {

            "StartDate": "2024-07-31T19:53:41.913Z",

            "LogOnDuration": 147061,

            "EndDate": null,

            "Machine": {

                "DesktopGroupId": "ad9e2d3d-44ac-49b0-a34b-7affb5ce3596"

            },

            "Connections": [

                {

                    "LogOnStartDate": "2024-07-31T19:53:41.913Z",

                    "LogOnEndDate": "2024-07-31T19:55:59.583Z",
```

```
                    "BrokeringDuration": 34,
                    "VMStartStartDate": null,
                    "VMStartEndDate": null,
                    "HdxStartDate": null,
                    "HdxEndDate": null,
                    "AuthenticationDuration": 266,
                    "GpoStartDate": "2024-07-31T19:55:30.857Z",
                    "GpoEndDate": "2024-07-31T19:55:57.037Z",
                    "LogOnScriptsStartDate": null,
                    "LogOnScriptsEndDate": null,
                    "ProfileLoadStartDate": "2024-07-31T19:55:28.13Z",
                    "ProfileLoadEndDate": "2024-07-31T19:55:30.853Z",
                    "InteractiveStartDate": "2024-07-31T19:55:30.853Z",
                    "InteractiveEndDate": "2024-07-31T19:56:09.01Z"
                }
            ]
        }
    ]
}
```


SessionMetrics for alive sessions

- `EndDate eq null` represents alive sessions.

- Use `$expand=SessionMetrics` to get the metrics of each session.

Request

```
GET /monitorodata/Sessions?$filter=EndDate eq null
&$select=StartDate,ConnectionState,SessionIdleTime&$expand=SessionMetrics(
$select=IcaRttMS),Machine($expand=DesktopGroup($select=Name)),Machine($sel
ect=Name),User($select=UserName),CurrentConnection($select=ClientName,Clie
ntVersion,ClientAddress,ConnectedViaIPAddress,BrokeringDuration) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Sessions(StartDate,ConnectionState,SessionIdleTime,SessionMetric
s(IcaRttMS),Machine(Name,DesktopGroup(Name)),User(UserName),CurrentConnect
ion(ClientName,ClientVersion,ClientAddress,ConnectedViaIPAddress,Brokering
Duration))",

    "value": [

        {
```

```
        "StartDate": "2024-06-25T07:46:56.673Z",
        "ConnectionState": 2,
        "SessionIdleTime": null,
        "SessionMetrics": [
            {
                "IcaRttMS": 0
            },
            {
                "IcaRttMS": 0
            }
        ],
        "Machine": {
            "Name": "FAKEDOMAIN1\\FAKEM1",
            "DesktopGroup": {
                "Name": "FAKEDOMAIN1\\FAKE-DG1"
            }
        },
        "User": {
            "UserName": "FAKENAME2"
        },
        "CurrentConnection": {
            "ClientName": "FAKECLIENT1",
```

```
            "ClientAddress": "192.0.2.42",
            "ClientVersion": "24.5.0.131",
            "ConnectedViaIPAddress": "203.0.113.7",
            "BrokeringDuration": null
        }
    },
    {
        "StartDate": "2024-07-26T20:35:12.673Z",
        "ConnectionState": 2,
        "SessionIdleTime": "2024-07-26T20:48:00Z",
        "SessionMetrics": [
            {
                "IcaRttMS": 0
            },
            {
                "IcaRttMS": 0
            }
        ],
        "Machine": {
            "Name": "FAKEDOMAIN1\\FAKEM3",
            "DesktopGroup": {
                "Name": "FAKE-DG2"
```

```
                }
            },
            "User": {
                "UserName": "FAKENAME3"
            },
            "CurrentConnection": {
                "ClientName": "FAKECLIENT2",
                "ClientAddress": "192.0.2.88",
                "ClientVersion": "24.5.0.131",
                "ConnectedViaIPAddress": "192.0.2.60",
                "BrokeringDuration": null
            }
        }
    ]
}
```

Alive sessions for target DesktopGroup

- `Machine/DesktopGroup/Id eq ad9e2d3d-44ac-49b0-a34b-7affb5ce3596` represents the target Desktop Group.
- `EndDate eq null` represents alive sessions.

Request

```
GET /monitorodata/Sessions?
$expand=Machine($expand=DesktopGroup)&$filter=(Machine/DesktopGroup/Id eq
ad9e2d3d-44ac-49b0-a34b-7affb5ce3596) and (EndDate eq null) HTTP/1.1
```

```
Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Sessions(Machine(DesktopGroup()))",

    "value": [

        {

            "SessionKey": "2d53d7f8-477c-4b18-a060-0081e050cc25",

            "StartDate": "2024-06-25T07:46:56.673Z",

            "LogOnDuration": 122030,

            "EndDate": null,

            "ExitCode": 1,

            "FailureId": null,
```

```
            "FailureDate": null,
            "ConnectionState": 2,
            "SessionIdleTime": null,
            "ConnectionStateChangeDate": "2024-07-31T21:22:44.527Z",
            "LifecycleState": 0,
            "CurrentConnectionId": 886035,
            "UserId": 4320,
            "MachineId": "43a6ac00-9263-4c1b-acf5-f68267c6a26f",
            "SessionType": 0,
            "IsAnonymous": false,
            "PublishedDesktopId": 3,
            "CreatedDate": "2024-06-25T07:48:43.95Z",
            "ModifiedDate": "2024-07-31T21:22:44.527Z",
            "Machine": {
                "Id": "43a6ac00-9263-4c1b-acf5-f68267c6a26f",
                "Sid": "S-1-5-21-1234567890-1234567890-1234567890-1001",
                "Name": "FAKEDOMAIN1\\FAKEM2",
                "DnsName": "fakem2.example.com",
                "LifecycleState": 0,
                "IPAddress": "192.0.2.178",
                "HostedMachineId": "e59ef480-56b7-8f02-5233-efd5a161cc41",
                "HostingServerName": "FAKEvisor",
```

```
"HostedMachineName": "FAKEM2",

"IsAssigned": false,

"IsInMaintenanceMode": false,

"IsPendingUpdate": false,

"AgentVersion": "2212.0.0.77",

"AssociatedUserFullNames": "FAKENAME1",

"AssociatedUserNames": "FAKEDOMAIN1\\FAKENAME1",

"AssociatedUserUPNs": "FAKENAME1@example.com",

"CurrentRegistrationState": 1,

"RegistrationStateChangeDate": "2024-07-05T04:07:06.44Z",

"LastDeregisteredCode": 0,

"LastDeregisteredDate": "2024-06-24T05:33:40.443Z",

"CurrentPowerState": 3,

"CurrentSessionCount": 1,

"ControllerDnsName": "fakeddc3.example.com",

"PoweredOnDate": "2024-06-24T10:06:16.1Z",

"PowerStateChangeDate": "2024-07-12T18:50:38.627Z",

"FunctionalLevel": 10,

"FailureDate": null,

"WindowsConnectionSetting": 0,

"IsPreparing": false,

"FaultState": 1,
```

```
                "OSType": "Windows 2019",

                "CurrentLoadIndexId": 17861538,

                "CatalogId": "11c5298e-4516-4c1b-b83a-efb219009b71",

                "DesktopGroupId": "ad9e2d3d-44ac-49b0-a34b-7affb5ce3596",

                "HypervisorId": "56ac3d9f-2691-4d2c-aacb-95726611fe79",

                "LastPowerActionType": 1,

                "LastPowerActionReason": 8,

                "LastPowerActionFailureReason": 400,

                "LastPowerActionCompletedDate":
"2024-06-24T10:06:21.937Z",

                "Tags": [],

                "Hash": "",

                "MachineRole": 0,

                "CreatedDate": "2021-04-27T12:41:12.097Z",

                "ModifiedDate": "2024-07-12T18:50:38.627Z",

                "DesktopGroup": {

                    "Id": "ad9e2d3d-44ac-49b0-a34b-7affb5ce3596",

                    "Name": "FAKEDOMAIN1\\FAKE-DG1",

                    "IsRemotePC": false,

                    "DesktopKind": 1,

                    "LifecycleState": 0,

                    "SessionSupport": 1,
```

```
                    "DeliveryType": 2,

                    "IsInMaintenanceMode": false,

                    "MachineCost": 0.0,

                    "CurrencyType": null,

                    "AutoscaleTagId": 0,

                    "CreatedDate": "2020-05-19T00:07:37.387Z",

                    "ModifiedDate": "2024-06-04T00:05:01.13Z"

                }

            }

        }

    ]

}
```


Terminated sessions in a time range

- `ConnectionState eq 3` represents terminated sessions.
- `FailureDate gt 2020-12-04T15:08:25.000Z` gets failures after the mentioned timestamp.

Request

```
GET /monitorodata/Sessions?$filter=ConnectionState eq 3 or FailureDate gt
2020-12-04T15:08:25.000Z HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Sessions",

    "value": [

        {

            "SessionKey": "3f570c39-a0d0-4dda-9e2e-001040b22ea7",

            "StartDate": "2024-05-17T09:22:06.87Z",

            "LogOnDuration": null,

            "EndDate": "2024-05-17T09:22:06.87Z",

            "ExitCode": 101,

            "FailureId": 13,

            "FailureDate": "2024-05-17T09:22:06.87Z",

            "ConnectionState": 3,

            "SessionIdleTime": null,
```

```
            "ConnectionStateChangeDate": "2024-05-17T09:22:06.87Z",

            "LifecycleState": 3,

            "CurrentConnectionId": 857484,

            "UserId": 2762,

            "MachineId": "510ff5f6-887c-4a43-a042-c6bf03313da0",

            "SessionType": 0,

            "IsAnonymous": false,

            "PublishedDesktopId": null,

            "CreatedDate": "2024-05-17T09:22:06.87Z",

            "ModifiedDate": "2024-05-17T09:22:06.87Z"

        }

    ]

}
```


Running Desktop sessions

- `ConnectionState eq 5` and `EndDate eq null` represents running sessions.
- `SessionType eq 0` represents desktop sessions

Request

```
GET /monitorodata/Sessions?$filter=ConnectionState eq 5 and EndDate eq
null and SessionType eq
0&$select=SessionKey,StartDate,SessionType&$expand=PublishedDesktopName,Us
er($select=FullName,Upn),Machine($select=Name)&$count=true HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>
```

```
Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Sessions",

    "value": [

        {

            "SessionKey":"1b8b2cbf-8281-49a5-9822-00026b2ef1f8",

            "StartDate":"2024-11-26T08:18:36.743Z",

            "SessionType":0,

            "PublishedDesktopName":{

                "Id":5,

                "PublishedName":"Desktop-FAKE-DG11"

            },

            "User":{
```

```
                "Upn":"user.name@example.com",
                "FullName":"User Name"
            },
            "Machine":{
                "Name":"FAKEDOMAIN1\\FAKEM12"
            }
        }
    ]
}
```

Number of active sessions by Desktop Group and Session Type

As part of this example, we query the Sessions entity, but expand to the DesktopGroup via the Machine entity. We group by the DesktopGroup name and the Session type. The list of Session Types can be found here: SessionType.

Request

```
GET /monitorodata/Sessions?$apply=filter(StartDate ge 2025-05-02 and
EndDate eq null)/expand(Machine,expand(DesktopGroup,filter(Name ne
null)))/groupby((Machine/DesktopGroup/
Name,SessionType),aggregate(SessionKey with countdistinct as
SessionCount)) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Sessions",

    "value": [

        {

            "@odata.id":null,

            "SessionType":0,

            "SessionCount":36,

            "Machine":{

                "@odata.id":null,

                "DesktopGroup":{

                    "@odata.id":null,

                    "Name":"FAKE-DG6"

                }
```

```
            }

        }

    ]

}
```

Connection data request examples

Connection represents an initial connection or reconnect for a session.

Use Citrix Monitor Service API to get the details of connection.

> **NOTE:** The request examples of this section target **cloud** setups. However the OData queries also apply to **on-premises** setups. Simply adjust the request URL to be of the form `http[s]://{MonitorServiceHost}/Citrix/Monitor/OData/v4/Data/{ODataQuery}` and change the authentication to NTLM.

Prerequisites

- Read the Get started with Citrix Cloud APIs section to ensure that you have a valid `bearer token`.
- Use the endpoint `https://{ApiGatewayEndpoint}/monitorodata/Connections` for your requests. See Supported API Gateway endpoints for a list of region specific API gateway endpoints.
- Invoke the API described in this document from a client host.

Connection details for sessions with failure

- Use `$expand` operation to get the details for sessions with failure.

Request

```
/monitorodata/Connections?$filter=Session/FailureDate ge
2024-07-24T00:00:00.000Z and Session/FailureDate le
2024-07-25T00:00:00.000Z &$select=*,&$expand=Session($select=*;
$expand=User($select=UPN,UserName),Failure($select=ConnectionFailureEnumVa
```

```
lue,Category),Machine($select=DnsName,DesktopGroupId,IsInMaintenanceMode))
HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0




{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Connections(*,Session(*,User(Upn,UserName),Failure(ConnectionFai
lureEnumValue,Category),Machine(DnsName,DesktopGroupId,IsInMaintenanceMode
)))",

    "value": [

        {

            "Id": 408601,

            "ClientName": "FAKECLIENT3",

            "ClientAddress": "192.0.2.144",
```

```
            "ClientVersion": "22.01.0.9",
            "ClientPlatform": "Macintosh",
            "ConnectedViaHostName": null,
            "ConnectedViaIPAddress": "192.0.2.36",
            "LaunchedViaHostName": "Workspace",
            "LaunchedViaIPAddress": null,
            "IsReconnect": false,
            "IsSecureIca": false,
            "Protocol": "HDX",
            "LogOnStartDate": "2022-03-31T07:49:47.307Z",
            "LogOnEndDate": "2022-03-31T07:50:00.33Z",
            "BrokeringDuration": null,
            "BrokeringDate": null,
            "DisconnectCode": 0,
            "DisconnectDate": "2022-03-31T08:10:51.533Z",
            "VMStartStartDate": null,
            "VMPoweredOnDate": null,
            "VMStartEndDate": null,
            "ClientSessionValidateDate": null,
            "ServerSessionValidateDate": "2022-03-31T07:49:47.307Z",
            "EstablishmentDate": "2022-03-31T07:49:47.307Z",
            "HdxStartDate": null,
```

```
            "HdxEndDate": null,
            "AuthenticationDuration": null,
            "GpoStartDate": null,
            "GpoEndDate": null,
            "LogOnScriptsStartDate": null,
            "LogOnScriptsEndDate": null,
            "ProfileLoadStartDate": null,
            "ProfileLoadEndDate": null,
            "InteractiveStartDate": null,
            "InteractiveEndDate": null,
            "SessionKey": "38502302-78ed-4f02-a3f0-cf6a31269b29",
            "CreatedDate": "2022-03-31T07:50:00.33Z",
            "ModifiedDate": "2022-03-31T08:10:51.533Z",
            "Session": {
                "SessionKey": "38502302-78ed-4f02-a3f0-cf6a31269b29",
                "StartDate": "2022-03-31T07:49:47.307Z",
                "LogOnDuration": null,
                "EndDate": null,
                "ExitCode": 1,
                "FailureId": 13,
                "FailureDate": "2024-07-24T14:53:56.517Z",
                "ConnectionState": 2,
```

```
"SessionIdleTime": null,
"ConnectionStateChangeDate": "2022-04-22T07:47:14.63Z",
"LifecycleState": 0,
"CurrentConnectionId": 884385,
"UserId": 1505,
"MachineId": "7ff93079-914a-4e6e-b9fe-5ce6e7578684",
"SessionType": 0,
"IsAnonymous": false,
"PublishedDesktopId": null,
"CreatedDate": "2022-03-31T07:50:00.33Z",
"ModifiedDate": "2022-04-22T07:47:14.63Z",
"User": {
    "Upn": "test.test@example.com",
    "UserName": "test"
},
"Failure": {
    "ConnectionFailureEnumValue": 101,
    "Category": 2
},
"Machine": {
    "DnsName": "fakem1.example.com",
    "IsInMaintenanceMode": false,
```

```
                    "DesktopGroupId": "b62f4949-0756-4a1e-94d9-
e70cdfd0a198"

                }

            }

        }

    ]

}
```

List of client versions

For the list of the client versions, we can query the Connections entity. We can aggregate over the Client platform and version and calculate the number of clients running each of the versions.

Request

```
/monitorodata/Connections?$apply=filter(ClientVersion ne null and
ClientPlatform ne null)/
groupby((ClientPlatform,ClientVersion),aggregate(ClientName with
countdistinct as ClientCount)) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506
```

```
Connection: keep-alive

odata-version: 4.0




{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Connections(ClientPlatform,ClientVersion,ClientCount)",

    "value": [

        {

            "@odata.id":null,

            "ClientVersion":"24.8.0",

            "ClientPlatform":"Android",

            "ClientCount":15

        },

        {

            "@odata.id":null,

            "ClientVersion":"24.11.0.2065",

            "ClientPlatform":"Windows",

            "ClientCount":18

        }

    ]
```

```
}
```

Connection Failure log request examples

Use Citrix Monitor Service API to get the details of connection failures.

> **NOTE:** The request examples of this section target **cloud** setups. However the OData queries also apply to **on-premises** setups. Simply adjust the request URL to be of the form `http[s]://{MonitorServiceHost}/Citrix/Monitor/OData/v4/Data/{ODataQuery}` and change the authentication to NTLM.

Prerequisites

- Read the Get started with Citrix Cloud APIs section to ensure that you have a valid `bearer token`.
- Use the endpoint `https://{ApiGatewayEndpoint}/monitorodata/ConnectionFailureLogs` for your requests. See Supported API Gateway endpoints for a list of region specific API gateway endpoints.
- Invoke the API described in this document from a client host.

ConnectionFailureLogs for target time

- `$filter=(FailureDate ge 2024-07-30T00:00:00Z and FailureDate le 2024-07-31T00:00:00Z)` represents the target time range.

Request

```
GET /monitorodata/ConnectionFailureLogs?$filter=(FailureDate ge
2024-07-30T00:00:00Z and FailureDate le 2024-07-31T00:00:00Z) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#ConnectionFailureLogs",

    "value": [

        {

            "Id": 128230,

            "SessionKey": "77337e10-1ad2-4e95-8990-b83a420405ed",

            "FailureDate": "2024-07-30T01:02:49.37Z",

            "UserId": 1225,

            "MachineId": "53e6e3b6-a874-4e9b-ab4b-61241c34f241",

            "ConnectionFailureEnumValue": 4,

            "CreatedDate": "2024-07-30T01:02:49.37Z",

            "ModifiedDate": "2024-07-30T01:02:51.387Z"

        },
```

```
        {
            "Id": 128231,
            "SessionKey": "77337e10-1ad2-4e95-8990-b83a420405ed",
            "FailureDate": "2024-07-30T01:19:49.98Z",
            "UserId": 1225,
            "MachineId": "53e6e3b6-a874-4e9b-ab4b-61241c34f241",
            "ConnectionFailureEnumValue": 4,
            "CreatedDate": "2024-07-30T01:19:49.98Z",
            "ModifiedDate": "2024-07-30T01:19:52.727Z"
        }
    ]
}
```


ConnectionFailureLogs related Machine, Session and User

- With `$expand` operation to get the related Machine, Session and User details for ConnectionFailureLogs.

Request

```
GET /monitorodata/ConnectionFailureLogs?$filter=(FailureDate ge
2024-07-31T00:00:00Z)&$expand=Machine($select=Name,CurrentRegistrationStat
e,IsInMaintenanceMode),User($select=Sid,Upn,UserName,Domain),Session HTTP/
1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#ConnectionFailureLogs",

    "value": [

        {

            "Id": 128249,

            "SessionKey": "0b3e91c9-b324-4a32-871a-70cc8e9a7a2a",

            "FailureDate": "2024-07-31T00:23:48.84Z",

            "UserId": 1308,

            "MachineId": "3563b00d-4c5b-4658-8fa2-9eddbf017e0b",

            "ConnectionFailureEnumValue": 3,

            "CreatedDate": "2024-07-31T00:23:48.84Z",

            "ModifiedDate": "2024-07-31T00:23:51.547Z",

            "Machine": {
```

```
            "Name": "FAKEDOMAIN1\\FAKEM1",
            "IsInMaintenanceMode": false,
            "CurrentRegistrationState": 2
        },
        "User": {
            "Sid": "S-1-5-21-1234567890-1234567890-1234567890-1001",
            "Upn": "FAKENAME1@example.com",
            "UserName": "FAKENAME1",
            "Domain": "FAKEDOMAIN1"
        },
        "Session": {
            "SessionKey": "0b3e91c9-b324-4a32-871a-70cc8e9a7a2a",
            "StartDate": "2024-07-19T13:30:02.003Z",
            "LogOnDuration": 149790,
            "EndDate": null,
            "ExitCode": 1,
            "FailureId": 11,
            "FailureDate": "2024-07-31T13:38:20.69Z",
            "ConnectionState": 2,
            "SessionIdleTime": null,
            "ConnectionStateChangeDate": "2024-07-25T13:57:20.283Z",
            "LifecycleState": 0,
```

```
                "CurrentConnectionId": 885929,

                "UserId": 1308,

                "MachineId": "3563b00d-4c5b-4658-8fa2-9eddbf017e0b",

                "SessionType": 0,

                "IsAnonymous": false,

                "PublishedDesktopId": 20,

                "CreatedDate": "2024-07-19T13:32:30.267Z",

                "ModifiedDate": "2024-07-25T13:57:20.283Z"

            }

        }

    ]

}
```


Count by ConnectionFailureEnumValue

- With `groupby` and `aggregate` operations, you can get the ConnectionFailureLogs count grouped by ConnectionFailureEnumValue.

Request

```
GET /monitorodata/ConnectionFailureLogs?$apply=filter(CreatedDate gt
2024-07-01T00:00:00.00Z )/groupby((ConnectionFailureEnumValue),
aggregate(Id with countdistinct as FailureCount)) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#ConnectionFailureLogs",

    "value": [

        {

            "@odata.id": null,

            "ConnectionFailureEnumValue": 3,

            "FailureCount": 63

        },

        {

            "@odata.id": null,

            "ConnectionFailureEnumValue": 4,

            "FailureCount": 178

        }
```

```
    ]

}
```

Users with a high number of session failures

As part of this example, we query the ConnectionFailureLogs entity, where session failures are logged. The linking to the Users entity is done through the Sessions entity. We group by the user entity, get the distinct count of failures and select the top items.

Request

```
GET /monitorodata/ConnectionFailureLogs?$apply=filter(Session/StartDate ge
2025-05-01)/groupby((Session/User/FullName,ConnectionFailureEnumValue),
aggregate(Id with countdistinct as FailureCount))&$orderby=FailureCount
desc&$top=20 HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{
```

```
    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#ConnectionFailureLogs",

    "value": [

        {

            "@odata.id":null,

            "ConnectionFailureEnumValue":100,

            "FailureCount":8,

            "Session":{

                "@odata.id":null,

                "User":{

                    "@odata.id":null,

                    "FullName":"User Name"

                }

            }

        }

    ]

}
```


Application data request examples

Application represents a virtualized application running on a session. Use Citrix Monitor Service API to get the details of applications.

> **NOTE:** The request examples of this section target **cloud** setups. However the OData queries also apply to **on-premises** setups. Simply adjust the request URL to be of the form

> `http[s]://{MonitorServiceHost}/Citrix/Monitor/OData/v4/Data/{ODataQuery}` and change the authentication to NTLM.

Prerequisites

- Read the Get started with Citrix Cloud APIs section to ensure that you have a valid `bearer token`.
- Use the endpoint `https://{ApiGatewayEndpoint}/monitorodata/Applications` for your requests. See Supported API Gateway endpoints for a list of region specific API gateway endpoints.
- Invoke the API described in this document from a client host.

Active Applications with Desktop Group ID

- `LifecycleState=0` represents active applications.

Request

```
GET /monitorodata/Applications?$filter=LifecycleState eq
0&$expand=DesktopGroups($select=Id) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0
```

```
{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Applications",

    "value": [

        {

            "Id": "40610fc4-cbc0-4458-baaa-07254ae54d41",

            "Name": "Citrix Floor Plan Viewer",

            "PublishedName": "Citrix Floor Plan Viewer",

            "ApplicationType": 0,

            "Enabled": false,

            "AdminFolder": "",

            "LifecycleState": 0,

            "Path": "C:\\Program Files (x86)\\Norskale\\Norskale Agent
Host\\VUEMAppCmd.exe",

            "BrowserName": "Citrix Floor Plan Viewer",

            "CreatedDate": "2018-12-11T19:55:33.29Z",

            "ModifiedDate": "2018-12-11T19:55:33.29Z",

            "DesktopGroups": [

                {

                    "Id": "0052e44f-f32d-476f-a307-cfd617baabda"

                }

            ]
```

```
        }

    ]

}
```

Application count by ApplicationType

- Use `groupby` operation to get the count group by ApplicationType.

Request

```
GET /monitorodata/Applications?$apply=groupby((ApplicationType),
aggregate(Name with countdistinct as NumberofApplications)) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Applications",
```

```
    "value": [
        {
            "@odata.id": null,
            "ApplicationType": 0,
            "NumberofApplications": 68
        }
    ]
}
```

Active applications with count

- `LifecycleState eq 0` represents active applications.
- `$count=true` parameter appends the record count to the response.

Request

```
GET /monitorodata/Applications?$filter=LifecycleState eq 0&$count=true
HTTP/1.1
Host: api.cloud.com
Authorization: CWSAuth bearer=<Token>
Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK
Date: Thu, 01 Aug 2024 06:23:00 GMT
Content-Type: application/json; odata.metadata=minimal
Content-Length: 5506
```

```
Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#Applications",

    "@odata.count": 68,

    "value": [

        {

            "Id": "88040e8b-8b62-4cde-bc2c-014d87518191",

            "Name": "FAKEApp",

            "PublishedName": "FAKEApp",

            "ApplicationType": 0,

            "Enabled": false,

            "AdminFolder": "",

            "LifecycleState": 0,

            "Path": "C:\\Program Files (x86)\\Norskale\\Norskale Agent
Host\\VUEMAppCmd.exe",

            "BrowserName": "FAKEApp",

            "CreatedDate": "2018-12-11T19:56:18.177Z",

            "ModifiedDate": "2018-12-11T19:56:18.177Z"

        }

    ]
```

```
}
```

Application instance data request examples

Application instance is the record of an instance of a running application.

Use Citrix Monitor Service API to get the details of application instance.

> **NOTE:** The request examples of this section target **cloud** setups. However the OData queries also apply to **on-premises** setups. Simply adjust the request URL to be of the form `http[s]://{MonitorServiceHost}/Citrix/Monitor/OData/v4/Data/{ODataQuery}` and change the authentication to NTLM.

Prerequisites

- Read the Get started with Citrix Cloud APIs section to ensure that you have a valid `bearer token`.
- Use the endpoint `https://{ApiGatewayEndpoint}/monitorodata/ApplicationInstances` for your requests. See Supported API Gateway endpoints for a list of region specific API gateway endpoints.
- Invoke the API described in this document from a client host.

ApplicationInstances for non-terminated sessions

- `EndDate is null` and `ConnectionState!=3` represent not terminated sessions.
- With the `expand` operator we enrich the output records with Application, Session and Machine details

Request

```
GET /monitorodata/ApplicationInstances?$filter=EndDate eq null and
Session/ConnectionState ne
3&$expand=Application($select=Name,PublishedName,Path),Session($select=Sta
rtDate,ConnectionState,SessionType;
$expand=Machine($select=Name))&$count=true HTTP/1.1

Host: api.cloud.com
```

```
Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#ApplicationInstances",

    "value": [

        {

            "SessionKey":"559dfdb2-235f-4131-925c-21ca3983dcd5",

            "StartDate":"2024-11-28T15:08:50.4433333Z",

            "EndDate":null,

            "Application":{

                "Name":"Paint",

                "PublishedName":"Paint",

                "Path":"C:\\Windows\\system32\\mspaint.exe"
```

```
            },
            "Session":{
                "StartDate":"2024-11-28T15:08:21.033Z",
                "ConnectionState":5,
                "SessionType":1,
                "Machine":{
                    "Name":"FAKEDOMAIN1\\FAKEM12"
                },
                "User":{
                    "Upn":"user.name@example.com",
                    "FullName":"User Name"
                }
            }
        }
    ]
}
```


ApplicationInstances for target application with Machine and User information

- Use `filter` operation to get the details for target application.
- Use `expand` operation to get the related Machine and User Information.

Request

```
GET /monitorodata/ApplicationInstances?$apply=filter(ApplicationId eq
6b07220e-b7d2-4f8d-9e43-49bd85222553 and EndDate eq
null)&$expand=Session($expand=Machine,User) HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#ApplicationInstances",

    "value": [

        {

            "Id": 13361311,

            "ApplicationId": "6b07220e-b7d2-4f8d-9e43-49bd85222553",

            "SessionKey": "762e418d-270f-4db1-bc7a-2eb3747825fb",
```

```
            "StartDate": "2024-07-28T10:06:19.363Z",
            "EndDate": null,
            "CreatedDate": "2024-07-28T10:06:19.363Z",
            "ModifiedDate": "2024-07-28T10:06:19.363Z",
            "Session": {
                "SessionKey": "762e418d-270f-4db1-bc7a-2eb3747825fb",
                "StartDate": "2024-07-28T10:06:05.397Z",
                "LogOnDuration": 15408,
                "EndDate": null,
                "ExitCode": 1,
                "FailureId": null,
                "FailureDate": null,
                "ConnectionState": 5,
                "SessionIdleTime": null,
                "ConnectionStateChangeDate": "2024-07-28T10:06:17.55Z",
                "LifecycleState": 0,
                "CurrentConnectionId": 33952565,
                "UserId": 103038,
                "MachineId": "b5630f84-9234-485c-bb3b-68217feb451b",
                "SessionType": 1,
                "IsAnonymous": false,
                "PublishedDesktopId": null,
```

```
                "CreatedDate": "2024-07-28T10:06:17.55Z",

                "ModifiedDate": "2024-08-02T08:08:38Z",

                "Machine": {

                    "Id": "b5630f84-9234-485c-bb3b-68217feb451b",

                    "Sid":
"S-1-5-21-1234567890-1234567890-1234567890-1001",

                    "Name": "FAKEDOMAIN1\\FAKEM14",

                    "DnsName": "fakem14.example.com",

                    "LifecycleState": 0,

                    "IPAddress": "192.0.2.250",

                    "HostedMachineId": "423fd007-86ff-7729-96bf-
f4cd05646e0a",

                    "HostingServerName": "fakeserver1.example.com",

                    "HostedMachineName": "fakem14",

                    "IsAssigned": false,

                    "IsInMaintenanceMode": true,

                    "IsPendingUpdate": false,

                    "AgentVersion": "1912.0.7000.7052",

                    "AssociatedUserFullNames": "FAKENAME2",

                    "AssociatedUserNames": "FAKEDOMAIN1\\FAKENAME2",

                    "AssociatedUserUPNs": "FAKENAME2@example.com",

                    "CurrentRegistrationState": 1,

                    "RegistrationStateChangeDate":
```

```
"2024-07-26T05:00:32.447Z",

                    "LastDeregisteredCode": 300,

                    "LastDeregisteredDate": "2024-07-19T07:38:43.81Z",

                    "CurrentPowerState": 3,

                    "CurrentSessionCount": 1,

                    "ControllerDnsName": "fakeddc1.example.com",

                    "PoweredOnDate": null,

                    "PowerStateChangeDate": "2024-07-24T10:09:09.293Z",

                    "FunctionalLevel": 7,

                    "FailureDate": null,

                    "WindowsConnectionSetting": 0,

                    "IsPreparing": false,

                    "FaultState": 1,

                    "OSType": "Windows 2019",

                    "CurrentLoadIndexId": 258229225,

                    "CatalogId": "693997ce-3024-4116-9b25-964a0b2f5f66",

                    "DesktopGroupId": "1377ad1d-b245-4782-
b7b4-45b093ae1fe5",

                    "HypervisorId":
"5ac693e1-2fb4-4293-97f2-3c4338e0aff0",

                    "LastPowerActionType": 4,

                    "LastPowerActionReason": 5,

                    "LastPowerActionFailureReason": 400,
```

```
                    "LastPowerActionCompletedDate":
"2024-07-26T04:59:41.257Z",
                    "Tags": [],
                    "Hash": "",
                    "MachineRole": 0,
                    "CreatedDate": "2024-01-26T23:25:41.88Z",
                    "ModifiedDate": "2024-07-31T00:08:38.86Z"
                },
                "User": {
                    "Id": 103038,
                    "Sid":
"S-1-5-21-1234567890-1234567890-1234567890-1002",
                    "Upn": "FAKENAME2@example.com",
                    "UserName": "FAKENAME2",
                    "FullName": "FAKENAME2",
                    "Domain": "FAKEDOMAIN1",
                    "CreatedDate": "2023-07-12T04:43:39.47Z",
                    "ModifiedDate": "2023-07-12T04:43:39.47Z"
                }
            }
        }
    ]
```

```
}
```

Cost optimization data request examples

The MachineCostSavingsSummaries entity provides aggregated metrics related to the cost savings applied on the VDAs.

> **NOTE:** The request examples of this section target **cloud** setups.

Prerequisites

- Read the Get started with Citrix Cloud APIs section to ensure that you have a valid `bearer token`.
- Use the endpoint `https://{ApiGatewayEndpoint}/monitorodata/MachineCostSavingsSummaries` for your requests. See Supported API Gateway endpoints for a list of region specific API gateway endpoints.
- Invoke the API described in this document from a client host.

Find out total savings

For more information on cost savings, see the Cost savings page.

- Apply `aggregate` operation to calculate the sum of the saved amount.

Request

```
GET /monitorodata/MachineCostSavingsSummaries?
$apply=aggregate(TotalAmountSaved with sum as TotalAmountSavedSum) HTTP/
1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 556

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#MachineCostSavingsSummaries(TotalAmountSavedSum)",

    "value": [

        {

            "@odata.id": null,

            "TotalAmountSavedSum": 2035677.9166666665

        }

    ]

}
```

Find out the machine state

- Filter based on the `SummaryDate` and select the fields of interest.

Request

```
GET /monitorodata/MachineCostSavingsSummaries?$filter=SummaryDate eq
2025-05-09T06:00:00Z&$select=TotalMachinesCount,PowerManagedMachinesOff,Po
werManagedMachinesInHibernate,PowerManagedMachinesOnWithSessions,PowerMana
gedMachinesOnWithoutSessions HTTP/1.1

Host: api.cloud.com

Authorization: CWSAuth bearer=<Token>

Citrix-CustomerId: <CustomerId>
```

Response

```
HTTP/1.1 200 OK

Date: Thu, 01 Aug 2024 06:23:00 GMT

Content-Type: application/json; odata.metadata=minimal

Content-Length: 5506

Connection: keep-alive

odata-version: 4.0



{

    "@odata.context": "https://api.cloud.com/monitorodata/
$metadata#MachineCostSavingsSummaries(TotalMachinesCount,PowerManagedMachi
nesOff,PowerManagedMachinesInHibernate,PowerManagedMachinesOnWithSessions,
PowerManagedMachinesOnWithoutSessions)",

    "value": [

        {

            "TotalMachinesCount": 30,

            "PowerManagedMachinesOff": 6,
```

```
            "PowerManagedMachinesInHibernate": 0,
            "PowerManagedMachinesOnWithSessions": 0,
            "PowerManagedMachinesOnWithoutSessions": 24
        },
        {
            "TotalMachinesCount": 14,
            "PowerManagedMachinesOff": 4,
            "PowerManagedMachinesInHibernate": 0,
            "PowerManagedMachinesOnWithSessions": 9,
            "PowerManagedMachinesOnWithoutSessions": 1
        }
    ]
}
```


Other examples relevant to Cost Optimization

- Find unused VDAs
- Find the daily average uptime in minutes
- Find failed machine power action

Resources

Getting Started Guides

- Citrix Monitor service API documentation
- Get Citrix Cloud authentication credentials for OData
- Learn more about accessing Citrix Monitor OData v4

Citrix Monitor Postman Collection

- Public Citrix Postman workspace
- Monitor OData API examples collection
- Monitor OData environment

Do More With Data Sets

- Data models-monitor service schema
- OData API and PowerShell SDK tutorial (video)
- Monitoring Citrix Cloud with OData and PowerShell (video)
- Monitoring CVAD with OData (video)
- Learn more about the OData syntax
- Descriptions for enums and error codes

Developer Community

- PowerBI template
- PowerBI step-by-step integration
- Powershell data collection scripts
- API usage samples and use cases (GitHub)

Blogs

- Deep dive into Monitor API

Release notes

January 2025

- Add the default filter in API Exploration.
- Add How to access On-Premises Monitor OData API.
- Update the PowerQuery template.
- Add How to invoke API.

October 2024

- Add SpaApplications, SpaEnumerations and SpaSessions for SPA.

September 2024

- Re-organize the document.
- Add the How to section for use cases.
- Add the Resources section and included all the required information for Monitor OData.
- Add the API Exploration section for API usage.

May 2024

- Update the API doc for current release.

May 2023

- Update the API doc for 7-15-ltsr.

Questions?

Questions?

API Reference

swagger-api