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# Management Guide

## NetIQ® AppManager® for Citrix XenDesktop and XenApp

December 2018

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# About this Book and the Library

The NetIQ AppManager product (AppManager) is a comprehensive solution for managing, diagnosing, and analyzing performance, availability, and health for a broad spectrum of operating environments, applications, services, and server hardware.

AppManager provides system administrators with a central, easy-to-use console to view critical server and application resources across the enterprise. With AppManager, administrative staff can monitor server and application resources, check for potential problems, initiate responsive actions, automate routine tasks, and gather performance data for real-time and historical reporting and analysis.

## Intended Audience

This guide provides information for individuals responsible for installing an AppManager module and monitoring specific applications with AppManager.

## Other Information in the Library

The library provides the following information resources:

### **Installation Guide for AppManager**

Provides complete information about AppManager pre-installation requirements and step-by-step installation procedures for all AppManager components.

### **User Guide for AppManager Control Center**

Provides complete information about managing groups of servers, including running jobs, responding to events, creating reports, and working with Control Center. A separate guide is available for the AppManager Operator Console.

### **Administrator Guide for AppManager**

Provides information about maintaining an AppManager management site, managing security, using scripts to handle AppManager tasks, and leveraging advanced configuration options.

### **Upgrade and Migration Guide for AppManager**

Provides complete information about how to upgrade from a previous version of AppManager.

### **Management guides**

Provide information about installing and monitoring specific applications with AppManager.

### **Help**

Provides context-sensitive information and step-by-step guidance for common tasks, as well as definitions for each field on each window.

The AppManager library is available in Adobe Acrobat (PDF) format from the [AppManager Documentation](#) page of the NetIQ Web site.



# About NetIQ Corporation

We are a global, enterprise software company, with a focus on the three persistent challenges in your environment: Change, complexity and risk—and how we can help you control them.

## Our Viewpoint

### **Adapting to change and managing complexity and risk are nothing new**

In fact, of all the challenges you face, these are perhaps the most prominent variables that deny you the control you need to securely measure, monitor, and manage your physical, virtual, and cloud computing environments.

### **Enabling critical business services, better and faster**

We believe that providing as much control as possible to IT organizations is the only way to enable timelier and cost effective delivery of services. Persistent pressures like change and complexity will only continue to increase as organizations continue to change and the technologies needed to manage them become inherently more complex.

## Our Philosophy

### **Selling intelligent solutions, not just software**

In order to provide reliable control, we first make sure we understand the real-world scenarios in which IT organizations like yours operate — day in and day out. That's the only way we can develop practical, intelligent IT solutions that successfully yield proven, measurable results. And that's so much more rewarding than simply selling software.

### **Driving your success is our passion**

We place your success at the heart of how we do business. From product inception to deployment, we understand that you need IT solutions that work well and integrate seamlessly with your existing investments; you need ongoing support and training post-deployment; and you need someone that is truly easy to work with — for a change. Ultimately, when you succeed, we all succeed.

## Our Solutions

- ◆ Identity & Access Governance
- ◆ Access Management
- ◆ Security Management
- ◆ Systems & Application Management
- ◆ Workload Management
- ◆ Service Management

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For questions about products, pricing, and capabilities, contact your local partner. If you cannot contact your partner, contact our Sales Support team.

<b>Worldwide:</b>	<a href="http://www.netiq.com/about_netiq/officelocations.asp">www.netiq.com/about_netiq/officelocations.asp</a>
<b>United States and Canada:</b>	1-888-323-6768
<b>Email:</b>	<a href="mailto:info@netiq.com">info@netiq.com</a>
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## Contacting Documentation Support

Our goal is to provide documentation that meets your needs. The documentation for this product is available on the NetIQ Web site in HTML and PDF formats on a page that does not require you to log in. If you have suggestions for documentation improvements, click **comment on this topic** at the bottom of any page in the HTML version of the documentation posted at [www.netiq.com/documentation](http://www.netiq.com/documentation). You can also email [Documentation-Feedback@netiq.com](mailto:Documentation-Feedback@netiq.com). We value your input and look forward to hearing from you.

## Contacting the Online User Community

NetIQ Communities, the NetIQ online community, is a collaborative network connecting you to your peers and NetIQ experts. By providing more immediate information, useful links to helpful resources, and access to NetIQ experts, NetIQ Communities helps ensure you are mastering the knowledge you need to realize the full potential of IT investments upon which you rely. For more information, visit [community.netiq.com](http://community.netiq.com).



# 1 Introducing AppManager for Citrix XenDesktop and XenApp

AppManager for Citrix XenDesktop and XenApp lets you manage the performance and availability of Citrix XenDesktop or XenApp servers.

The XenDesktop category of Knowledge Scripts tracks vital aspects of system performance for Citrix XenDesktop and XenApp, including:

- ◆ The status and number of sessions on a Citrix XenDesktop or XenApp server
- ◆ The number and type of failures that have occurred on servers in delivery groups on a XenDesktop or XenApp server
- ◆ The total instances of all applications and separate instances for each of the applications that are running
- ◆ XenDesktop or XenApp error or warning events from the Windows Application event log and custom Citrix logs
- ◆ The status of XenDesktop or XenApp services
- ◆ The license usage and license expiration of XenDesktop or XenApp servers
- ◆ The registration state of XenDesktop or XenApp servers
- ◆ The activity of the databases associated with the Broker, Host, and Machine Creation XenDesktop services

By monitoring your Citrix server implementation at the component level, you can quickly identify areas that might have a negative impact on overall performance, and then you can modify the configuration to improve performance.



# 2 Installing AppManager for Citrix XenDesktop and XenApp

This chapter provides installation instructions and describes system requirements for AppManager for Citrix XenDesktop and XenApp.

This chapter assumes you have AppManager installed. For more information about installing AppManager or about AppManager system requirements, see the *Installation Guide for AppManager*, which is available on the [AppManager Documentation](#) page.

## 2.1 System Requirements

For the latest information about supported software versions and the availability of module updates, visit the [AppManager Supported Products](#) page. Unless noted otherwise, this module supports all updates, hotfixes, and service packs for the releases listed below.

AppManager for Citrix XenDesktop and XenApp has the following system requirements:

Software/Hardware	Version
NetIQ AppManager installed on the AppManager repository (QDB) computers, on the XenDesktop or XenApp servers you want to monitor (agents), and on all console computers	8.0.3, 8.2, 9.1, 9.2, 9.5, or later One of the following AppManager agents are required: <ul style="list-style-type: none"><li>◆ AppManager agent 7.0.4 with hotfix 72616 or later</li><li>◆ AppManager agent 8.0.3, 8.2, 9.1, 9.2, 9.5, or later</li></ul>
Microsoft Windows operating system on the agent computers	One of the following: <ul style="list-style-type: none"><li>◆ Windows Server 2016</li><li>◆ Windows Server 2012 R2</li><li>◆ Windows Server 2012</li><li>◆ Windows Server 2008 R2</li></ul>
Citrix XenDesktop or XenApp on the agent computers	One of the following: <ul style="list-style-type: none"><li>◆ XenDesktop 7.12, 7.11, 7.6, 7.5, or 7.1</li><li>◆ XenApp 7.12, 7.11, 7.6, or 7.5</li></ul>
Microsoft Windows PowerShell on all Citrix XenDesktop or XenApp servers	2.0 or later
Citrix XenDesktop or XenApp Server SDK on all Citrix XenDesktop or XenApp servers	6.0 or later

Software/Hardware	Version
Microsoft .NET Framework on the agent computer where XenDesktop or XenApp is installed	Version 2.0 (based on a requirement of the NetIQ PowerShellHost)
	<p><b>NOTE</b></p> <ul style="list-style-type: none"> <li>◆ You can also install .NET Framework 3.0 or 3.5, which automatically installs .NET Framework version 2.0.</li> <li>◆ If you install .NET Framework 4.0 or later, then you must also install AppManager for Microsoft Windows 8.1.82.0.</li> </ul>
AppManager for Microsoft Windows module installed on repository, agent, and console computers	7.6.170.0 or later
Microsoft SQL Server Native Client 11.0 <b>(for TLS 1.2 support)</b>	11.3.6538.0 or later <b>NOTE:</b> The SQL Server Native client can be installed from this <a href="#">Microsoft download link</a> .

**NOTE:** If you want TLS 1.2 support and are running AppManager 9.1 or 9.2, then you are required to perform some additional steps. To know about the steps, see the [article](#).

## 2.2 Installing the Module

Run the module installer on the XenDesktop or XenApp servers you want to monitor (agents) to install the agent components, and run the module installer on all console computers to install the Help and console extensions.

Access the `AM70-XenDesktop-8.x.x.0.msi` module installer from the `AM70-XenDesktop-8.x.x.0` self-extracting installation package on the [AppManager Module Upgrades & Trials](#) page.

For Windows environments where User Account Control (UAC) is enabled, install the module using an account with administrative privileges. Use one of the following methods:

- ◆ Log in to the server using the account named Administrator. Then, run the module installer `XenDesktop.msi` file from a command prompt or by double-clicking it.
- ◆ Log in to the server as a user with administrative privileges and run the module installer `XenDesktop.msi` file as an administrator from a command prompt. To open a command-prompt window at the administrative level, right-click a command-prompt icon or a Windows menu item and select **Run as administrator**.

You can install the Knowledge Scripts into local or remote AppManager repositories (QDBs). The module installer now installs Knowledge Scripts for each module directly into the QDB instead of to the `\AppManager\qdb\kp` folder as in previous releases of AppManager.

You can install the module manually, or you can use Control Center to deploy the module on a remote server where an agent is installed. For more information, see [Section 2.3, “Deploying the Module with Control Center,” on page 13](#). However, if you do use Control Center to deploy the module, Control Center only installs the *agent* components of the module. The module installer installs the QDB and console components as well as the agent components on the agent computer.

### To install the module manually:

- 1 Double-click the module installer `.msi` file.

- 2 Accept the license agreement.
- 3 Review the results of the pre-installation check. You can expect one of the following three scenarios:
  - ♦ **No AppManager agent is present:** In this scenario, the pre-installation check fails, and the installer does not install agent components.
  - ♦ **An AppManager agent is present, but some other prerequisite fails:** In this scenario, the default is to not install agent components because of one or more missing prerequisites. However, you can override the default by selecting **Install agent component locally**. A missing application server for this particular module often causes this scenario. For example, installing the AppManager for Citrix XenDesktop or XenApp module requires the presence of a Citrix XenDesktop or XenApp server on the selected computer.
  - ♦ **All prerequisites are met:** In this scenario, the installer installs the agent components.
- 4 To install the Knowledge Scripts into the QDB:
  - 4a Select **Install Knowledge Scripts** to install the repository components, including the Knowledge Scripts, object types, and SQL stored procedures.
  - 4b Specify the SQL Server name of the server hosting the QDB, as well as the case-sensitive QDB name.
- 5 (Conditional) If you use Control Center 7.x, run the module installer for each QDB attached to Control Center.
- 6 (Conditional) If you use Control Center 8.x or later, run the module installer only for the primary QDB. Control Center automatically replicates this module to secondary QDBs.
- 7 Run the module installer on all console computers to install the Help and console extensions.
- 8 Run the module installer on the XenDesktop or XenApp servers you want to monitor (agents) to install the agent components.
- 9 (Conditional) If you have not discovered XenDesktop or XenApp resources, run the Discovery\_XenDesktop Knowledge Script on all agent computers where you installed the module. For more information, see [Section 2.6, “Discovering Citrix XenDesktop or XenApp Resources,”](#) on page 15.

After the installation has completed, the `XenDesktop_Install.log` file, located in the `\NetIQ\Temp\NetIQ_Debug\<ServerName>` folder, lists any problems that occurred.

## 2.3 Deploying the Module with Control Center

You can use Control Center to deploy the module on a remote server where an agent is installed. This topic briefly describes the steps involved in deploying a module and provides instructions for checking in the module installation package. For more information, see the *Control Center User Guide for AppManager*, which is available on the [AppManager Documentation](#) page.

### 2.3.1 Deployment Overview

This section describes the tasks required to deploy the module on an agent computer.

**To deploy the module on an agent computer:**

- 1 Verify the default deployment credentials.
- 2 Check in an installation package. For more information, see [Section 2.3.2, “Checking In the Installation Package,”](#) on page 14.
- 3 Configure an e-mail address to receive notification of a deployment.

- 4 Create a deployment rule or modify an out-of-the-box deployment rule.
- 5 Approve the deployment task.
- 6 View the results.

## 2.3.2 Checking In the Installation Package

You must check in the installation package, `AM70-XenDesktop-8.x.x.0.xml`, before you can deploy the module on an agent computer.

### To check in a module installation package:

- 1 Log in to Control Center using an account that is a member of a user group with deployment permissions.
- 2 Navigate to the **Deployment** tab (for AppManager 8.x or later) or **Administration** tab (for AppManager 7.x).
- 3 In the Deployment folder, select **Packages**.
- 4 On the Tasks pane, click **Check in Deployment Packages** (for AppManager 8.x or later) or **Check in Packages** (for AppManager 7.x).
- 5 Navigate to the folder where you saved `AM70-XenDesktop-8.x.x.0.xml` and select the file.
- 6 Click **Open**. The Deployment Package Check in Status dialog box displays the status of the package check in.

## 2.4 Silently Installing the Module

To silently (without user intervention) install a module using the default settings, run the following command from the folder in which you saved the module installer:

```
msiexec.exe /i "AM70-XenDesktop-8.x.x.0.msi" /qn
```

where `x.x` is the actual version number of the module installer.

To create a log file that describes the operations of the module setup program, add the following flag to the command noted above:

```
/L* "AM70-XenDesktop-8.x.x.0.msi.log"
```

The log file is created in the directory in which you saved the module installer.

---

**NOTE:** To perform a silent install on an AppManager agent running Windows Server 2008 R2 or Windows Server 2012, open a command prompt at the administrative level and select **Run as administrator** before you run the silent install command listed above.

---

To silently install the module to a remote AppManager repository, you can use Windows authentication or SQL authentication.

### Windows authentication:

```
AM70-XenDesktop-8.x.x.0.msi /qn MO_B_QDBINSTALL=1 MO_B_MOINSTALL=0  
MO_B_SQLSVR_WINAUTH=1 MO_B_SQLSVR_NAME=SQLServerName MO_QDBNAME=AM-RepositoryName
```

### SQL authentication:

```
AM70-XenDesktop-8.x.x.0.msi /qn MO_B_QDBINSTALL=1 MO_B_MOINSTALL=0
MO_B_SQLSVR_WINAUTH=0 MO_SQLSVR_USER=SQLLogin MO_SQLSVR_PWD=SQLLoginPassword
MO_SQLSVR_NAME=SQLServerName MO_QDBNAME=AM-RepositoryName
```

## 2.5 Permissions for Running XenDesktop Knowledge Scripts

To run the XenDesktop Knowledge Scripts, the AppManager agent must run as a Windows user that is configured as a XenDesktop or XenApp Administrator.

## 2.6 Discovering Citrix XenDesktop or XenApp Resources

Use the Discovery\_XenDesktop Knowledge Script to discover Citrix XenDesktop or XenApp components. This script always raises an event if discovery fails. You can also choose to raise an event if discovery succeeds.

---

**IMPORTANT:** Run the Discovery\_XenDesktop script only on agent computers where the XenDesktop or XenApp Delivery Controller component is installed. To ensure the discovery script performs a complete discovery and discovers all Delivery Controller objects, set the permissions for the NetIQ AppManager Client Resource Monitor (NetIQmc) service to **Log On As the domain administrator**. If you do not log on as the domain administrator, discovery will not discover the following Delivery Controller objects: Machine Catalogs and Delivery Groups.

---

If you delete or add a resource object, or if you make any other kind of change that might affect the monitoring of your resources, run the Discovery\_XenDesktop Knowledge Script again to update your list of resource objects. In addition, if you are running this module on AppManager 8 or later, you can use the delta discovery feature in Control Center to run discovery on a schedule to more quickly detect changes to your environment.

Set the parameters on the **Values** tab as needed:

Description	How to Set It
<b>General Settings</b>	
<b>Job failure event notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the discovery job fails. The default is 5.
<b>Discovery Options</b>	
Discover individual applications?	Select <b>Yes</b> to discover individual applications on a XenDesktop or XenApp server. The default is Yes.  <b>NOTE:</b> If you have more than 250 applications, select <b>No</b> for this parameter, because AppManager only displays the first 250 applications in the Navigation pane or TreeView.
<b>Event Notification</b>	
Raise event if discovery succeeds?	Select <b>Yes</b> to raise an event if the discovery process is successful. The default is unselected.

Description	How to Set It
Event severity when discovery succeeds	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the discovery process is successful. The default is 25.
<b>Raise event if discovery partially succeeds?</b>	Select <b>Yes</b> to raise an event if a discovery returns some data but also generates warning messages. The default is Yes.
Event severity when discovery partially succeeds	Set the event severity level, from 1 to 40, to indicate the importance of an event in which a discovery returns some data but also generates warning messages. The default is 15.

## 2.7 Configuring the PowerShell Execution Policy

This section describes the procedure for configuring the Microsoft PowerShell Execution Policy for environments that use Powershell. The PowerShell Execution Policy determines whether PowerShell scripts are allowed to run.

### 2.7.1 Understanding PowerShell Cmdlets

Citrix XenDesktop and XenApp use the Microsoft scripting and command environment known as PowerShell. PowerShell is made up of hundreds of executable objects called **cmdlets**, pronounced **command-lets**. When running the XenDesktop category of Knowledge Scripts, AppManager makes a series of calls to PowerShell and the XenDesktop or XenApp cmdlets. The combination of cmdlets depends on the version of XenDesktop or XenApp Server. AppManager executes the cmdlets to manipulate XenDesktop or XenApp objects.

For more information about using Powershell, see your Microsoft PowerShell documentation.

### 2.7.2 Configuring the PowerShell Execution Policy

The PowerShell Execution Policy determines whether PowerShell scripts are allowed to run. By default, the Execution Policy is set to `Restricted`. If you try to run scripts under the `Restricted` policy, AppManager generates error messages.

The Execution Policy directly affects the XenDesktop Knowledge Scripts. Although the scripts that ship with AppManager for Citrix XenDesktop and XenApp are written in VBScript and installed as `<scriptname>.qml`, the logic for the scripts is contained in complementary PowerShell scripts that are installed on the agent computer along with the module. The PowerShell scripts use the same name as the XenDesktop Knowledge Scripts, but with a `.ps1` extension.

---

**NOTE:** The digital signature encoded in a XenDesktop Knowledge Script is tied to the contents of the script. If you change the script, the signature is no longer valid and you cannot execute the script. If you change a XenDesktop Knowledge Script, you must do one of the following:

- ◆ Re-sign the scripts using your own digital certificate.
  - ◆ Change the Execution Policy to either **RemoteSigned** or **Unrestricted**.  
A group policy that governs script execution overrides any policy changes you make with the `Set-ExecutionPolicy` cmdlet. For example, if the group policy forbids script execution, you cannot change the policy by running `Set-ExecutionPolicy`. First change the group policy to allow script execution, and then run `Set-ExecutionPolicy` to select a specific Execution Policy.
-



Before AppManager can execute the PowerShell scripts, you must change the Execution Policy from *Restricted* to one of the following policy options:

- ♦ **AllSigned**, which allows execution of scripts that have been digitally signed by a trusted publisher.
- ♦ **RemoteSigned**, which allows local scripts to run regardless of signature, and requires trusted digital signatures only for remote scripts. XenDesktop Knowledge Scripts are local scripts.
- ♦ **Unrestricted**, which allows both local and remote scripts to run, regardless of signature.

#### To change the PowerShell Execution Policy:

1 Open the XenDesktop or XenApp Command Shell on the agent computer.

2 Run the following cmdlet:

```
Set-ExecutionPolicy <policy>
```

where <policy> is the name of the Execution Policy you choose.

3 Repeat Steps 1 and 2 on all agent computers, including Server role computers.

When a PowerShell script is executed under an **AllSigned** policy, PowerShell verifies that the script contains a digital signature and that the signature is associated with a trusted publisher. NetIQ Corporation signs the XenDesktop or XenApp PowerShell scripts.

If you set the PowerShell execution policy to **AllSigned** or **Restricted**, you must choose to trust NetIQ Corporation by importing the NetIQ Corporation digital certificate into the local certificate store on *each* XenDesktop or XenApp server in your environment.

#### To import the digital certificate and extend the trust:

- 1 Ensure that the PowerShell execution policy is not set to **Restricted** or **AllSigned**. Even though the script is signed, the certificate is not yet in the certificate store, so the signature will not be recognized as valid.
- 2 From the PowerShell command prompt, as Administrator, run the following file:  
`AppManager\bin\PowerShell\Scripts\Library\CertificateImporter.ps1`
- 3 If needed, set the PowerShell execution policy back to AllSigned.

## 2.8 Changing Configuration Settings

AppManager for Citrix XenDesktop and XenApp includes the following components:

- ♦ A client object, `MCPShostClient.dll`, which runs within the AppManager agent. This client object starts the server program and asks it to run jobs.
- ♦ A server program, `MCPShostServer.exe`, which provides the PowerShell environment in which the XenDesktop scripts are executed.

Both components have associated configuration files that define certain operational parameters. You can modify these settings to fine-tune performance or to specify resource usage limits.

The configuration files are in XML format. After making changes, ensure that the files retain their well-formed XML format. Also do not remove or change settings other than those documented here. NetIQ Corporation strongly recommends that you create backup copies of these files before modifying them.

---

**NOTE:** This topic does not discuss all configuration settings. As a rule, if a configuration setting is not discussed in this topic, you should not change the value of that setting.

---

## 2.8.1 Client Configuration Settings

The client configuration file, `MCPShostClient.dll.config`, resides in the `AppManager\bin\PowerShell` directory. You can change the following settings.

In the `<appSettings>` section:

- ♦ **maxActiveServers** Use this setting to specify the maximum number of servers that can be active at any time. Use this setting in conjunction with `maxMemoryUsage` to specify a lower memory threshold with an increased number of servers that can be used. This combination is beneficial for situations in which a server exceeds the memory limitation and has to shut down. If only one server can be active at a time, job requests are blocked until the server restarts. If you allow more than one server to be active, job requests can be executed in other server processes or on new servers if the current number of active servers is less than `maxActiveServers`.
- ♦ **serverStartupTimeout** If `MCPShostServer.exe` is not already running when a job is scheduled for execution, the client starts the server automatically. After starting the server, the client attempts to contact it. Use this configuration setting to specify the number of seconds that the client should attempt to contact the server. An error event is raised if the client cannot contact the server within the specified period.

In the `<log4net>` section:

- ♦ **file** Use this setting to specify the pathname of the log file. If the pathname is a relative path, it is considered to be relative to the `\AppManager\bin\PowerShell` directory.
- ♦ **appendToFile** Use this setting to indicate whether the client overwrites the existing log file or appends to it, at the time the client is loaded into the AppManager agent.
- ♦ **maxSizeRollBackups** Use this setting to specify the number of old log files you want to retain.
- ♦ **maximumFileSize** Use this setting to specify the maximum size of a log file. After a log file reaches this size, it is deleted, or renamed if the `maxSizeRollBackups` value is greater than 0.

## 2.8.2 Server Configuration Settings

The server configuration file, `MCPShostServer.exe.config`, resides in the `AppManager\bin\PowerShell` directory. You can change the following settings.

In the `<appSettings>` section:

- ♦ **serverShutdownTimeout** Use this setting to specify the number of seconds that the server will remain running when no jobs are executing. If no jobs are submitted to the server during this period, the server shuts down and will restart the next time a client needs to run a job.
- ♦ **maxActiveClients** The PowerShell runspace pool allocates runspaces as needed. Each execution of a job requires one runspace. Runspaces return to the pool after use and are then available for other jobs. Use this setting to set the absolute limit on the number of runspaces allocated for a pool. If a client requests a runspace when none is available and the pool has reached this limit, the client is blocked from running until a runspace becomes available.  
  
If you do not specify the runspace setting, the pool always allocates a new runspace, even if all others are in use, thereby ensuring that clients never have to wait for a runspace to be available.
- ♦ **maxMemoryUsage** Use this setting to specify the maximum amount of memory, in megabytes, that the server process should consume. If memory usage exceeds the maximum size, the server blocks additional requests from clients and restarts automatically after the last client has finished job execution. Because XenDesktop Knowledge Script jobs use XenDesktop and XenApp cmdlets, which require a large amount of memory, server memory usage can grow excessively.

In the <log4net> section:

- ♦ **file** Use this setting to specify the pathname of the log file. If the pathname is a relative path, it is considered to be relative to the `\AppManager\bin\PowerShell` directory.
- ♦ **appendToFile** Use this setting to indicate whether the client overwrites the existing log file or appends to it, at the time the client is loaded into the AppManager agent.
- ♦ **maxSizeRollBackups** Use this setting to specify the number of old log files you want to retain.
- ♦ **maximumFileSize** Use this setting to specify the maximum size of a log file. After a log file reaches this size, it is deleted, or renamed if the `maxSizeRollBackups` value is greater than 0.

## 2.9 Troubleshooting PowerShell Errors

XenDesktop Knowledge Scripts might raise such events as "PowerShell script failed to run to completion" or "Error executing PowerShell script." These errors can occur when Knowledge Scripts take a long time to run, or when there is contention for access to the server that executes the PowerShell scripts, `MCPHostServer.exe`. The following are some recommendations for resolving these issues:

- ♦ **Increase the amount of memory that can be used by MCPHostServer.exe.** Increasing the memory limit reduces the frequency with which the server restarts due to excessive memory usage. Increasing the memory limit also reduces the number of PowerShell errors; each time the server recognizes that it is exceeding its memory usage threshold, the server prevents new jobs from executing until all existing jobs have completed and the server restarts. If existing jobs take a significant amount of time to complete, the waiting jobs may time out and return errors. To increase the amount of memory `MCPHostServer.exe` can use, modify the value of the `maxMemoryUsage` setting. For more information, see [Section 2.8, "Changing Configuration Settings," on page 17](#).
- ♦ **Increase the number of PowerShell execution environments, or runspaces that MCPHostServer.exe can host.** The default number of runspaces is eight, which means no more than eight Knowledge Script jobs can be running simultaneously on the server. If you attempt to run additional jobs, the jobs are held back until runspaces become available as existing jobs complete their iterations. Being held back in this manner increases the chance that jobs will time out before running, or before completing their iteration. To increase the number of available runspaces, modify the `maxActiveClients` setting. For more information, see [Section 2.8, "Changing Configuration Settings," on page 17](#).

Increasing this value will be beneficial if you are running more than eight XenDesktop Knowledge Script jobs, but even then the benefit may not be significant.

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**NOTE:** The client's `maxActiveServers` configuration option specifies the maximum number of servers that can be active at any time (the default is five). The `maxActiveServers` configuration value and the `maxActiveClients` server configuration value determine the total number of jobs that can be serviced at any one time. You can have more than this number of jobs in the "Running" state in AppManager, but only if some of the jobs are between iterations, and not actually running at the same time.

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# 3 XenDesktop Knowledge Scripts

AppManager for Citrix XenDesktop and XenApp provides the following Knowledge Scripts for monitoring servers that are running Citrix XenDesktop or XenApp.

From the Knowledge Script view of Control Center, you can access more information about any NetIQ-supported Knowledge Script by selecting it and clicking **Help**. Or in the Operator Console, click any Knowledge Script in the Knowledge Script pane and press **F1**.

Knowledge Script	What It Does
<a href="#">ApplicationUsage</a>	Monitors the total instances of all applications and separate instances for each of the applications that are running.
<a href="#">DatabaseActivity</a>	Monitors the activity of the databases associated with the Broker, Host, and Machine Creation XenDesktop services.
<a href="#">EventLog</a>	Monitors the Windows Application event log and custom Citrix logs for Citrix XenDesktop or XenApp error or warning events.
<a href="#">LicenseStatus</a>	Monitors the license usage and license expiration of XenDesktop or XenApp servers.
<a href="#">MachineFailures</a>	Monitors the number and type of failures that have occurred on machines in delivery groups on a XenDesktop or XenApp server.
<a href="#">MachineRegistration</a>	Monitors the registration state of XenDesktop or XenApp servers.
<a href="#">ServiceStatus</a>	Monitors the status of Citrix XenDesktop services.
<a href="#">Sessions</a>	Monitors the status and number of sessions that exist on XenDesktop or XenApp servers.

## 3.1 ApplicationUsage

Use the XenDesktop\_ApplicationUsage Knowledge Script to monitor the total instances of all applications and separate instances for each of the applications that are running.

This script raises an event if the total number of application instances or the number of instances of an application exceeds the thresholds you set. You can also choose to collect data on the total number of applications running.

### 3.1.1 Resource Objects

Citrix XenDesktop or XenApp Applications folder object or individual application object

### 3.1.2 Default Schedule

The default schedule is every 15 minutes.

### 3.1.3 Setting Parameter Values

Set the following parameters on the **Values** tab as needed:

Description	How to Set It
<b>General Settings</b>	
<b>Job failure event notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the ApplicationUsage job fails. The default is 5.
<b>Monitor Total Application Instances</b>	
<b>Event Notification</b>	
<b>Raise event if total number of application instances exceeds threshold?</b>	Select <b>Yes</b> to raise an event when the total number of application instances exceeds the threshold you set. The default is Yes.
Threshold - Maximum number of total application instances	Specify the maximum number of total applications instances that can exist before an event is raised. The default is 50 applications.
Event severity when total number of application instances exceeds threshold	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the total number of application instances is exceeded. The default is 10.
<b>Data Collection</b>	
Collect data for total number of all application instances?	Select <b>Yes</b> to collect data for the total number of all application instances. The default is unselected.
<b>Monitor Running Instances per Application</b>	
<b>Event Notification</b>	
<b>Raise event if number of instances of an application exceeds threshold?</b>	Select <b>Yes</b> to raise an event when the number of instances of an application exceeds the threshold you set. The default is Yes.
Threshold - Maximum number of instances of an application	Specify the maximum number of instances of an application that can exist before an event is raised. The default is 10 instances.
Event severity when number of instances of an application exceeds threshold?	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the number of instances of an application is exceeded. The default is 10.

## 3.2 DatabaseActivity

Use the XenDesktop\_DatabaseActivity Knowledge Script to Monitor the activity of the databases associated with the Broker, Host, and Machine Creation XenDesktop services.

This script raises an event if the average transaction time, the average transaction rate, or the transaction error rate exceeds the thresholds you set for those three services. You can also choose to collect data on those metrics.

### 3.2.1 Resource Objects

Citrix XenDesktop or XenApp site object

## 3.2.2 Default Schedule

The default schedule is every 15 minutes.

## 3.2.3 Setting Parameter Values

Set the following parameters on the **Values** tab as needed:

Description	How to Set It
<b>General Settings</b>	
<b>Job failure event notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the DatabaseActivity job fails. The default is 5.
<b>Monitor Broker Service</b>	
<b>Event Notification</b>	
<b>Raise event if average transaction time exceeds threshold?</b>	Select <b>Yes</b> to raise an event when the average transaction time for the Broker service exceeds threshold. The default is Yes.
Threshold - Maximum average transaction time	Specify the maximum average transaction time for the Broker service that can exist before an event is raised. The default is 5000 milliseconds.
Event severity when average transaction time is exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the average transaction time for the Broker service is exceeded. The default is 10.
<b>Raise event if transaction rate exceeds threshold?</b>	Select <b>Yes</b> to raise an event when the transaction rate for the Broker service exceeds threshold. The default is Yes.
Threshold - Maximum transaction rate	Specify the maximum transaction rate for the Broker service that can exist before an event is raised. The default is 20 transactions per second.
Event severity when transaction rate is exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the transaction rate for the Broker service is exceeded. The default is 10.
<b>Raise event if transaction error rate exceeds threshold?</b>	Select <b>Yes</b> to raise an event when the transaction error rate for the Broker service exceeds threshold. The default is Yes.
Threshold - Maximum transaction error rate	Specify the maximum transaction error rate for the Broker service that can exist before an event is raised. The default is 0 errors per seconds.
Event severity when transaction error rate is exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the transaction error rate for the Broker service is exceeded. The default is 10.
<b>Data Collection</b>	
Collect data for Broker service?	Select <b>Yes</b> to collect data for the Broker service. The default is unselected.
<b>Monitor Host Service</b>	
<b>Event Notification</b>	

<b>Description</b>	<b>How to Set It</b>
<b>Raise event if average transaction time exceeds threshold?</b>	Select <b>Yes</b> to raise an event when the average transaction time for the Host service exceeds threshold. The default is Yes.
Threshold - Maximum average transaction time	Specify the maximum average transaction time for the Host service that can exist before an event is raised. The default is 5000 milliseconds.
Event severity when average transaction time is exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the average transaction time for the Host service is exceeded. The default is 10.
<b>Raise event if transaction rate exceeds threshold?</b>	Select <b>Yes</b> to raise an event when the transaction rate for the Host service exceeds threshold. The default is Yes.
Threshold - Maximum transaction rate	Specify the maximum transaction rate for the Host service that can exist before an event is raised. The default is 20 transactions per second.
Event severity when transaction rate is exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the transaction rate for the Host service is exceeded. The default is 10.
<b>Raise event if transaction error rate exceeds threshold?</b>	Select <b>Yes</b> to raise an event when the transaction error rate for the Host service exceeds threshold. The default is Yes.
Threshold - Maximum transaction error rate	Specify the maximum transaction error rate for the Host service that can exist before an event is raised. The default is 0 errors per seconds.
Event severity when transaction error rate is exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the transaction error rate for the Host service is exceeded. The default is 10.
<b>Data Collection</b>	
Collect data for Host service?	Select <b>Yes</b> to collect data for the Host service. The default is unselected.
<b>Monitor Machine Creation Service</b>	
<b>Event Notification</b>	
<b>Raise event if average transaction time exceeds threshold?</b>	Select <b>Yes</b> to raise an event when the average transaction time for the Machine Creation service exceeds threshold. The default is Yes.
Threshold - Maximum average transaction time	Specify the maximum average transaction time for the Machine Creation service that can exist before an event is raised. The default is 5000 milliseconds.
Event severity when average transaction time is exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the average transaction time for the Machine Creation service is exceeded. The default is 10.
<b>Raise event if transaction rate exceeds threshold?</b>	Select <b>Yes</b> to raise an event when the transaction rate for the Machine Creation service exceeds threshold. The default is Yes.
Threshold - Maximum transaction rate	Specify the maximum transaction rate for the Machine Creation service that can exist before an event is raised. The default is 20 transactions per second.



Description	How to Set It
Event severity when transaction rate is exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the transaction rate for the Machine Creation service is exceeded. The default is 10.
<b>Raise event if transaction error rate exceeds threshold?</b>	Select <b>Yes</b> to raise an event when the transaction error rate for the Machine Creation service exceeds threshold. The default is Yes.
Threshold - Maximum transaction error rate	Specify the maximum transaction error rate for the Machine Creation service that can exist before an event is raised. The default is 0 errors per seconds.
Event severity when transaction error rate is exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the transaction error rate for the Machine Creation service is exceeded. The default is 10.
<b>Data Collection</b>	
Collect data for Machine Creation service?	Select <b>Yes</b> to collect data for the Machine Creation service. The default is unselected.

## 3.3 EventLog

Use the XenDesktop\_EventLog Knowledge Script to monitor the Windows Application event log and custom Citrix logs for Citrix XenDesktop or XenApp error or warning events. You can specify a list of event sources, event categories, or event ID to ignore in the event log search.

This script raises an event if the Windows Application event log entries match your search criteria.

### 3.3.1 Resource Objects

Citrix XenDesktop or XenApp site object

### 3.3.2 Default Schedule

The default schedule is every 15 minutes.

### 3.3.3 Setting Parameter Values

Set the following parameters on the **Values** tab as needed:

Description	How to Set It
<b>General Settings</b>	
<b>Job failure event notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the EventLog job fails. The default is 5.
<b>Monitor Windows Event Log</b>	
<b>Event Notification</b>	

Description	How to Set It
Comma-separated list of event sources to ignore	Specify the location of the path that contains the list of event sources to ignore. Click the <b>Ellipsis (...)</b> button to navigate to the file.
Comma-separated list of event categories to ignore	Specify the location of the path that contains the list of event categories to ignore. Click the <b>Ellipsis (...)</b> button to navigate to the file.
Comma-separated list of event IDs to ignore	Specify the location of the path that contains the list of event IDs to ignore. Click the <b>Ellipsis (...)</b> button to navigate to the file.
<b>Raise event if XenDesktop error events are found?</b>	Select <b>Yes</b> to raise an event when the script encounters XenDesktop or XenApp error events. The default is Yes.
Event severity when XenDesktop error events are found	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the script encounters XenDesktop or XenApp error events. The default is 10.
<b>Raise event if XenDesktop warning events are found?</b>	Select <b>Yes</b> to raise an event when the script encounters warning events. The default is Yes.
Event severity when XenDesktop warning events are found	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the script encounters warning events. The default is 20.

## 3.4 LicenseStatus

Use the XenDesktop\_LicenseStatus Knowledge Script to monitor the license usage and license expiration of XenDesktop or XenApp servers.

This script raises an event when the percentage of licenses in use exceeds a threshold you set, or if the license expiration date is approaching. You can also choose to collect data for the number of licenses in use.

### 3.4.1 Resource Objects

Citrix XenDesktop or XenApp License Server object

### 3.4.2 Default Schedule

The default schedule is daily.

### 3.4.3 Setting Parameter Values

Set the following parameters on the **Values** tab as needed:

Description	How to Set It
<b>General Settings</b>	
<b>Job failure event notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the LicenseStatus job fails. The default is 5.

Description	How to Set It
<b>Monitor License Usage</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of licenses in use exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of licenses in use exceeds the threshold. The default is Yes.
Threshold - Maximum percentage of licenses in use	Specify the maximum percentage of licenses that can be in use before an event is raised. The default is 80%.
Event severity when maximum percentage of licenses in use is exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the percentage of licenses in use exceeds the threshold. The default is 10.
<b>Data Collection</b>	
Collect data for number of licenses in use?	Select <b>Yes</b> to collect data for the number of licenses in use. The default is unselected.
Collect data for percentage of licenses in use?	Select <b>Yes</b> to collect data for the percentage of licenses in use. The default is unselected.
<b>Monitor License Expiration</b>	
<b>Event Notification</b>	
<b>Raise event if license expiration date is approaching?</b>	Select <b>Yes</b> to raise an event if the license expiration date is approaching. In the following parameter, you can specify when you want to raise the event based on the number of days before the license expires. The default is Yes.
Threshold - Number of days before license expires	Specify the number of days before the license expires, at which point an event is raised. The default is 5 days.
Event severity when number of days before license expires is reached	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the number of days before the license expires is reached. The default is 15.

## 3.5 MachineFailures

Use the XenDesktop\_MachineFailures Knowledge Script to monitor the number and type of failures that have occurred on machines in delivery groups on a XenDesktop or XenApp server. You can filter the monitoring based on failure type or whether the failure occurred for a single-user session or multi-user session.

This script raises an event when the number of machine failures exceed a threshold you set, and you can collect data on the number and type of machine failures.

### 3.5.1 Resource Objects

Citrix XenDesktop or XenApp Delivery Group object

### 3.5.2 Default Schedule

The default schedule is every 15 minutes.

### 3.5.3 Setting Parameter Values

Set the following parameters on the **Values** tab as needed:

Description	How to Set It
<b>General Settings</b>	
<b>Job failure event notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the MachineFailures job fails. The default is 5.
<b>Monitor Machine Failures</b>	
<b>Filters</b>	
<b>Sessions to Monitor</b>	
Single-user (desktop OS) sessions	Select <b>Yes</b> to monitor single-user, or desktop operating system, sessions. The default is Yes.
Multi-user (server OS) sessions	Select <b>Yes</b> to monitor multi-user, or server operating system, sessions. The default is Yes.
<b>Failure Types to Monitor</b>	
Machine failed to start	Select <b>Yes</b> to monitor when a server failed to start. The default is Yes.
Machine stuck on boot	Select <b>Yes</b> to monitor when a server begins to reboot but never completes the process. The default is Yes.
Machine is unregistered	Select <b>Yes</b> to monitor when a server is unregistered. The default is Yes.
Machine is at maximum capacity	Select <b>Yes</b> to monitor when a server is at maximum capacity. The default is Yes.
<b>Event Notification</b>	
<b>Raise event if number of machine failures exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the number of server failures exceeds a threshold you set. The default is Yes.
Threshold - Maximum number of machine failures	Specify the maximum number of server failures that can exist before an event is raised. The default is 0 failures.
Event severity when maximum number of failures is exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the maximum number of failures is exceeded. The default is 10.
<b>Data Collection</b>	
Collect data for number of machine failures?	Select <b>Yes</b> to collect data for the number of server failures. The default is unselected.

## 3.6 MachineRegistration

Use the XenDesktop\_MachineRegistration Knowledge Script to monitor the registration state of servers running Citrix XenDesktop or XenApp.

This script raises an event when a server remains in the Unregistered, Initializing, or AgentError states for longer than the thresholds you set.

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**NOTE:** The XenDesktop\_MachineRegistration script only monitors machines with a power state of On. The script ignores machines that are powered off or in other states, including servers that are in maintenance mode. This script also does not monitor servers that are configured as remote servers, as opposed to server operating system servers or desktop operating system servers, which are the types this script monitors.

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### 3.6.1 Resource Objects

Citrix XenDesktop or XenApp Delivery Group object or Catalog object

### 3.6.2 Default Schedule

The default schedule is every 5 minutes.

### 3.6.3 Setting Parameter Values

Set the following parameters on the **Values** tab as needed:

Description	How to Set It
<b>General Settings</b>	
<b>Job failure event notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the MachineRegistration job fails. The default is 5.
<b>Monitor Machines in Unregistered State</b>	
<b>Event Notification</b>	
<b>Raise event if a machine is in the Unregistered state?</b>	Select <b>Yes</b> to raise an event if a machine is in the Unregistered state. The default is Yes.
Threshold - Maximum amount of time for a machine to remain in the Unregistered state	Specify the maximum amount of time for a machine to remain in the Unregistered state before an event is raised. The default is 0 minutes.
Event severity when a machine is found to be in the Unregistered state	Set the event severity level, from 1 to 40, to indicate the importance of the event in which a machine is found to be in the Unregistered state. The default is 5.
<b>Monitor Machines in Initializing State</b>	
<b>Event Notification</b>	

Description	How to Set It
<b>Raise event if a machine is in the Initializing state?</b>	Select <b>Yes</b> to raise an event if a machine is in the Initializing state. The default is Yes.
Threshold - Maximum amount of time for a machine to remain in the Initializing state	Specify the maximum amount of time for a machine to remain in the Initializing state before an event is raised. The default is 0 minutes.
Event severity when a machine is found to be in the Initializing state	Set the event severity level, from 1 to 40, to indicate the importance of the event in which a machine is found to be in the Initializing state. The default is 5.
<b>Monitor Machines in AgentError State</b>	
<b>Event Notification</b>	
<b>Raise event if a machine is in the AgentError state?</b>	Select <b>Yes</b> to raise an event if a machine is in the AgentError state. The default is Yes.
Threshold - Maximum amount of time for a machine to remain in the AgentError state	Specify the maximum amount of time for a machine to remain in the AgentError state before an event is raised. The default is 0 minutes.
Event severity when a machine is found to be in the AgentError state	Set the event severity level, from 1 to 40, to indicate the importance of the event in which a machine is found to be in the AgentError state. The default is 5.

## 3.7 ServiceStatus

Use the XenDesktop\_ServiceStatus Knowledge Script to monitor the status of XenDesktop services. This script raises an event when services are not running and when stopped services fail to start.

If you are monitoring multiple services, separate events are raised for each service. The same thresholds apply to all services.

The XenDesktop\_ServiceStatus script runs a series of connectivity tests on a sub-set of the XenDesktop services that use back-end databases. The script runs connectivity tests on the following XenDesktop services:

- ◆ Citrix AD Identity Service
- ◆ Citrix Broker Service
- ◆ Citrix Configuration Service
- ◆ Citrix Configuration Logging Service
- ◆ Citrix Delegated Administration Service
- ◆ Citrix Environment Test Service
- ◆ Citrix Host Service
- ◆ Citrix Machine Creation Service
- ◆ Citrix Monitor Service
- ◆ Citrix Storefront Service

### 3.7.1 Resource Objects

Citrix XenDesktop Service Folder object or Service object

## 3.7.2 Default Schedule

The default schedule is every 5 minutes.

## 3.7.3 Setting Parameter Values

Set the following parameters on the **Values** tab as needed:

Description	How to Set It
<b>General Settings</b>	
<b>Job failure event notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the ServiceStatus job fails. The default is 5.
<b>Monitor Status of XenDesktop Services</b>	
<b>Services to be Monitored</b>	
Monitor services configured to start automatically?	Select <b>Yes</b> to monitor the XenDesktop or XenApp services that start automatically. The default is Yes.
Monitor services configured to start manually?	Select <b>Yes</b> to monitor the XenDesktop or XenApp services that must be manually started. The default is unselected.
<b>Event Notification</b>	
<b>Raise event if XenDesktop services are not running?</b>	Select <b>Yes</b> to raise an event when the XenDesktop or XenApp services are not running. The default is Yes.
Event severity when services are not running	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the XenDesktop or XenApp services are not running. The default is 10.
<b>Start services not currently running?</b>	Select <b>Yes</b> to start any XenDesktop or XenApp services that are not currently running. The default is Yes.
Threshold - Timeout for service startup	Specify the length of time in seconds that the job should wait for a service to start before timing out and raising a failure event. The default timeout is 60 seconds.
<b>Raise event if stopped services fail to start?</b>	Select <b>Yes</b> to raise an event when any stopped services fail to start. The default is Yes.
Event severity when stopped services fail to start.	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the stopped services fail to start. The default is 5.
<b>Monitor XenDesktop Service Database Connections</b>	
<b>Event Notification</b>	
<b>Raise event if a connection cannot be made to a service database?</b>	Select <b>Yes</b> to raise an event when the script cannot connect to a service database. The default is Yes.
Event severity when a connection cannot be made to a service database	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the script could not connect to a service database. The default is 10.

## 3.8 Sessions

Use the XenDesktop\_Sessions Knowledge Script to monitor the status and number of sessions that exist on a XenDesktop or XenApp server on a total and per-server basis.

You can filter the number of servers to monitor by matching tags or metadata, and you can also filter the sessions by session states. You can also collect data on the maximum and average number of sessions on XenDesktop or XenApp servers, and total number of sessions on all XenDesktop or XenApp servers.

You can run this script on server catalogs or delivery groups. In many cases, a server belongs to both a catalog and a delivery group. If a server appears in a delivery group, it will be a member of a catalog as well. If a threshold event is raised for a server, and that server exists in both a catalog and a delivery group being monitored, the script raises two events: one event on the delivery group and one event on the catalog. As a result, some events might be duplicated. To avoid duplicate events, run the job only on delivery groups or only on catalogs, instead of on both objects.

### 3.8.1 Resource Objects

Citrix XenDesktop or XenApp Delivery Group object or Catalog object

### 3.8.2 Default Schedule

The default schedule is every 15 minutes.

### 3.8.3 Setting Parameter Values

Set the following parameters on the **Values** tab as needed:

Description	How to Set It
<b>General Settings</b>	
<b>Job failure event notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the Sessions job fails. The default is 5.
<b>Monitor Machine Sessions</b>	
<b>Machine Filters</b>	



Description	How to Set It
<b>Include only machines with matching tags or metadata?</b>	<p>Select <b>Yes</b> to filter the list of sessions to monitor based on machines with matching tags (name) or metadata (name=value). The default is unselected.</p> <p>In XenDesktop or XenApp you can associate tags and metadata with specific servers. A <i>tag</i> is simply a name, while a <i>metadata</i> item consists of a name and a value that you can specify in the following manner:</p> <pre>tag1, tag2,mdlname=mdlvalue , tag3, mdlname = md2value, md2name =md2value</pre> <p>The script ignores and spaces around the commas and equal signs in the metadata item. Also, in this example the metadata name <code>mdlname</code> is used twice, with two different values. This combination is valid, and it matches all sessions whose associated machines have either value for that metadata name. The script ignores duplicate entries for tags and metadata where both the name and value are duplicated.</p> <p><b>Tips</b></p> <ul style="list-style-type: none"> <li>◆ If you specify only tags, the script monitors sessions associated <i>only</i> with a server that has any of those tags.</li> <li>◆ If you specify only metadata items, the script only monitors sessions associated with servers that have a matching metadata item (name and value).</li> <li>◆ If you specify <i>both</i> tags and metadata, the script monitors only sessions associated with servers that match at least one of the tags, and the script will also monitor at least one of the metadata items. In other words, the script monitors only sessions associated with machines that have a matching tag <i>and</i> a matching metadata item.</li> </ul>
List of machines by tag (name) or metadata (name=value) to monitor	Specify the XenDesktop or XenApp servers that you want to monitor, based on tag (name) or metadata (name=value). Separate the server names with commas.
<b>Include only machines in the following states?</b>	Select <b>Yes</b> to filter the list of sessions to monitor based on one or more of the following set of session states. The default is Yes.
PreparingSession	Select <b>Yes</b> to filter the list of sessions to include sessions with the PreparingSession tag or metadata. The default is Yes.
Connected	Select <b>Yes</b> to filter the list of sessions to include sessions with the Connected tag or metadata. The default is Yes.
Active	Select <b>Yes</b> to filter the list of sessions to include sessions with the Active tag or metadata. The default is Yes.
Disconnected	Select <b>Yes</b> to filter the list of sessions to include sessions with the Disconnected tag or metadata. The default is Yes.
Reconnecting	Select <b>Yes</b> to filter the list of sessions to include sessions with the Reconnecting tag or metadata. The default is Yes.
NonBrokeredSession	Select <b>Yes</b> to filter the list of sessions to include sessions with the NonBrokeredSession tag or metadata. The default is Yes.

<b>Description</b>	<b>How to Set It</b>
Unknown	Select <b>Yes</b> to filter the list of sessions to include sessions with the Unknown tag or metadata. The default is Yes.
Other	Select <b>Yes</b> to filter the list of sessions to include sessions with the Other tag or metadata. The default is Yes.
<b>Monitor Sessions Per Machine</b>	
<b>Event Notification</b>	
<b>Raise event if number of sessions on any machine exceeds threshold?</b>	Select <b>Yes</b> to raise an event when the number of sessions on any XenDesktop or XenApp server exceeds a threshold you set. The default is Yes.
Threshold - Maximum number of sessions on any machine	Specify the maximum number of sessions that can exist on any machine before an event is raised. The default is 10 sessions.
Event severity when services are not running	Set the event severity level, from 1 to 40, to indicate the importance of the event in which the XenDesktop or XenApp services are not running. The default is 10.
<b>Data Collection</b>	
Collect data for maximum number of sessions on any machine?	Select <b>Yes</b> to collect data for the maximum number of sessions on any XenDesktop or XenApp server. The default is unselected.
Collect data for average number of sessions per machine?	Select <b>Yes</b> to collect data for the average number of sessions per XenDesktop or XenApp server. The default is unselected.
<b>Monitor Total Number of Sessions</b>	
<b>Event Notification</b>	
<b>Raise event if total number of sessions exceeds threshold?</b>	Select <b>Yes</b> to raise an event when the total number of sessions exceeds a threshold you set. The default is Yes.
Threshold - Maximum number of sessions	Specify the maximum number of sessions that can exist on all XenDesktop or XenApp servers before an event is raised. The default is 75 sessions.
Event severity when number of sessions exceeds threshold	Set the event severity level, from 1 to 40, to indicate the importance of the event in number of sessions exceeds the threshold. The default is 10.
<b>Data Collection</b>	
Collect data for total number of sessions?	Select <b>Yes</b> to collect data for the total number of sessions on a XenDesktop or XenApp server. The default is unselected.

# 4 Troubleshooting AppManager for Citrix XenDesktop

This chapter describes how to troubleshoot AppManager for Citrix XenDesktop.

## 4.1 Parsing or execution error while running PowerShell scripts

While running the Knowledge Scripts, you might encounter a parsing or execution error for the PowerShell scripts. For example:

```
File C:\Program Files
(x86)\NetIQ\AppManager\bin\PowerShell\Scripts\XenDesktop\Discovery_XenDesktop.ps1
cannot be loaded because running scripts is disabled on this system.
```

To resolve the error, you must set the PowerShell execution policy to **RemoteSigned** on your agent machine. For more information on PowerShell execution policies, see the [Microsoft article](#).

## 4.2 MCPSServer PowerShell session fails to initialize

While running multiple jobs at different intervals, you might get failure events corresponding to the MCPSServer or MCPSSClient host.

To resolve this error:

- 1 On the agent machine, go to `\NetIQ\AppManager\bin\PowerShell`.
- 2 Open the `MCPSServer.exe.config` file and set the `maxActiveClients` key to a higher value.
- 3 Open the `MCPSSClient.dll.config` file and set the `maxActiveServers` key to a higher value.

