

# **NetIQ<sup>®</sup> AppManager<sup>®</sup> for NetBackup UNIX**

## **Management Guide**

January 2013



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# About this Book and the Library

The NetIQ AppManager Suite (AppManager Suite) is a comprehensive solution for managing, diagnosing, and analyzing performance, availability, and server health for a broad spectrum of operating environments, applications, 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 staffs can monitor computer 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 computers, 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.



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# About NetIQ Corporation

NetIQ, an Attachmate business, is a global leader in systems and security management. With more than 12,000 customers in over 60 countries, NetIQ solutions maximize technology investments and enable IT process improvements to achieve measurable cost savings. The company's portfolio includes award-winning management products for IT Process Automation, Systems Management, Security Management, Configuration Audit and Control, Enterprise Administration, and Unified Communications Management. For more information, please visit [www.netiq.com](http://www.netiq.com).

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# 1 Introduction to AppManager for NetBackup UNIX

AppManager for NetBackup UNIX is a robust and dependable tool to monitor and promote the efficiency of NetBackup servers. Using a set of AppManager-specific Knowledge Scripts, AppManager for NetBackup UNIX monitors:

- ♦ The number of successful, incomplete, and failed backup jobs.
- ♦ The memory and CPU resources consumed by AppManager servers.
- ♦ The number of clients managed by the AppManager servers.
- ♦ The status of AppManager devices and services.
- ♦ The size of AppManager directories.
- ♦ Changes made to storage units configured on the AppManager servers.

By monitoring the status of backup jobs, AppManager for NetBackup UNIX helps you maintain an accurate, up-to-date picture of how well archiving protects your information. If the number of incomplete or failed backup jobs exceeds your expectations, or the number of successful jobs fails to meet a minimum threshold, AppManager for NetBackup UNIX alerts you. You can investigate your AppManager implementation to see whether the necessary daemons are running or the appropriate classes are active. You can also know the status of network connections and of any backup devices in use.

In addition to monitoring AppManager, AppManager can intervene to restart a AppManager service or reset a device.

AppManager for NetBackup UNIX also scans error logs for AppManager entries, giving you better visibility of potential problems with backup activities.

The Knowledge Scripts for AppManager for NetBackup UNIX raise events in the AppManager Operator Console or Control Center Console when problems arise. For example, if the number of failed jobs exceeds a threshold, or if a daemon is not running the Knowledge Scripts raise events. The Knowledge Scripts collect information that you can use for data analysis and reporting.

AppManager for NetBackup UNIX provides a single location from which to manage your implementation of AppManager. Using the Operator Console or Control Center Console, you can monitor the health and activity of your AppManager servers, the efficacy with which the servers archive your information, and the status of AppManager daemons and storage devices. In addition to monitoring, the Operator Console and Control Center Console provide the means to initiate responsive actions like restarting a stopped daemon, or paging the necessary personnel when problems arise. You can also use the tools available in the Operator Console and Control Center Console to generate and view reports based on AppManager information.



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# 2 Installing AppManager for NetBackup UNIX

This chapter describes requirements for how to install AppManager for NetBackup UNIX.

This chapter assumes you have an AppManager repository, console, management server, and UNIX agent installed. For more information about installing AppManager, see the *Installation Guide for AppManager* and for information about installing the UNIX agent, see the *AppManager for UNIX and Linux Servers Management Guide*, which are available on the [AppManager Documentation](#) page.

## 2.1 System Requirements

For the latest information about specific supported software versions and the availability of module updates, visit the [AppManager Supported Products](#) page.

AppManager for NetBackup UNIX has the following system requirements:

Item	Requirement
AppManager repository, management server, and Control Center Console	7.0.1 or later
AppManager UNIX agent	7.1 or later
Operating system on agent computers	One of the following: <ul style="list-style-type: none"><li>◆ CentOS</li><li>◆ HP-UX</li><li>◆ IBM AIX</li><li>◆ Oracle Linux</li><li>◆ Oracle Solaris</li><li>◆ Red Hat Enterprise Linux</li><li>◆ SUSE Linux Enterprise Server</li></ul>
Symantec NetBackup Enterprise Server	6.5 or 7.1

If you encounter problems using this module with a later version of your application, contact [NetIQ Technical Support](#).

## 2.2 Installing the Module

To install the module you must:

- ◆ Install the Knowledge Scripts by running the module installer `.msi` on all AppManager repositories that store data for this module.
- ◆ Install the Help files by running the module installer `.msi` on all AppManager Control Center and Operator Console computers you will use with this module.
- ◆ Ensure that the UNIX agent is installed on the computer you want to monitor.

You can access the `AM70-NetBackupUNIX-7.x.x.0.msi` module installer from the `AM70_NetBackupUNIX_7.x.x.0` self-extracting installation package on the [AppManager Module Upgrades & Trials](#) page.

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.

### To install the module:

- 1 Ensure you have the UNIX agent installed on the managed computer. For information about how to install the agent, see the *AppManager for UNIX and Linux Servers Management Guide*.
- 2 Install the Knowledge Scripts into the QDB by running the module installer on the QDB computer:
  - 2a Select **Install Knowledge Scripts** to install the repository components.
  - 2b Specify the SQL Server name of the server hosting the QDB, as well as the case-sensitive QDB name.
- 3 (Conditional) If you use Control Center 7.x, run the module installer for each QDB.
- 4 (Conditional) If you use Control Center 8.x, run the module installer only for the primary QDB. Control Center automatically replicates this module to secondary QDBs.
- 5 Run the module installer on all console computers to install the Help and console extensions.
- 6 (Conditional) If you have not discovered NetBackup resources, run the `Discovery_NetBackupUNIX` Knowledge Script on all agent computers. For more information, see [Section 2.3, “Discovering AppManager for NetBackup UNIX Resources,”](#) on page 13.
- 7 Upgrade any running Knowledge Script jobs. For more information, see [Section 2.4, “Upgrading Knowledge Script Jobs,”](#) on page 13.

The `NetBackupUNIX_Install.log` file, in the `\NetIQ\Temp\NetIQ_Debug\ folder on the QDB computer, lists any problems that occurred during installation.`

### 2.2.1 Silently Installing the Knowledge Scripts

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

#### Windows authentication:

```
AM70-NetBackupUNIX-7.x.x.0.msi /qn MO_B_QDBINSTALL=1 MO_B_SQLSVR_WINAUTH=1  
MO_SQLSVR_NAME=[SQLServerName] MO_QDBNAME=[AMRepositoryName]
```

#### SQL authentication:

```
AM70-NetBackupUNIX-7.x.x.0.msi /qn MO_B_QDBINSTALL=1 MO_B_SQLSVR_WINAUTH=0  
MO_SQLSVR_USER=[SQL login] MO_SQLSVR_PWD=[SQLLoginPassword]  
MO_SQLSVR_NAME=[SQLServerName] MO_QDBNAME=[AMRepositoryName]
```

## 2.3 Discovering AppManager for NetBackup UNIX Resources

Use the `Discovery_NetBackupUNIX` Knowledge Script to discover configuration and resource information for NetBackup servers. The `Discovery_NetBackupUNIX` script also tracks, displays, and provides various alerts about NetBackup services.

By default, this script runs once for each computer.

Set the Values tab parameters as needed.

Description	How To Set It
Raise events when discovery succeeds? (y/n)	Select <code>y</code> to raise an event if the discovery job succeeds. This Knowledge Script raises an event even if the job fails for any reason. The default is <code>n</code> .
Search path for NetBackup programs	Type the path to the NetBackup program to direct the search for NetBackup resources. The default is <code>/usr/opensv</code> (the default NetBackup installation path).
Event severity when discovery...	Set the event severity level, from 1 to 40, to reflect the importance when the job: <ul style="list-style-type: none"><li>◆ <b>...succeeds.</b> Set the severity level for a successful discovery and to raise an event when the job succeeds. The default is 25.</li><li>◆ <b>...fails.</b> The default is 5.</li><li>◆ <b>...partially succeeds.</b> Set the event severity level for a discovery that returns some data but also generates warning messages. The default is 15.</li><li>◆ <b>...is not applicable.</b> This type of failure usually occurs when NetBackup is not installed on the target computer. The default is 15.</li></ul>

## 2.4 Upgrading Knowledge Script Jobs

This release of AppManager for NetBackup UNIX contains updated Knowledge Scripts. You can push the changes for updated scripts to running Knowledge Script jobs in one of the following ways:

- ◆ Use the `AMAdmin_UpgradeJobs` Knowledge Script.
- ◆ Use the Properties Propagation feature.

### 2.4.1 Running AMAdmin\_UpgradeJobs

The `AMAdmin_UpgradeJobs` Knowledge Script can push changes to running Knowledge Script jobs. Your AppManager repository (QDB) must be at version 7.0 or later. In addition, the repository computer must have hotfix 72040 installed, or the most recent AppManager Repository hotfix. To download the hotfix, see the [AppManager Suite Hotfixes](#) page.

Upgrading jobs to use the most recent script version allows the jobs to take advantage of the latest script logic while maintaining existing parameter values for the job.

For more information, see the Help for the `AMAdmin_UpgradeJobs` Knowledge Script.

## 2.4.2 Propagating Knowledge Script Changes

You can propagate script changes to jobs that are running and to Knowledge Script Groups, including recommended Knowledge Script Groups and renamed Knowledge Scripts.

Before propagating script changes, verify that the script parameters are set to your specifications. Customized script parameters might have reverted to default parameters during the installation of the module. New parameters might need to be set appropriately for your environment or application.

You can choose to propagate only properties (specified in the Schedule and Values tabs), only the script (which is the logic of the Knowledge Script), or both. Unless you know specifically that changes affect only the script logic, you should propagate the properties and the script.

### Propagating Changes to Ad Hoc Jobs

You can propagate the properties and the logic (script) of a Knowledge Script to ad hoc jobs started by that Knowledge Script. Corresponding jobs are stopped and restarted with the Knowledge Script changes.

**To propagate changes to ad hoc Knowledge Script jobs:**

- 1 In the Knowledge Script view, select the Knowledge Script for which you want to propagate changes.
- 2 Right-click the script and select **Properties propagation > Ad Hoc Jobs**.
- 3 Select the components of the Knowledge Script that you want to propagate to associated ad hoc jobs:

Select	To propagate
Script	The logic of the Knowledge Script.
Properties	Values from the Knowledge Script Schedule and Values tabs, such as schedule, monitoring values, actions, and advanced options.

### Propagating Changes to Knowledge Script Groups

You can propagate the properties and logic (script) of a Knowledge Script to corresponding Knowledge Script Group members.

After you propagate script changes to Knowledge Script Group members, you can propagate the updated Knowledge Script Group members to associated running jobs. For more information, see [“Propagating Changes to Ad Hoc Jobs” on page 14](#).

**To propagate Knowledge Script changes to Knowledge Script Groups:**

- 1 In the Knowledge Script view, select the Knowledge Script Group for which you want to propagate changes.
- 2 Right-click the Knowledge Script Group and select **Properties propagation > Ad Hoc Jobs**.
- 3 (Conditional) If you want to exclude a Knowledge Script member from properties propagation, deselect that member from the list in the Properties Propagation dialog box.

- 4 Select the components of the Knowledge Script that you want to propagate to associated Knowledge Script Groups:

Select	To propagate
Script	The logic of the Knowledge Script.
Properties	Values from the Knowledge Script Schedule and Values tabs, including the schedule, actions, and Advanced properties.

- 5 Click **OK**. Any monitoring jobs started by a Knowledge Script Group member are restarted with the job properties of the Knowledge Script Group member.

## 2.5 Running the UNIX Agent as Non-Root

When the UNIX agent runs as a user other than root, you must install the optional non-root extensions. The non-root extensions use the `sudo` utility to allow programs to run as different users on UNIX and Linux operating systems. To enable `sudo` functionality, use a command alias and a user specification that list the commands that a user can run. You must add this information to the configuration file, `/etc/uroot.cfg`, with the commands that AppManager for NetBackup UNIX executes.

The following example shows the updates required for a default installation of the AppManager UNIX agent to run with an installation of AppManager that uses the default program file locations.

The user in this example is `netiq`. Set this user to the user account that runs the UNIX agent.

```
# __START_NETIQ_ADDITIONS_NETBACKUP__
#
# This block contains code required by NetIQ AppManager for NetBackup UNIX.
#
Cmdnd_Alias NETIQ_CMDS_NETBACKUP = \
    /bin/find, \
    /usr/opensv/netbackup/bin/admincmd/bpdbjobs, \
    /usr/opensv/netbackup/bin/admincmd/bpminlicense, \
    /usr/opensv/netbackup/bin/admincmd/bpgetconfig, \
    /usr/opensv/netbackup/bin/admincmd/bpplclients, \
    /usr/opensv/netbackup/bin/admincmd/bpplinfo, \
    /usr/opensv/netbackup/bin/admincmd/bppllist, \
    /usr/opensv/netbackup/bin/admincmd/bperror, \
    /usr/opensv/netbackup/bin/admincmd/bpstulist, \
    /usr/opensv/netbackup/bin/bpclntcmd, \
    /usr/opensv/netbackup/bin/bpps, \
    /usr/opensv/netbackup/bin/initbpdbm, \
    /usr/opensv/netbackup/bin/initbprd, \
    /usr/opensv/volmgr/bin/ltid, \
    /usr/opensv/volmgr/bin/vmoprcmd, \
    /usr/opensv/volmgr/bin/vmps, \
    /usr/opensv/volmgr/bin/vmd
netiq ALL = NOPASSWD: NETIQ_CMDS_NETBACKUP
#
# __END_NETIQ_ADDITIONS_NETBACKUP__
```

The example provided above lists the default paths to the appropriate NetBackup program files. When you edit the `sudoers` file to allow access to these program files, make sure the paths are accurate.





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# 3 NetBackupUNIX Knowledge Scripts

AppManager provides the following Knowledge Scripts for monitoring NetBackup resources.

From the Knowledge Script view of the Control Center Console, you can access more information about any Knowledge Script by selecting it and pressing **F1**.

Knowledge Script	What It Does
<a href="#">Clients</a>	Monitors the number of clients managed by the NetBackup server.
<a href="#">DBDirSize</a>	Monitors the size in MB of the NetBackup database directory on the NetBackup server.
<a href="#">DeviceStatus</a>	Monitors the NetBackup device status and optionally resets.
<a href="#">ErrorLog</a>	Checks for errors, generates an error log, warning, and critical entries made since the last time the script was run.
<a href="#">FailedJobs</a>	Monitors the number of backup jobs that failed during the specified interval.
<a href="#">IncompleteJobs</a>	Monitors the number of incomplete backup jobs during the specified interval.
<a href="#">LogDirSize</a>	Monitors the size in MB of the NetBackup log directory.
<a href="#">PendingRequest</a>	Monitors the number of pending device requests on the NetBackup server.
<a href="#">ResourceHigh</a>	Monitors the CPU and memory usage of NetBackup daemons.
<a href="#">StorageUnitsChanged</a>	Monitors whether changes are made to the storage units configured on the NetBackup Server.
<a href="#">SuccessfulJobs</a>	Monitors the number of successfully completed backup jobs during the specified interval.

## 3.1 Clients

Use this Knowledge Script to monitor the number of NetBackup clients managed by the NetBackup server. This Knowledge Script raises an event if the number of managed clients exceeds the threshold you set.

### 3.1.1 Resource Object

NetBackup server

### 3.1.2 Default Schedule

The default interval for this Knowledge Script is **Every 24 hours**.

### 3.1.3 Setting Parameter Values

Set the following parameters as needed.

Description	How to Set It
Raise event when the managed backup clients threshold is exceeded?	Set to y to raise events. The default is y.
Collect data for number of clients being managed?	Set to y to collect data for charts and reports. If set to y, this script returns the number of clients managed by the NetBackup server. The default is n.
Threshold -- Maximum number of clients being managed	Enter a threshold for the maximum number of clients, from 0 to 9999, NetBackup sever can manage before raising an event. The default is 10 clients.
Event severity level	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 8.

## 3.2 DBDirSize

Use this Knowledge Script to monitor the size in MB of the NetBackup database directory in the NetBackup server. This Knowledge Script raises an event and executes the specified action if the size of the database directory exceeds the threshold you set.

### 3.2.1 Resource Object

NetBackup server

### 3.2.2 Default Schedule

The default interval for this Knowledge Script is **Every 24 hours**.

### 3.2.3 Setting Parameter Values

Set the following parameters as needed.

Description	How to Set It
Raise event when the database directory size threshold is exceeded?	Set to y to raise events. The default is y.
Collect data for database directory size?	Set to y to collect data for charts and reports. If set to y, this script returns the size in MB of the database directory. The default is n.
Threshold -- maximum size of database directory	Type a threshold for the maximum size in MB, from 0 to 9999, of the NetBackup database directory. The default is 200 MB.
Event severity level	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 10.

## 3.3 DeviceStatus

Use this Knowledge Script to detect the status of a NetBackup device. If the device status is Not Connected, you can change the status to Connected. A NetBackup device is the medium used to store archived information, such as a tape drive.

This Knowledge Script raises an event when the auto-reset feature succeeds in resetting a device from the Not Connected status to the Connected status, and when the auto-reset feature fails.

### 3.3.1 Resource Object

NetBackup device

### 3.3.2 Default Schedule

The default interval for this Knowledge Script is **Every 24 hours**.

### 3.3.3 Setting Parameter Values

Set the following parameters as needed.

Description	How To Set It
Collect data for device status?	Set to y to collect data for charts and reports. If set to y, this script returns 0 if the device is down or 100 if the device is up. The default is n.
Automatically reset device if device is down?	Set to y to automatically reset a device that is detected as down. The default is y.
Event severity level when auto-reset fails	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 5.
Event severity level when auto-reset succeeds	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 25.

## 3.4 ErrorLog

Use this Knowledge Script to generate a log of problems on the NetBackup server, and then scan the log for Error, Warning, and Critical entries.

An iteration is the schedule you set for running the Knowledge Script. For example, **Every hour**. During the first iteration, this Knowledge Script sets a starting point to check for log entries but does not generate any events. During subsequent iterations, this Knowledge Script generates events if the server creates log entries.

### 3.4.1 Resource Object

NetBackup server

### 3.4.2 Default Schedule

The default interval for this Knowledge Script is **Every hour**.

### 3.4.3 Setting Parameter Values

Set the following parameters as needed.

Description	How To Set It
Raise event if a log entry is found?	Set to y to raise events. During the first iteration of the job, all log entries are evaluated. On subsequent iterations, existing entries are ignore, and only log entries written since the last iteration will raise an event. The default is y.
Collect data for the number of log entries found?	Set to y to collect charts for graphs and reports. If set to y, this script returns the total number of entries in the error log during the interval. The default is n.
Event severity level	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 10.

## 3.5 FailedJobs

Use this Knowledge Script to monitor the number of failed backup jobs. This Knowledge Script raises an event if the number of failed jobs during the interval exceeds the set threshold.

An iteration is the schedule you set for running the Knowledge Script. For example, **Every 24 hours**. During the first iteration, this Knowledge Script sets a starting point to check for failed backup jobs but does not generate any events. During subsequent iterations, this Knowledge Script generates events if the server generates failed backup jobs.

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**NOTE:** The first iteration of this Knowledge Script may list a job multiple times. In subsequent iterations, the Knowledge Script lists the jobs only once.

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### 3.5.1 Resource Object

NetBackup server

### 3.5.2 Default Schedule

The default interval for this Knowledge Script is **Every 24 hours**.

### 3.5.3 Setting Parameter Values

Set the following parameters as needed.

Description	How to Set It
Raise event when threshold is exceeded?	Set to y to raise events. The default is y.
Collect data for number of failed backup jobs?	Set to y to collect data for charts and reports. If set to y, this script returns the number of failed jobs since the last script iteration. The default is n.
Threshold -- Maximum number of failed backup jobs	Type a threshold for the maximum number of failed jobs, from 0 to 9999, that can be detected before an event is raised. The default is 10.

Description	How to Set It
Event severity level	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 5.

## 3.6 IncompleteJobs

Use this Knowledge Script to monitor the number of incomplete backup jobs. This Knowledge Script raises an event if the number of incomplete jobs during the interval exceeds the set the threshold.

An iteration is the schedule you set for running the Knowledge Script. For example, **Every 24 hours**. During the first iteration, this Knowledge Script sets a starting point to check for incomplete backup jobs but does not generate any events. During subsequent iterations, this Knowledge Script generates events if the server generates incomplete backup jobs.

### 3.6.1 Resource Object

NetBackup server

### 3.6.2 Default Schedule

The default interval for this Knowledge Script is **Every 24 hours**.

### 3.6.3 Setting Parameter Values

Set the following parameters as needed.

Description	How to Set It
Raise event when the incomplete jobs threshold is exceeded?	Set to y to raise events. The default is y.
Collect data for number of incomplete jobs?	Set to y to collect data for charts and reports. If set to y, this script returns the number of jobs submitted and the number of incomplete jobs since the last script iteration. The default is n.
Threshold -- Maximum number of incomplete backup jobs	Type a maximum threshold for the number of incomplete jobs, from 0 to 9999, since the last script iteration. The default is 10.
Event severity level	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 10.

## 3.7 LogDirSize

Use this Knowledge Script to monitor the size (in MB) of the NetBackup log directory. This Knowledge Script raises an event if the size of this directory exceeds the threshold you set.

### 3.7.1 Resource Object

NetBackup server

## 3.7.2 Default Schedule

The default interval for this Knowledge Script is **Every 24 hours**.

## 3.7.3 Setting Parameter Values

Set the following parameters as needed.

Description	How To Set It
Raise event when the log directory size threshold is exceeded?	Set to y to raise events. The default is y.
Collect data for log directory size?	Set to y to collect data for charts and reports. If set to y, this script returns the size (in MB) of the NetBackup log directory. The default is n.
Threshold -- Maximum size of log directory	Type a threshold for the maximum size in MB, from 0 to 9999, of the NetBackup log directory. The default is 200 MB.
Event severity level	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 10.

## 3.8 PendingRequest

Use this Knowledge Script to monitor the current number of pending device requests on the NetBackup server. This Knowledge Script raises an event if the current number of pending device requests exceeds the threshold you set.

### 3.8.1 Resource Object

NetBackup server

### 3.8.2 Default Schedule

The default interval for this Knowledge Script is **Every hour**.

### 3.8.3 Setting Parameter Values

Set the following parameters as needed.

Description	How To Set It
Raise event when the current number of pending device requests threshold is exceeded?	Set to y to raise events. The default is y.
Collect data for number of pending device requests?	Set to y to collect data for charts and reports. If set to y, this script returns the current number of pending device requests. The default is n.

Description	How To Set It
Threshold -- Maximum number of pending device requests	Type a threshold for the maximum current number of pending device requests, from 0 to 9999, that can be detected before an event is raised. The default is 5 requests.
Event severity level	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 8.

## 3.9 ResourceHigh

Use this Knowledge Script to monitor the CPU and memory usage of NetBackup daemons. This Knowledge Script raises an event if the CPU or memory usage exceeds the threshold you set.

### 3.9.1 Resource Objects

NetBackup daemons

### 3.9.2 Default Schedule

The default interval for this Knowledge Script is **Every 5 minutes**.

### 3.9.3 Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event when either threshold is exceeded?	Set to y to raise events. The default is y.
Collect data for CPU and memory utilization? (y/n)	Set to y to collect data for charts and reports. If set to y, returns the CPU utilization (%) and the memory utilization (MB) of the NetBackup daemons. The default is n.
Threshold -- Maximum CPU utilization	Enter a threshold for the maximum CPU utilization, as a percentage of total CPU time, of the NetBackup daemons that can be detected before an event is raised. The default is 60%.
Threshold -- Maximum memory utilization	Type a threshold for the maximum number of MB, from 0 to 5000, of memory utilization that can be detected before an event is raised. The default is 6 MB.
Event severity level	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 10.

## 3.10 StorageUnitsChanged

Use this Knowledge Script to detect whether modifications have been made to storage units configured on the NetBackup server. This Knowledge Script raises an event if you add a new storage unit or delete a storage unit.

### 3.10.1 Resource Object

NetBackup storage unit folder

### 3.10.2 Default Schedule

The default interval for this Knowledge Script is **Every 24 hours**.

### 3.10.3 Setting Parameter Values

Set the following parameters as needed.

Description	How To Set It
Raise event if modification to storage units is detected?	Set to y to raise events. The default is y.
Collect data for number of modified storage units?	Set to y to collect data for charts and reports. If set to y, this script returns the number of added and deleted storage units. The default is n.
Event severity level	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 10.

## 3.11 SuccessfulJobs

Use this Knowledge Script to monitor the number of successfully completed backup jobs. This Knowledge Script raises an event if the number of successfully completed jobs during the interval falls below the set threshold.

An iteration is the schedule you set for running the Knowledge Script. For example, **Every 24 hours**. During the first iteration, this Knowledge Script sets a starting point to check for successful backup jobs but does not generate any events. During subsequent iterations, this Knowledge Script generates events if the server generates successful backup jobs.

### 3.11.1 Resource Object

NetBackup server

### 3.11.2 Default Schedule

The default interval for this Knowledge Script is **Every 24 hours**.

### 3.11.3 Setting Parameter Values

Set the following parameters as needed.

Description	How To Set It
Raise event when threshold not met?	Set to y to raise events. The default is y.



Description	How To Set It
Collect data for number of successfully completed backup jobs?	Set to y to collect data for charts and reports. If set to y, this script returns the number of successfully completed backup jobs since the last script iteration. The default is n.
Threshold -- Minimum number of successfully completed backup jobs	Type a minimum threshold for the number of successfully completed backup jobs, from 0 to 9999, since the last script iteration. The default is 10 jobs.
Event severity level	Set the event severity level, from 1 to 40, to indicate the importance of the event. The default is 5.

### 3.11.4 Example of How this Script is Used

Assume that you run three backup jobs every morning at 2 A.M. and expect all the jobs to be complete by 7 A.M. You can run this script once each day at 8 A.M. with the **Number of successfully completed jobs minimum threshold** set to **3**. This script raises an event and alerts you to possible problems if any of the scheduled backup jobs fails to complete by 8 A.M.

