

NetIQ® AppManager® for Symantec Backup Exec

Management Guide

February 2011



Legal Notice

NetIQ AppManager is covered by United States Patent No(s): 05829001, 05986653, 05999178, 06078324, 06397359, 06408335.

THIS DOCUMENT AND THE SOFTWARE DESCRIBED IN THIS DOCUMENT ARE FURNISHED UNDER AND ARE SUBJECT TO THE TERMS OF A LICENSE AGREEMENT OR A NON-DISCLOSURE AGREEMENT. EXCEPT AS EXPRESSLY SET FORTH IN SUCH LICENSE AGREEMENT OR NON-DISCLOSURE AGREEMENT, NETIQ CORPORATION PROVIDES THIS DOCUMENT AND THE SOFTWARE DESCRIBED IN THIS DOCUMENT "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SOME STATES DO NOT ALLOW DISCLAIMERS OF EXPRESS OR IMPLIED WARRANTIES IN CERTAIN TRANSACTIONS; THEREFORE, THIS STATEMENT MAY NOT APPLY TO YOU.

This document and the software described in this document may not be lent, sold, or given away without the prior written permission of NetIQ Corporation, except as otherwise permitted by law. Except as expressly set forth in such license agreement or non-disclosure agreement, no part of this document or the software described in this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, or otherwise, without the prior written consent of NetIQ Corporation. Some companies, names, and data in this document are used for illustration purposes and may not represent real companies, individuals, or data.

This document could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein. These changes may be incorporated in new editions of this document. NetIQ Corporation may make improvements in or changes to the software described in this document at any time.

© 2011 NetIQ Corporation. All rights reserved.

U.S. Government Restricted Rights: If the software and documentation are being acquired by or on behalf of the U.S. Government or by a U.S. Government prime contractor or subcontractor (at any tier), in accordance with 48 C.F.R. 227.7202-4 (for Department of Defense (DOD) acquisitions) and 48 C.F.R. 2.101 and 12.212 (for non-DOD acquisitions), the government's rights in the software and documentation, including its rights to use, modify, reproduce, release, perform, display or disclose the software or documentation, will be subject in all respects to the commercial license rights and restrictions provided in the license agreement.

Check Point, FireWall-1, VPN-1, Provider-1, and SiteManager-1 are trademarks or registered trademarks of Check Point Software Technologies Ltd.

ActiveAudit, ActiveView, Aegis, AppManager, Change Administrator, Change Guardian, Compliance Suite, the cube logo design, Directory and Resource Administrator, Directory Security Administrator, Domain Migration Administrator, Exchange Administrator, File Security Administrator, Group Policy Administrator, Group Policy Guardian, Group Policy Suite, IntelliPolicy, Knowledge Scripts, NetConnect, NetIQ, the NetIQ logo, PSAudit, PSDetect, PSPasswordManager, PSSecure, Secure Configuration Manager, Security Administration Suite, Security Manager, Server Consolidator, VigilEnt, and Vivinet are trademarks or registered trademarks of NetIQ Corporation or its subsidiaries in the USA. All other company and product names mentioned are used only for identification purposes and may be trademarks or registered trademarks of their respective companies.

For purposes of clarity, any module, adapter or other similar material ("Module") is licensed under the terms and conditions of the End User License Agreement for the applicable version of the NetIQ product or software to which it relates or interoperates with, and by accessing, copying or using a Module you agree to be bound by such terms. If you do not agree to the terms of the End User License Agreement you are not authorized to use, access or copy a Module and you must destroy all copies of the Module and contact NetIQ for further instructions.

Contents

About this Book and the Library.....	iii
About NetIQ Corporation	v

Chapter 1

Introduction to AppManager for Backup Exec	1
Why Monitor Backup Exec?	1
How AppManager Can Help.....	2

Chapter 2

Installing AppManager for Backup Exec	3
Installing the Module	4
Deploying the Module with Control Center.....	4
Verifying Your Installed Module	5
Upgrading Knowledge Script Jobs.....	6

Chapter 3

BackupExec Knowledge Scripts	9
About bemcmd.exe	10
AbortedJobs	11
ActiveJobIDs	12
CompletedJobs.....	13
FailedJobs.....	14
IncompleteJobs	15
LatestJob.....	16
Report_Availability	17
Report_IDsofActiveJobs	19
Report_NumberofAbortedJobs	22
Report_NumberofCompletedJobs	25
Report_NumberofFailedJobs.....	28
Report_NumberofIncompleteJobs	31
Report_StatusofTheLatestJob.....	34
ResourceHigh.....	37
ResubmitFailedJobs	38
ServiceDown	39
SkippedFilesInJobs.....	40
SuccessfulJobs	42
TotalBytes.....	43
Discovery_BackupExec	44

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 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 NetIQ Web site: www.netiq.com/support/am/extended/documentation/default.asp?version=AMDocumentation.

Conventions

The library uses consistent conventions to help you identify items throughout the documentation. The following table summarizes these conventions.

Convention	Use
Bold	<ul style="list-style-type: none">• Window and menu items• Technical terms, when introduced
<i>Italics</i>	<ul style="list-style-type: none">• Book and CD-ROM titles• Variable names and values• Emphasized words
Fixed Font	<ul style="list-style-type: none">• File and folder names• Commands and code examples• Text you must type• Text (output) displayed in the command-line interface
Brackets, such as <i>[value]</i>	<ul style="list-style-type: none">• Optional parameters of a command
Braces, such as <i>{value}</i>	<ul style="list-style-type: none">• Required parameters of a command
Logical OR, such as <i>value1 value2</i>	<ul style="list-style-type: none">• Exclusive parameters. Choose one parameter.

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 measureable 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.

Contacting Sales Support

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

Worldwide: www.netiq.com/about_netiq/officelocations.asp
United States and Canada: 888-323-6768
Email: info@netiq.com
Web Site: www.netiq.com

Contacting Technical Support

For specific product issues, please contact our Technical Support team.

Worldwide: www.netiq.com/Support/contactinfo.asp
North and South America: 1-713-418-5555
Europe, Middle East, and Africa: +353 (0) 91-782 677
Email: support@netiq.com
Web Site: www.netiq.com/support

Contacting Documentation Support

Our goal is to provide documentation that meets your needs. If you have suggestions for improvements, please email Documentation-Feedback@netiq.com. We value your input and look forward to hearing from you.

Contacting the Online User Community

Qmunity, 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, Qmunity helps ensure you are mastering the knowledge you need to realize the full potential of IT investments upon which you rely. For more information, please visit <http://community.netiq.com>.

Chapter 1

Introduction to AppManager for Backup Exec

This chapter discusses the advantages of using AppManager to monitor Symantec Backup Exec and discusses how to view Backup Exec resources in AppManager.

Why Monitor Backup Exec?

Although unexpected or catastrophic events are rare, they are a major risk factor that any twenty-first-century enterprise must prepare for. After all, even a short power outage or minor flood can wipe out an enormous amount of data—often a company or organization's most valuable asset.

As corporate computing environments become more complex and the amount of data they generate increases, companies are turning to products that can provide dependable and robust backup capabilities. One popular backup product is Backup Exec from Symantec (formerly VERITAS).

Backup Exec provides backup and restoration capabilities for servers and workstations network-wide. A Backup Exec installation typically includes an administrator console computer and a media server, which holds the Backup Exec engine, plus Backup Exec agents on all computers holding data that needs to be backed up.

Backup Exec may be your only line of defense against catastrophic data loss. And the more you grow to trust Backup Exec and rely on it to safeguard data resources, the more you need to:

- be certain that Backup Exec is being deployed correctly.
- guarantee that archived data will always be available if needed.
- ensure the availability and performance of Backup Exec services.
- reduce support costs associated with deploying and managing Backup Exec.
- fulfill corporate service-level agreements (SLAs) regarding the dependability of backup services.

System administrators who intend to successfully meet the expectations of corporate management for absolutely reliable data backups need administrative and management tools that are dependable, robust, and comprehensive.

How AppManager Can Help

Backup Exec itself provides some tools to help administer services, alert administrators to error conditions, and produce reports. For example, Backup Exec provides a console that administrators can use to manually stop, pause, and start Backup Exec services. However, this console cannot monitor Backup Exec services automatically or on a continual basis.

Similarly, Backup Exec can send alerts when specific jobs fail, but this feature cannot be fine-tuned to send alerts when a certain threshold is exceeded. In addition, the Backup Exec tools do not provide an integrated, seamless mechanism for collecting performance data for analysis, graphing, and reporting. Such data is a standard requirement of many SLAs.

AppManager for Backup Exec provides ready-made monitoring scripts and reports that complement and extend Backup Exec's built-in features and provide additional value as well. With AppManager, you can automate monitoring tasks. Automated monitoring is critical for an application such as Backup Exec, which typically runs during off-hours.

AppManager for Backup Exec offers a set of Knowledge Scripts to gather information from Backup Exec services and from system resources. These scripts are readily customizable and can alert you whenever a Backup Exec job fails, or even when a job is completed. Knowledge Scripts can make direct calls to the Backup Exec applet named `bemcmd.exe` to retrieve information about Backup Exec jobs and their status.

AppManager for Backup Exec lets you fine-tune monitoring tasks and produce graphs and reports to help you analyze the efficiency of your backup regimen and verify service-level agreements.

[“BackupExec Knowledge Scripts”](#) on page 9 discusses the Knowledge Scripts available for monitoring and managing Backup Exec and serves as a reference for all the capabilities of AppManager for Backup Exec.

Chapter 2

Installing AppManager for Backup Exec

This chapter lists system requirements and describes how to install AppManager for Symantec Backup Exec.

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 Web site: <https://www.netiq.com/support/am/extended/documentation/default.asp>.

AppManager for Symantec Backup Exec requires version 6.0.2 or later of the AppManager repository, management server, and Operator Console or Control Center Console.

The managed clients require the following:

- Backup Exec version 10d and 11d.
- NetIQ AppManager agent version 6.0.2 or later.
- One of the following operating systems:
 - Windows 2000 Service Pack 4
 - Windows 2003 Server Service Pack 1 or Service Pack 2

For the latest information about supported software versions and the availability of module updates, visit the AppManager Supported Products page at www.netiq.com/support/am/supportedproducts/default.asp. If you encounter problems using this module with a later version of your application, contact NetIQ Technical Support.

For more information about system requirements for the AppManager agent, repository, and management server, see the Installation Guide for AppManager.

Installing the Module

The setup program automatically identifies and updates all relevant AppManager components on a computer. Therefore, run the setup program only once on any computer. The pre-installation check also runs automatically when you launch the setup program.

You can install the module in one of the following ways:

- Run the module setup program, `<AM70-BackupExe-7.x.x.0.>.msi`, which you downloaded from the Web. Save the module setup files on the distribution computer, and then delete the older versions of the module setup files. For more information about the distribution computer, see the *Installation Guide for AppManager*.
- Use Control Center to install the module on the remote computer where an agent is installed. For more information, see “[Deploying the Module with Control Center](#)” on page 4.

To install the module:

1. Run the module setup program on all AppManager repository (QDB) computers to install the Knowledge Scripts and reports.
 - Run the setup program on the primary repository computer first. Then run the setup program on all other repository computers.
 - For repositories running in active/active and active/passive clusters, run the setup program on the active node. Then, copy the following Registry key to the non-active node.
`HKEY_LOCAL_MACHINE\SOFTWARE\NetIQ\AppManager\4.0`
2. Install the module on the Backup Exec computer you want to monitor (agent computer). Use one of the following methods:
 - Run the module setup program.
 - Use Control Center to deploy the installation package.
3. Run the module setup program on all Operator Console and Control Center computers to install the Help and console extensions.
4. *If you have not already discovered Backup Exec resources*, run the “[Discovery_BackupExec](#)” on page 44 Knowledge Script on all agent computers where you installed the module.

After the installation has completed, you can find a record of problems encountered in the `BackupExe_Install.log` file, located in the `\NetIQ\Temp\NetIQ_Debug\<ServerName>` folder.

Deploying the Module with Control Center

You can use Control Center to deploy the module on a remote computer 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 Web site: <https://www.netiq.com/support/am/extended/documentation/default.asp>.

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.
3. Configure an email 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.

Checking In the Installation Package

You must check in the installation package, `AM70-BackupExe-7.x.x.0.xml`, before you can deploy the module on an agent computer.

To check in a module installation package:

1. Log on to Control Center and navigate to the Administration pane.
2. In the Deployment folder, select **Packages**.
3. On the Tasks pane, click **Check in Packages**.
4. Navigate to the folder where you saved `AM70-BackupExe-7.x.x.0.xml` and select the file.
5. Click **Open**. The Deployment Package Check in Status dialog box displays the status of the package check in.

Verifying Your Installed Module

To verify installation on many computers, run the ReportAM_CompVersion Knowledge Script. Ensure you discover a report-enabled agent before running this script. For more information, see the Help for the script.

To verify installation on one or only a few computers, use the Operator Console.

To verify your installed module with the Operator Console:

1. In the TreeView pane, select the computer for which you want to verify your installed module.
2. From the TreeView menu, select **Properties**. On the System tab, the System information pane displays the version numbers for all modules installed on the computer.
3. Verify that the version number from the *AppManager for Symantec Backup ExecReadme* matches the version number shown in the System information pane.

Upgrading Knowledge Script Jobs

This release of AppManager for Symantec Backup Exec may contain 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.

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](#) Web 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.

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 may have reverted to default parameters during the installation of the module. New parameters may 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 both properties and the script.

For more information about propagating Knowledge Script changes, see the “Running Monitoring Jobs” chapter of the *Operator Console User Guide for AppManager*.

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. Click **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 6.

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. On the KS menu, select **Properties propagation > Ad Hoc Jobs**.
3. *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.

Chapter 3

BackupExec Knowledge Scripts

AppManager for Symantec Backup Exec provides the following set of Knowledge Scripts for monitoring Backup Exec resources. 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**. In the Operator Console, click any Knowledge Script in the Knowledge Script pane and press **F1**.

Knowledge Script	What It Does
AbortedJobs	Monitors the number of aborted or cancelled Backup Exec jobs.
ActiveJobIDs	Monitors the number of jobs that were active when the script ran.
CompletedJobs	Monitors the number of jobs that were completed during the monitoring interval.
FailedJobs	Monitors the number of failed Backup Exec jobs.
IncompleteJobs	Monitors the number of Backup Exec jobs that have not completed.
LatestJob	Scans the Backup Exec log and returns the status of the last completed Backup Exec job.
Report_Availability	Generates a report about Backup Exec availability.
Report_IDsofActiveJobs	Generates a report about the number of active Backup Exec jobs.
Report_NumberofAbortedJobs	Generates a report about the number of aborted Backup Exec jobs.
Report_NumberofCompletedJobs	Generates a report about the number of completed Backup Exec jobs.
Report_NumberofFailedJobs	Generates a report about the number of failed Backup Exec jobs.
Report_NumberofIncompleteJobs	Generates a report about the number of incomplete Backup Exec jobs.
Report_StatusofTheLatestJob	Generates a report about the status of the most-recently-submitted backup job.
ResourceHigh	Monitors the CPU and memory usage of Backup Exec services.
ResubmitFailedJobs	Checks for backup jobs that failed and resubmits those jobs to the Backup Exec server.
ServiceDown	Monitors Backup Exec services to see if they are running.
SkippedFilesInJobs	Monitors the number of files that were skipped during backups that finished within the last monitoring interval.
SuccessfulJobs	Monitors the number of Backup Exec jobs that completed successfully.
TotalBytes	Monitors the total number of bytes backed up during the last monitoring interval.
Discovery_BackupExec	Discovers Backup Exec resources on managed computers.

About bemcmd.exe

Several Knowledge Scripts need the **bemcmd.exe** applet in order to retrieve information from the Backup Exec sever. This applet ships along with the Symantec Backup Exec software.

With Knowledge Scripts that use **bemcmd.exe**, you cannot configure an interval of less than 5 minutes. This prevents overloading of the Backup Exec server with **bemcmd** requests.

Knowledge Scripts that use **bemcmd.exe** cannot process a completed job history of more than about 350 entries. If they encounter more than about 350 completed job history entries, the following Knowledge Scripts will abort the job:

- [CompletedJobs](#)
- [SuccessfulJobs](#)
- [SkippedFilesInJobs](#)

If a job is aborted due to this limitation, you must delete older job history entries and then try to run the Knowledge Script again.

The following Knowledge Scripts require **bemcmd.exe** in order to run successfully:

- [ActiveJobIDs](#)
- [CompletedJobs](#)
- [ResubmitFailedJobs](#)
- [SkippedFilesInJobs](#)
- [SuccessfulJobs](#)

AbortedJobs

Use this Knowledge Script to monitor the number of aborted or cancelled Backup Exec jobs and return data about those jobs.

This script periodically scans the Windows Application Event Log for any entries that Backup Exec made regarding aborted or cancelled jobs. When this Knowledge Script starts, it uses the value specified for the **Start with events in past N hours** parameter to determine how to process entries already in the event log. While running at the interval specified on the **Schedule** tab, it scans the event log for any new entries created since the last time it checked.

If the number of cancelled jobs found in the event log exceeds the threshold you set during any monitoring interval, an event is raised.

Resource Object

Backup Exec

Default Schedule

The default interval for this script is **Every 24 hours**.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if threshold exceeded?	Set to y to raise events. Default is y .
Collect data for number of aborted jobs?	Set to y to collect data for reports and graphs. When set to y , returns the number of cancelled jobs found. Default is n .
Start with events in past <i>N</i> hours	Set this parameter to determine which events are searched the first time the Knowledge Script is run. Subsequent searches begin where the last search finished. The following values are valid: <ul style="list-style-type: none">• -1 -- search all Application Event Log events that occur before and during the first monitoring interval. During subsequent monitoring intervals, only events that occur during the interval are searched.• 0 -- search only for events that occur during the monitoring interval; previous events are not searched.• N -- the number of hours to go back in the event log to scan for matching events. For example, enter 8 to scan the last 8 hours of the event log for matching entries. Default is 0.
Threshold -- Maximum number of aborted jobs	Enter the maximum number of cancelled jobs allowed during any interval before an event is raised. Default is 10 cancelled jobs.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default severity level is 5.

ActiveJobIDs

Use this Knowledge Script to check the number of jobs that are active when the script runs. It does not report all jobs that have been active since this script was last executed.

An “active” job is any job with a status of running, loading, or pending (queued). If the number of active jobs exceeds the maximum threshold or falls below the minimum threshold you set, an event is raised.

This Knowledge Script is useful for verifying that a specific job is still in process. You can also use it to retrieve the job ID of any currently active job.

Note

This script requires `bemcmd.exe` to run successfully. See [“About bemcmd.exe”](#) on page 10 for more information.

Resource Object

Backup Exec

Default Schedule

The default interval for this script is **Every 24 hours**. This Knowledge Script must be run at intervals of 5 minutes or more.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if threshold exceeded or not met?	Set to y to raise events. Default is y .
Collect data for number of active jobs?	Set to y to collect data for reports and graphs. If set to y , returns the number of active jobs, and the job IDs of the active jobs. Default is n .
Threshold -- Maximum number of active jobs	Specify a maximum number of active jobs. If the actual number of active jobs exceeds this threshold, an event is raised. Default is 20 active jobs.
Threshold -- Minimum number of active jobs	Specify a minimum number of active jobs. If the actual number of active jobs falls below this threshold, an event is raised. Default is 5 active jobs.
Event severity when threshold exceeded or not met	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default severity level is 12.

CompletedJobs

Use this Knowledge Script to monitor the number of jobs that were completed during the monitoring interval, regardless of their outcome. A completed job is any job with a status of Cancelled, Successful, or Failed.

If the number of completed jobs exceeds the maximum threshold or falls below the minimum threshold you set, an event is raised.

Note

This script requires bemcmd.exe to run successfully. See [“About bemcmd.exe”](#) on page 10 for more information.

Resource Object

Backup Exec

Default Schedule

The default interval for this script is **Every 24 hours**. This Knowledge Script must be run at intervals of 5 minutes or more.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if threshold exceeded or not met?	Set to y to raise events. Default is y .
Collect data for number of completed jobs?	Set to y to collect data for reports and graphs. If set to y , returns the number of completed jobs, and the IDs of the completed jobs. Default is n .
Threshold -- Maximum number of completed jobs	Specify a maximum number of completed jobs. If the number of completed jobs exceeds this threshold, an event is raised. Default is 20 completed jobs.
Threshold -- Minimum number of completed jobs	Specify the minimum number of completed jobs. If the number of completed jobs falls below this threshold, an event is raised. Default is 5 completed jobs.
Event severity when threshold exceeded or not met	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default severity level is 12.

FailedJobs

Use this Knowledge Script to monitor the number of failed Backup Exec jobs and return data about those jobs.

This Knowledge Script periodically scans the Windows Application Event Log for any entries that Backup Exec made regarding failed jobs. When this Knowledge Script starts, it uses the value specified for the **Start with events in past N hours** parameter to determine how to process entries already in the event log. While running at the interval specified on the **Schedule** tab, it scans the event log for any new entries created since the last time it checked.

If the number of failed jobs found in the event log exceeds the threshold you specify during any interval, an event is raised. This Knowledge Script returns the number of failed jobs, and the event detail message shows each job's name, start time, and end time.

Resource Object

Backup Exec

Default Schedule

The default interval for this script is **Every 24 hours**.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if threshold exceeded?	Set to y to raise events. Default is y .
Collect data for number of failed jobs?	Set to y to collect data for reports and graphs. If set to y , returns the number of failed jobs found. Default is n .
Start with events in past <i>N</i> hours	Set this parameter to determine which events to search for the first time the Knowledge Script is run. Subsequent searches begin where the last search finished. The following values are valid: <ul style="list-style-type: none">• -1 -- search all Application Event Log events that occur before and during the first monitoring interval. During subsequent monitoring intervals, only events that occur during the interval are searched.• 0 -- search only for events that occur during the monitoring interval; previous events are not searched.• N -- the number of hours to go back in the event log to scan for matching events. For example, enter 8 to scan the last 8 hours of the event log for matching entries. Default is 0.
Threshold -- Maximum number of failed jobs	Specify the maximum number of failed jobs. If the number of failed jobs exceeds this threshold, an event is raised. Default is 10 failed jobs.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default severity level is 5.

IncompleteJobs

Use this Knowledge Script to monitor the number of Backup Exec jobs that have not completed and to return data about those jobs.

This script periodically scans the Backup Exec log for any entries that contain only a data header but no job information. An entry with only a data header indicates that Backup Exec has begun to track the job, but the job is not yet complete.

This Knowledge Script does not determine why the job is not complete. In most cases, however, it indicates that the job is pending (queued) or still running.

If the number of jobs that have not completed exceeds the threshold you set during any interval, an event is raised.

Resource Object

Backup Exec

Default Schedule

The default interval for this script is **Every 24 hours**.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if threshold exceeded?	Set to y to raise events. Default is y .
Collect data for number of incomplete jobs?	Set to y to collect data for reports and graphs. If set to y , returns the number of jobs that have not completed. Default is n .
Threshold -- Maximum number of incomplete jobs	Specify the maximum number of incomplete jobs. If the number of incomplete jobs exceeds this threshold, an event is raised. Default is 2 incomplete jobs.
Event severity when threshold exceeded	If events are enabled, set the event severity level, from 1 to 40, to indicate the importance of the event. Default severity level is 5.

LatestJob

Use this Knowledge Script to monitor the status of the last completed Backup Exec job and return data about that job.

This script periodically scans the Backup Exec log for the status of the last completed backup or restore job. An event is raised if the last job failed. You can set this Knowledge Script to raise an event if the latest job completed successfully.

This Knowledge Script can also monitor the size of the backup file and raise an event if the file exceeds the maximum threshold or falls below the minimum threshold you set. A file that is too large or too small can indicate a problem with the backup.

An event can be raised if the media label on the disk cartridge where the current backup was made is identical to the media label of the disk where the previous backup was made. If the two media labels are identical, it may indicate that the current backup overwrote a previous backup. This Knowledge Script can detect this condition, but only after the first script iteration is complete.

Resource Object

Backup Exec

Default Schedule

The default interval for this script is **Every 24 hours**.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if last job ran successfully?	Set this parameter to y to raise an event when the last job ran successfully. Default is n . Note This script always raises an event when the last job failed.
Collect data for status of last job?	Set to y to collect data for reports and graphs. If set to y , returns the number of jobs that have not completed. Default is n .
Threshold -- Maximum size of backup file	Specify the maximum size of the backup file. If the file size exceeds this threshold, an event is raised. Default is 2000 MB.
Threshold -- Minimum size of backup file	Specify the minimum size of the backup file. If the file size falls below this threshold, an event is raised. Default is 10 MB.
Event severity level if...	Set the event severity level, from 1 to 40, to indicate the importance of: <ul style="list-style-type: none">• ... last job failed. Enter a value that indicates the latest job failed. Default is 5.• ... last job succeeded. Enter a value that indicates the latest job completed successfully. Default is 25.• ... duplicate disk label found. Enter a value to indicate that the media label of the current backup disk is the same as the media label of the previous backup disk. Default is 15.• ... file size warning. Enter a value to indicate that the size of the backup file was larger or smaller than the thresholds you set. Default is 18.

Report_Availability

Use this Report Knowledge Script to generate a report about the availability of Backup Exec based on the up and down status of Backup Exec services.

This report uses data collected by the [ServiceDown](#) Knowledge Script.

Resource Objects

Report Agent > AM Repositories > *AppManager for Symantec Backup Exec repository.*

Default Schedule

The default schedule is **Run once**.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Data source	Use the following parameters to select the data for your report.
Select computer(s)	Click the Browse [...] button to start the data wizard. Use the data wizard to select the computers for your report.
Select time range	Click the Browse [...] button to open the time browser. Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Click the Browse [...] button to select the days of the week to include in your report.
Data settings	Use the following parameters to define the statistical calculation applied to data, and which data is displayed.
Hours or percentage on chart	Select whether to illustrate availability by hours or as a percentage.
Select sorting/display option	Select whether data is sorted, or the method of display: <ul style="list-style-type: none">• No sort: Data is not sorted• Sort: Data is sorted by value (lowest to highest from front to back; highest to lowest from left to right)• Top %: Chart only the top <i>N</i> % of selected data (sorted by default)• Top <i>N</i>: Chart only the top <i>N</i> of selected data (sorted by default)• Bottom %: Chart only the bottom <i>N</i>% of data (sorted by default)• Bottom <i>N</i>: Chart only the bottom <i>N</i> of selected data (sorted by default)
Percentage/count for top/bottom	Enter a number for either the percent or count defined in the previous parameter (for example, Top 10%, or Top 10). Default is 25.
Truncate top/bottom?	If set to yes, the data table shows only the top or bottom <i>N</i> or % (for example, only the top 10%). Otherwise, the table shows all data. Default is no.
Report settings	Use the following parameters to define the graphical presentation of data, the folder where the report is generated, and properties that identify the report.
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. Default is yes.

Description	How to Set It
Include table?	Set to yes to include a table of data stream values in the report. Default is yes.
Include chart?	Set to yes to include a chart of data stream values in the report. The default is yes.
Select chart style	Click the Browse [...] button to open the Chart Settings dialog box. Define the graphic properties of the charts in your report. Default is pie chart style.
Select output folder	Click the Browse [...] button to set parameters for the output folder.
Add job ID to output folder name?	Set to yes to append the job ID to the name of the output folder. Adding the job ID to the output folder name is helpful to identify a specific instance of a report Knowledge Script with its corresponding report. Default is no.
Select properties	Click the Browse [...] button to open the Report Properties dialog box. Set the properties parameters as desired.
Add time stamp to title?	Set to yes to append a timestamp to the title of the report, making each title unique. The timestamp consists of the date and time the report was generated. Adding a timestamp lets you run consecutive iterations of the same report without overwriting previous output. Default is no.
Event notification	Use the following parameters to raise events associated with generating the report, and to set severity levels for those events.
Event for report success?	Set to yes to raise an event when the report is successfully generated. Default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 35.
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 25.
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 5.

Report_IDsofActiveJobs

Use this Report Knowledge Script to generate a report about the number of active Backup Exec jobs. This report allows you to make a statistical analysis of the data point values (for example, the average or maximum value over a period of time).

This report uses data collected by the [ActiveJobIDs](#) Knowledge Script.

Resource Object

Report Agent > AM Repositories > *AppManager repository*.

Default Schedule

The default schedule is **Run once**.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Data source	Use the following parameters to select the data for your report.
Select computers	Click the Browse [...] button to start the data wizard. Use the data wizard to select the computers to be included in your report.
Select time range	Click the Browse [...] button to open the time browser. Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Click the Browse [...] button to select the days of the week to include in your report.
Statistics to show	Select a statistical method by which to display data in the report: <ul style="list-style-type: none">• Average: Average value of data points for the aggregation interval (for example, the average value for 1 hour)• Minimum/Average/Maximum: Minimum, average, and maximum values of data points for the aggregation interval• Minimum: Minimum value of data points for the aggregation interval• Maximum: Maximum value of data points for the aggregation interval• Range: Range of values in the data stream (maximum - minimum = range)• StandardDeviation: Measure of how widely values are dispersed from the mean• Sum: Total value of data points for the aggregation interval• Open/Close: Last value for the aggregation interval• Change: Difference between the first and last values for the time range of the report (close - open = change)• Count: Number of data points for the time range of the report

Description	How to Set It
Select sorting/display option	Select whether data is sorted, or the method of display: <ul style="list-style-type: none"> • No sort: Data is not sorted • Sort: Data is sorted by value (lowest to highest from front to back; highest to lowest from left to right) • Top %: Chart only the top <i>N</i> % of selected data (sorted by default) • Top N: Chart only the top <i>N</i> of selected data (sorted by default) • Bottom %: Chart only the bottom <i>N</i> % of data (sorted by default) • Bottom N: Chart only the bottom <i>N</i> of selected data (sorted by default)
Percentage/count for top/bottom	Enter a number for either the percent or count defined in the previous parameter (for example, Top 10%, or Top 10). Default is 25.
Truncate top/bottom?	If set to yes, then the data table shows only the top or bottom <i>N</i> or % (for example, only the top 10%). Otherwise, the table shows all data. Default is no.
Show totals on the table?	If set to yes, additional calculations are made for each column of numbers in a table, and the following values are listed at the end of the table: <ul style="list-style-type: none"> • Report Average: Average of all values in a column • Report Minimum: Minimum value in a column • Report Maximum: Maximum value in a column • Report Total: Total of all values in a column Default is no.
Report settings	
Include parameter help card?	Set to y to include a table in the report that lists parameter settings for the report script. Default is y .
Include table?	Set to y to include a table of data stream values in the report. Default is y .
Include chart?	Set to y to include a chart of data stream values in the report. Default is y .
Select chart style	Click the Browse [...] button to open the Chart Settings dialog box. Define the graphic properties of the charts in your report.
Select output folder	Click the Browse [...] button to set parameters for the output folder.
Add job ID to output folder name?	Set to yes to append the job ID to the name of the output folder. This is helpful to correlate a specific instance of a Report Script and the corresponding report. Default is no.
Select properties	Click the Browse [...] button to open the Report Properties dialog box. Set the properties as desired.
Add time stamp to title	Set to y to append a timestamp to the title of the report. The timestamp consists of the date and time the report was generated. Adding a timestamp lets you run consecutive iterations of the same report without overwriting previous output. Default is n .
Event notification	
Event for report success?	Set to y to raise an event when the report is successfully generated. Default is y .

Description	How to Set It
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 35.
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 25.
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 5.

Report_NumberofAbortedJobs

Use this Report Knowledge Script to generate a report about the number of aborted Backup Exec jobs. This report allows you to make a statistical analysis of the data point values (for example, the average or maximum value over a time period).

This report uses data collected by the [AbortedJobs](#) Knowledge Script.

Resource Object

Report Agent > AM Repositories > *AppManager repository*.

Default Schedule

The default schedule is **Run once**.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Data source	Use the following parameters to select the data for your report.
Select computers	Click the Browse [...] button to start the data wizard. Use the data wizard to select the computers to be included in your report.
Select time range	Click the Browse [...] button to open the time browser. Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Click the Browse [...] button to select the days of the week to include in your report.
Statistics to show	Select a statistical method by which to display data in the report: <ul style="list-style-type: none">• Average: Average value of data points for the aggregation interval (for example, the average value for 1 hour)• Minimum/Average/Maximum: Minimum, average, and maximum values of data points for the aggregation interval• Minimum: Minimum value of data points for the aggregation interval• Maximum: Maximum value of data points for the aggregation interval• Range: Range of values in the data stream (maximum - minimum = range)• StandardDeviation: Measure of how widely values are dispersed from the mean• Sum: Total value of data points for the aggregation interval• Open/Close: Last value for the aggregation interval• Change: Difference between the first and last values for the time range of the report (close - open = change)• Count: Number of data points for the time range of the report

Description	How to Set It
Select sorting/display option	Select whether data is sorted, or the method of display: <ul style="list-style-type: none"> • No sort: Data is not sorted • Sort: Data is sorted by value (lowest to highest from front to back; highest to lowest from left to right) • Top %: Chart only the top <i>N</i> % of selected data (sorted by default) • Top N: Chart only the top <i>N</i> of selected data (sorted by default) • Bottom %: Chart only the bottom <i>N</i> % of data (sorted by default) • Bottom N: Chart only the bottom <i>N</i> of selected data (sorted by default)
Percentage/count for top/bottom	Enter a number for either the percent or count defined in the previous parameter (for example, Top 10%, or Top 10). Default is 25.
Truncate top/bottom?	If set to yes, then the data table shows only the top or bottom <i>N</i> or % (for example, only the top 10%). Otherwise, the table shows all data. Default is no.
Show totals on the table?	If set to yes, additional calculations are made for each column of numbers in a table, and the following values are listed at the end of the table: <ul style="list-style-type: none"> • Report Average: Average of all values in a column • Report Minimum: Minimum value in a column • Report Maximum: Maximum value in a column • Report Total: Total of all values in a column Default is no.
Report settings	
Include parameter help card?	Set to y to include a table in the report that lists parameter settings for the report script. Default is y .
Include table?	Set to y to include a table of data stream values in the report. Default is y .
Include chart?	Set to y to include a chart of data stream values in the report. Default is y .
Select chart style	Click the Browse [...] button to open the Chart Settings dialog box. Define the graphic properties of the charts in your report.
Select output folder	Click the Browse [...] button to set parameters for the output folder.
Add job ID to output folder name?	Set to yes to append the job ID to the name of the output folder. This is helpful to correlate a specific instance of a Report Script and the corresponding report. Default is no.
Select properties	Click the Browse [...] button to open the Report Properties dialog box. Set the properties as desired.
Add time stamp to title	Set to y to append a timestamp to the title of the report. The timestamp consists of the date and time the report was generated. Adding a timestamp lets you run consecutive iterations of the same report without overwriting previous output. Default is n .
Event notification	
Event for report success?	Use the following parameters to raise events associated with generating the report, and to set severity levels for those events. Set to y to raise an event when the report is successfully generated. Default is y .

Description	How to Set It
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 35.
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 25.
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 5.

Report_NumberofCompletedJobs

Use this Report Knowledge Script to generate a report about the number of completed Backup Exec jobs. This report allows you to make a statistical analysis of the data point values (for example, the average or maximum value over a period of time).

This report uses data collected by the [CompletedJobs](#) Knowledge Script.

Resource Object

Report Agent > AM Repositories > *AppManager repository*.

Default Schedule

The default schedule is **Run once**.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Data source	Use the following parameters to select the data for your report.
Select computers	Click the Browse [...] button to start the data wizard. Use the data wizard to select the computers for your report.
Select time range	Click the Browse [...] button to open the time browser. Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Click the Browse [...] button to select the days of the week to include in your report.
Statistics to show	Select a statistical method by which to display data in the report: <ul style="list-style-type: none">• Average: Average value of data points for the aggregation interval (for example, the average value for 1 hour)• Minimum/Average/Maximum: Minimum, average, and maximum values of data points for the aggregation interval• Minimum: Minimum value of data points for the aggregation interval• Maximum: Maximum value of data points for the aggregation interval• Range: Range of values in the data stream (maximum - minimum = range)• StandardDeviation: Measure of how widely values are dispersed from the mean• Sum: Total value of data points for the aggregation interval• Open/Close: Last value for the aggregation interval• Change: Difference between the first and last values for the time range of the report (close - open = change)• Count: Number of data points for the time range of the report

Description	How to Set It
Select sorting/display option	Select whether data is sorted, or the method of display: <ul style="list-style-type: none"> • No sort: Data is not sorted • Sort: Data is sorted by value (lowest to highest from front to back; highest to lowest from left to right) • Top %: Chart only the top <i>N</i> % of selected data (sorted by default) • Top N: Chart only the top <i>N</i> of selected data (sorted by default) • Bottom %: Chart only the bottom <i>N</i> % of data (sorted by default) • Bottom N: Chart only the bottom <i>N</i> of selected data (sorted by default)
Percentage/count for top/bottom	Enter a number for either the percent or count defined in the previous parameter (for example, Top 10%, or Top 10). Default is 25.
Truncate top/bottom?	If set to yes, then the data table shows only the top or bottom <i>N</i> or % (for example, only the top 10%). Otherwise, the table shows all data. Default is no.
Show totals on the table?	If set to yes, additional calculations are made for each column of numbers in a table, and the following values are listed at the end of the table: <ul style="list-style-type: none"> • Report Average: Average of all values in a column • Report Minimum: Minimum value in a column • Report Maximum: Maximum value in a column • Report Total: Total of all values in a column Default is no.
Report settings	
Include parameter help card?	Set to y to include a table in the report that lists parameter settings for the report script. Default is y .
Include table?	Set to y to include a table of data stream values in the report. Default is y .
Include chart?	Set to y to include a chart of data stream values in the report. Default is y .
Select chart style	Click the Browse [...] button to open the Chart Settings dialog box. Define the graphic properties of the charts in your report.
Select output folder	Click the Browse [...] button to set parameters for the output folder.
Add job ID to output folder name?	Set to yes to append the job ID to the name of the output folder. This is helpful to correlate a specific instance of a Report Script and the corresponding report. Default is no.
Select properties	Click the Browse [...] button to open the Report Properties dialog box. Set the properties as desired.
Add time stamp to title	Set to y to append a timestamp to the title of the report. The timestamp consists of the date and time the report was generated. Adding a timestamp lets you run consecutive iterations of the same report without overwriting previous output. Default is n .
Event notification	
Event for report success?	Use the following parameters to raise events associated with generating the report, and to set severity levels for those events. Set to y to raise an event when the report is successfully generated. Default is y .

Description	How to Set It
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 35.
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 25.
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 5.

Report_NumberofFailedJobs

Use this Report Knowledge Script to generate a report about the number of failed Backup Exec jobs. This report allows you to make a statistical analysis of the data point values (for example, the average or maximum value over a period of time).

This report uses data collected by the [FailedJobs](#) Knowledge Script.

Resource Object

Report Agent > AM Repositories > *AppManager repository*.

Default Schedule

The default schedule is **Run once**.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Data source	Use the following parameters to select the data for your report.
Select computers	Click the Browse [...] button to start the data wizard. Use the data wizard to select the computers to be included in your report.
Select time range	Click the Browse [...] button to open the time browser. Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Click the Browse [...] button to select the days of the week to include in your report.
Statistics to show	Select a statistical method by which to display data in the report: <ul style="list-style-type: none">• Average: Average value of data points for the aggregation interval (for example, the average value for 1 hour)• Minimum/Average/Maximum: Minimum, average, and maximum values of data points for the aggregation interval• Minimum: Minimum value of data points for the aggregation interval• Maximum: Maximum value of data points for the aggregation interval• Range: Range of values in the data stream (maximum - minimum = range)• StandardDeviation: Measure of how widely values are dispersed from the mean• Sum: Total value of data points for the aggregation interval• Open/Close: Last value for the aggregation interval• Change: Difference between the first and last values for the time range of the report (close - open = change)• Count: Number of data points for the time range of the report

Description	How to Set It
Select sorting/display option	Select whether data is sorted, or the method of display: <ul style="list-style-type: none"> • No sort: Data is not sorted • Sort: Data is sorted by value (lowest to highest from front to back; highest to lowest from left to right) • Top %: Chart only the top <i>N</i> % of selected data (sorted by default) • Top N: Chart only the top <i>N</i> of selected data (sorted by default) • Bottom %: Chart only the bottom <i>N</i> % of data (sorted by default) • Bottom N: Chart only the bottom <i>N</i> of selected data (sorted by default)
Percentage/count for top/bottom	Enter a number for either the percent or count defined in the previous parameter (for example, Top 10%, or Top 10). Default is 25.
Truncate top/bottom?	If set to yes, then the data table shows only the top or bottom <i>N</i> or % (for example, only the top 10%). Otherwise, the table shows all data. Default is no.
Show totals on the table?	If set to yes, additional calculations are made for each column of numbers in a table, and the following values are listed at the end of the table: <ul style="list-style-type: none"> • Report Average: Average of all values in a column • Report Minimum: Minimum value in a column • Report Maximum: Maximum value in a column • Report Total: Total of all values in a column Default is no.
Report settings	
Include parameter help card?	Set to y to include a table in the report that lists parameter settings for the report script. Default is y .
Include table?	Set to y to include a table of data stream values in the report. Default is y .
Include chart?	Set to y to include a chart of data stream values in the report. Default is y .
Select chart style	Click the Browse [...] button to open the Chart Settings dialog box. Define the graphic properties of the charts in your report.
Select output folder	Click the Browse [...] button to set parameters for the output folder.
Add job ID to output folder name?	Set to yes to append the job ID to the name of the output folder. This is helpful to correlate a specific instance of a Report Script and the corresponding report. Default is no.
Select properties	Click the Browse [...] button to open the Report Properties dialog box. Set the properties as desired.
Add time stamp to title	Set to y to append a timestamp to the title of the report. The timestamp consists of the date and time the report was generated. Adding a timestamp lets you run consecutive iterations of the same report without overwriting previous output. Default is n .
Event notification	
Event for report success?	Use the following parameters to raise events associated with generating the report, and to set severity levels for those events. Set to y to raise an event when the report is successfully generated. Default is y .

Description	How to Set It
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 35.
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 25.
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 5.

Report_NumberofIncompleteJobs

Use this Report Knowledge Script to generate a report about the number of incomplete Backup Exec jobs. This report allows you to make a statistical analysis of the data point values (for example, the average or maximum value over a period of time).

This report uses data collected by the [IncompleteJobs](#) Knowledge Script.

Resource Object

Report Agent > AM Repositories > *AppManager repository*.

Default Schedule

The default schedule is **Run once**.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Data source	Use the following parameters to select the data for your report.
Select computers	Click the Browse [...] button to start the data wizard. Use the data wizard to select the computers to be included in your report.
Select time range	Click the Browse [...] button to open the time browser. Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Click the Browse [...] button to select the days of the week to include in your report.
Statistics to show	Select a statistical method by which to display data in the report: <ul style="list-style-type: none">• Average: Average value of data points for the aggregation interval (for example, the average value for 1 hour)• Minimum/Average/Maximum: Minimum, average, and maximum values of data points for the aggregation interval• Minimum: Minimum value of data points for the aggregation interval• Maximum: Maximum value of data points for the aggregation interval• Range: Range of values in the data stream (maximum - minimum = range)• StandardDeviation: Measure of how widely values are dispersed from the mean• Sum: Total value of data points for the aggregation interval• Open/Close: Last value for the aggregation interval• Change: Difference between the first and last values for the time range of the report (close - open = change)• Count: Number of data points for the time range of the report

Description	How to Set It
Select sorting/display option	Select whether data is sorted, or the method of display: <ul style="list-style-type: none"> • No sort: Data is not sorted • Sort: Data is sorted by value (lowest to highest from front to back; highest to lowest from left to right) • Top %: Chart only the top <i>N</i> % of selected data (sorted by default) • Top N: Chart only the top <i>N</i> of selected data (sorted by default) • Bottom %: Chart only the bottom <i>N</i> % of data (sorted by default) • Bottom N: Chart only the bottom <i>N</i> of selected data (sorted by default)
Percentage/count for top/bottom	Enter a number for either the percent or count defined in the previous parameter (for example, Top 10%, or Top 10). Default is 25.
Truncate top/bottom?	If set to yes, then the data table shows only the top or bottom <i>N</i> or % (for example, only the top 10%). Otherwise, the table shows all data. Default is no.
Show totals on the table?	If set to yes, additional calculations are made for each column of numbers in a table, and the following values are listed at the end of the table: <ul style="list-style-type: none"> • Report Average: Average of all values in a column • Report Minimum: Minimum value in a column • Report Maximum: Maximum value in a column • Report Total: Total of all values in a column Default is no.
Report settings	
Include parameter help card?	Set to y to include a table in the report that lists parameter settings for the report script. Default is y .
Include table?	Set to y to include a table of data stream values in the report. Default is y .
Include chart?	Set to y to include a chart of data stream values in the report. Default is y .
Select chart style	Click the Browse [...] button to open the Chart Settings dialog box. Define the graphic properties of the charts in your report.
Select output folder	Click the Browse [...] button to set parameters for the output folder.
Add job ID to output folder name?	Set to yes to append the job ID to the name of the output folder. This is helpful to correlate a specific instance of a Report Script and the corresponding report. Default is no.
Select properties	Click the Browse [...] button to open the Report Properties dialog box. Set the properties as desired.
Add time stamp to title	Set to y to append a timestamp to the title of the report. The timestamp consists of the date and time the report was generated. Adding a timestamp lets you run consecutive iterations of the same report without overwriting previous output. Default is n .
Event notification	
Event for report success?	Set to y to raise an event when the report is successfully generated. Default is y .

Description	How to Set It
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 35.
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 25.
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 5.

Report_StatusofTheLatestJob

Use this Report Knowledge Script to generate a report about the status of the most recently submitted Backup Exec job. This report lets you make a statistical analysis of the data point values (for example, the average or maximum value over a time period).

This report uses data collected by the [LatestJob](#) Knowledge Script.

Resource Object

Report Agent > AM Repositories > *AppManager repository*.

Default Schedule

The default schedule is **Run once**.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Data source	Use the following parameters to select the data for your report.
Select computers	Click the Browse [...] button to start the data wizard. Use the data wizard to select the computers to be included your report.
Select time range	Click the Browse [...] button to open the time browser. Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Click the Browse [...] button to select the days of the week to include in your report.
Statistics to show	Select a statistical method by which to display data in the report: <ul style="list-style-type: none">• Average: Average value of data points for the aggregation interval (for example, the average value for 1 hour)• Minimum/Average/Maximum: Minimum, average, and maximum values of data points for the aggregation interval• Minimum: Minimum value of data points for the aggregation interval• Maximum: Maximum value of data points for the aggregation interval• Range: Range of values in the data stream (maximum - minimum = range)• StandardDeviation: Measure of how widely values are dispersed from the mean• Sum: Total value of data points for the aggregation interval• Open/Close: Last value for the aggregation interval• Change: Difference between the first and last values for the time range of the report (close - open = change)• Count: Number of data points for the time range of the report

Description	How to Set It
Select sorting/display option	Select whether data is sorted, or the method of display: <ul style="list-style-type: none"> • No sort: Data is not sorted • Sort: Data is sorted by value (lowest to highest from front to back; highest to lowest from left to right) • Top %: Chart only the top <i>N</i> % of selected data (sorted by default) • Top N: Chart only the top <i>N</i> of selected data (sorted by default) • Bottom %: Chart only the bottom <i>N</i> % of data (sorted by default) • Bottom N: Chart only the bottom <i>N</i> of selected data (sorted by default)
Percentage/count for top/bottom	Enter a number for either the percent or count defined in the previous parameter (for example, Top 10%, or Top 10). Default is 25.
Truncate top/bottom?	If set to yes, then the data table shows only the top or bottom <i>N</i> or % (for example, only the top 10%). Otherwise, the table shows all data. Default is no.
Show totals on the table?	If set to yes, additional calculations are made for each column of numbers in a table, and the following values are listed at the end of the table: <ul style="list-style-type: none"> • Report Average: Average of all values in a column • Report Minimum: Minimum value in a column • Report Maximum: Maximum value in a column • Report Total: Total of all values in a column Default is no.
Report settings	
Use the following parameters to define the graphical presentation of data, the folder where the report is generated, and properties that identify the report.	
Include parameter help card?	Set to y to include a table in the report that lists parameter settings for the report script. Default is y .
Include table?	Set to y to include a table of data stream values in the report. Default is y .
Include chart?	Set to y to include a chart of data stream values in the report. Default is y .
Select chart style	Click the Browse [...] button to open the Chart Settings dialog box. Define the graphical properties of the charts in your report.
Select output folder	Click the Browse [...] button to set parameters for the output folder.
Add job ID to output folder name?	Set to yes to append the job ID to the name of the output folder. This is helpful to correlate a specific instance of a Report Script and the corresponding report. Default is no.
Select properties	Click the Browse [...] button to open the Report Properties dialog box. Set the properties as desired.
Add time stamp to title	Set to y to append a timestamp to the title of the report. The timestamp consists of the date and time the report was generated. Adding a timestamp lets you run consecutive iterations of the same report without overwriting previous output. Default is n .
Event notification	
Use the following parameters to raise events associated with generating the report, and to set severity levels for those events.	
Event for report success?	Set to y to raise an event when the report is successfully generated. Default is y .

Description	How to Set It
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 35.
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 25.
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default is 5.

ResourceHigh

Use this Knowledge Script to monitor the CPU and memory usage of the Backup Exec services that were found during discovery. If the CPU or memory utilization associated with a monitored service exceeds one of the thresholds you set, an event is raised.

Resource Object

Backup Exec

Default Schedule

The default interval for this script is **Every 24 hours**.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if threshold exceeded?	Set to y to raise events. Default is y .
Collect data for CPU and memory utilization?	Set to y to collect data for reports and graphs. If set to y , returns the CPU and memory utilization for each monitored service. Default is n .
Threshold -- Maximum CPU utilization	Enter the maximum amount of CPU resources consumed by any single Backup Exec service. If CPU utilization exceeds this threshold, an event is raised. Default is 60%
Threshold -- Maximum memory utilization	Enter the maximum amount of memory consumed by any single Backup Exec service. If memory utilization exceeds this threshold, an event is raised. Default is 6 MB.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default severity level is 8.

ResubmitFailedJobs

Use this Knowledge Script to check for backup jobs that failed. If it finds any failed jobs, this Knowledge Script resubmits those jobs to the Backup Exec server.

Note

To check for-but not resubmit-failed backup jobs, use the [FailedJobs](#) Knowledge Script.

With releases of Backup Exec prior to 9.0, resubmitted jobs are restarted with a new job ID. For Backup Exec version 9.0 and later, the same job ID is re-used when the job is re-started.

You can set a threshold for the maximum number of resubmitted jobs during any monitoring interval. If the number of resubmitted jobs exceeds the threshold you set, an event is raised. The Knowledge Script still resubmits all failed jobs, even if an event is raised.

Note

This script requires bemcmd.exe to run successfully. See [“About bemcmd.exe”](#) on page 10 for more information.

Resource Object

Backup Exec

Default Schedule

The default interval for this script is **Every 24 hours**. This Knowledge Script must be run at intervals of 5 minutes or more.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if jobs resubmitted or if threshold exceeded?	Set to y to raise events. Default is y .
Collect data for resubmitted jobs?	Set to y to collect data for reports and graphs. If set to y , returns the number of backup jobs that were resubmitted during the monitoring interval. Default is n .
Resubmitted jobs threshold	Specify the maximum number of resubmitted backup jobs. If the number of resubmitted backup jobs exceeds this threshold, an event is raised. Default is 10 resubmitted jobs.
Event severity when any job resubmitted	Set the event severity level, from 1 to 40, to indicate the importance of the event when any failed backup jobs are resubmitted. Default severity level is 12.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the threshold-crossing event. Default severity level is 5.

ServiceDown

Use this Knowledge Script to monitor the availability of Backup Exec services that were found during discovery. You can set this script to automatically restart a service that is not running.

By default, an event is raised if any of the Backup Exec services are down.

Resource Object

Backup Exec

Default Schedule

The default interval for this script is **Every 24 hours**.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data for status of services?	Set to y to collect data for reports and graphs. If set to y , returns the following values: <ul style="list-style-type: none">• 100 (service is up)• 0 (service is down) Default is n .
Restart service if down?	Set to y to automatically restart any service that is down. Default is y .
Event severity when...	Set the event severity level, from 1 to 40, to indicate the importance when: <ul style="list-style-type: none">• ... attempt to restart fails. Specify a value that indicates the service is down and AppManager cannot restart it. Default is 5.• ... attempt to restart succeeds. Specify a value that indicates the service was down and AppManager successfully restarted it. Default is 25.• ... restart parameter is disabled. Specify a value to indicate the service is down and the "Restart service if down?" parameter is set to n. Default is 18.

SkippedFilesInJobs

Use this Knowledge Script to monitor the number of files that were skipped during backup jobs that finished within the last monitoring interval. You can choose to monitor only successful jobs, only failed jobs, or both. In addition, you can filter by specific job IDs. If the total number of files that were skipped across all monitored jobs exceeds the threshold you set, an event is raised.

- First, this Knowledge Script determines the number of Backup Exec jobs that have completed between the current and last Knowledge Script iteration.
- Then it checks for either successful or failed jobs, depending on how you set the “**Monitor...**” parameters.

If you enter job IDs for the **Filter by specific job IDs** parameter, this Knowledge Script filters the list of completed jobs it found and only considers the job IDs you specified.

- Finally, it looks for skipped files only within the types of jobs (successful or failed) you selected for monitoring.

If you enter an invalid job ID for the **Filter by specific job IDs** parameter, an error event states which job ID was found to be invalid on the first script iteration; however, the script continues to process the other job IDs that were supplied. Filtering by job ID is only supported on Backup Exec 9.x and later.

You must select **y** for either the **Monitor successful jobs** or the **Monitor failed jobs** parameter.

Note

This script requires `bemcmd.exe` to run successfully. See “[About bemcmd.exe](#)” on page 10 for more information.

Resource Object

Backup Exec

Default Schedule

The default interval for this script is **Every 24 hours**. This Knowledge Script must be run at intervals of 5 minutes or more.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if threshold exceeded?	Set to y to raise events. Default is y .
Collect data for number of skipped files?	Set to y to collect data for reports and graphs. If set to y , returns the number of files skipped during the monitoring interval. Default is n .
Filter: Backup Exec job IDs to include (comma-separated, no spaces)	To monitor only specific jobs, type the job IDs. Separate each job ID with commas, and do not use spaces. For example, enter job IDs in the following format: {63D3C37C-9524-4D25-ABF8-2E0A42E33A6C}, {43D3B57G-9524-4D25-YGH8-2E0A42E33N6H} Note: This parameter is only supported on Backup Exec 9.x.

Description	How to Set It
Monitor successful jobs?	Enter y to monitor only successful jobs. Default is y.
Monitor failed jobs?	Enter y to monitor only failed jobs. Default is n.
Threshold -- Maximum number of files skipped	Specify the maximum number of files that can be skipped. If the number of files skipped exceeds this threshold, an event is raised. Default is 10 skipped files.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default severity level is 5.

SuccessfulJobs

Use this Knowledge Script to monitor the number of successful Backup Exec jobs that were completed during the monitoring interval and return data about those jobs. A successful job is any job with a status of `Successful`.

If the number of successful jobs falls below the minimum threshold you set, an event is raised.

Note

This script requires `bemcmd.exe` to run successfully. See [“About bemcmd.exe”](#) on page 10 for more information.

Resource Object

Backup Exec

Default Schedule

The default interval for this script is **Every 24 hours**. This Knowledge Script must be run at intervals of 5 minutes or more.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if threshold not met?	Set to y to raise events. Default is y .
Collect data for number of successful jobs?	Set to y to collect data for reports and graphs. If set to y , returns the number of successful jobs, and the IDs of the successful jobs. Default is n .
Threshold -- Minimum number of successful jobs	Specify the minimum number of successful jobs. If the number of successful jobs falls below this threshold, an event is raised. Default is 10 successful jobs.
Event severity when threshold not met	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default severity level is 5.

TotalBytes

Use this Knowledge Script to monitor the total number of bytes of data that were backed up during the last monitoring interval. If the number of bytes exceeds a threshold that you set, an event is raised.

Resource Object

Backup Exec

Default Schedule

The default interval for this script is **Every 24 hours**.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if threshold exceeded?	Set to y to raise events. Default is y .
Collect data for number of bytes backed up?	Set to y to collect data for reports and graphs. If set to y , returns the number of bytes backed up since the last time the script ran. Default is n .
Threshold -- Maximum number of bytes backed up	Specify the maximum number of bytes. If the number of bytes backed up exceeds this threshold, an event is raised. Default is 300 MB.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the event. Default severity level is 8.

Discovery_BackupExec

Use this Knowledge Script to discover Symantec Backup Exec servers and the services associated with them.

Resource Objects

Backup Exec servers.

Default Schedule

By default, this script is only run once for each computer.

Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Event for successful discovery?	This Knowledge Script always raises an event when the job fails for any reason. In addition, you can set this parameter to y to raise an event when the job succeeds. The default is n .
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">• ...succeeds. If you set this Knowledge Script to raise an event when the job succeeds, set the event severity level for a successful discovery. Default is 25.• ...fails. Default is 5.• ...is not applicable. This type of failure usually occurs when the target computer does not have Backup Exec installed. Default is 15.