

# **NetIQ<sup>®</sup> AppManager<sup>®</sup> for Microsoft SQL Server**

## **Management Guide**

January 2013



## Legal Notice

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.

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.

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.

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.

**© 2013 NetIQ Corporation and its affiliates. All Rights Reserved.**

For information about NetIQ trademarks, see <https://www.netiq.com/company/legal/>.

---

# Contents

<b>About this Book and the Library</b>	<b>7</b>
<b>About NetIQ Corporation</b>	<b>9</b>
<b>1 Introducing AppManager for Microsoft SQL Server</b>	<b>11</b>
<b>2 Installing AppManager for Microsoft SQL Server</b>	<b>13</b>
2.1 System Requirements	13
2.2 Installing the Module	14
2.3 Deploying the Module with Control Center	15
2.3.1 Deployment Overview	16
2.3.2 Checking In the Installation Package	16
2.4 Silently Installing the Module	16
2.5 Permissions for Running Knowledge Scripts	17
2.6 Discovering SQL Server Resources	18
2.7 Upgrading Knowledge Script Jobs	18
2.7.1 Running AMAdmin_UpgradeJobs	19
2.7.2 Propagating Knowledge Script Changes	19
2.8 Configuring SQL Server User in Security Manager	20
<b>3 SQL Knowledge Scripts</b>	<b>23</b>
3.1 Accessibility	27
3.2 BackupJob	29
3.3 Bcp	30
3.4 BlockedProcesses	32
3.5 CacheHitRatio	33
3.6 ClusterOwner	34
3.7 Connectivity	34
3.8 CPUUtil	35
3.9 DataGrowthRate	36
3.10 DataSpace	38
3.11 DBGrowthRate	40
3.12 DBLocks	42
3.13 DBMirroring	43
3.14 DBMirrorStatus	46
3.15 DbOption	48
3.16 DBSpace	51
3.17 DBStats	53
3.18 ErrorLog	55
3.19 ErrorLogEx	57
3.20 LockUtil	58
3.21 LogGrowthRate	59
3.22 LoginFailures	61
3.23 LogShipping	62
3.24 LogSpace	63
3.25 MemUtil	65
3.26 MonitorDDL	66

3.27	MonitorJobs	67
3.28	NearFileMaxSize	69
3.29	NearMaxConnect	71
3.30	NearMaxLocks	72
3.31	NetError	73
3.32	ParseErrors	74
3.33	ProcessingTime	75
3.34	RepLatency	76
3.35	Replication	77
3.36	Report_Accessibility	79
3.37	Report_CacheHitRatio	81
3.38	Report_DatabaseDataSpace	83
3.39	Report_DataSpaceAvailabilitySummary	85
3.40	Report_DataSpaceUtilizationSummary	88
3.41	Report_DBSpaceAvailabilitySummary	91
3.42	Report_DBSpaceAvailable	93
3.43	Report_DBSpaceUtilizationSummary	96
3.44	Report_ErrorLogSummary	98
3.45	Report_NearMaxConnect	101
3.46	Report_NearMaxLocks	103
3.47	Report_NetError	105
3.48	Report_Replication	108
3.49	Report_ReplicationLatency	110
3.50	Report_SpaceAvailability	112
3.51	Report_SpaceAvailabilitySummary	115
3.52	Report_SpaceUtilizationSummary	118
3.53	Report_To-Be-ReplicatedTransactions	120
3.54	Report_TopCPUUsers	123
3.55	Report_TopCPUUsersDetail	125
3.56	Report_TopIOUsers	126
3.57	Report_TopIOUsersDetail	129
3.58	Report_TopLockUsers	130
3.59	Report_TopLockUsersDetail	132
3.60	Report_TopMemoryUsers	134
3.61	Report_TopMemoryUsersDetail	136
3.62	Report_TopResourceUsers	138
3.63	Report_TransactionsReplicatedPerSec	140
3.64	Report_UserConnections	142
3.65	Report_UserConnectionsSummary	144
3.66	Report_UserMaxConnections	147
3.67	RepTransactions	149
3.68	RepTranSec	150
3.69	RunSql	151
3.70	ServerDown	155
3.71	ServerThroughput	156
3.72	SPIDsMonitoring	157
3.73	StoredProcRecompiles	158
3.74	TopCPUUsers	159
3.75	TopIOUsers	160
3.76	TopLockUsers	161
3.77	TopMemoryUsers	162
3.78	TopResourceUsers	163
3.79	UserConnections	165

3.80 UserMaxConnection.....166



---

# 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 [AppManager Documentation](#) page of the NetIQ Web site.





---

# 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).

## 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.

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

## Contacting Technical Support

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

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

## Contacting Documentation Support

Our goal is to provide documentation that meets your needs. If you have suggestions for improvements, click **Add Comment** at the bottom of any page in the HTML versions of the documentation posted at [www.netiq.com/documentation](http://www.netiq.com/documentation). You can also email [Documentation-Feedback@netiq.com](mailto:Documentation-Feedback@netiq.com). We value your input and look forward to hearing from you.

## Contacting the Online User Community

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>.

---

# 1 Introducing AppManager for Microsoft SQL Server

AppManager for Microsoft SQL Server provides a comprehensive solution for monitoring the performance and availability of your Microsoft SQL Server environment.

With AppManager for Microsoft SQL Server, you can:

- ◆ Quickly identify fault lines or factors that might adversely impact performance and take preventive action
- ◆ Plan and schedule timely upgrades
- ◆ Isolate the causes of server performance problems and address them on time, ensuring better performance for your enterprise
- ◆ Run Knowledge Script jobs on SQL Server components
- ◆ Run Knowledge Script jobs directly on SQL Server virtual servers in a clustered environment

AppManager for Microsoft SQL Server provides Knowledge Scripts designed to give you a comprehensive view of how SQL Server performs on your servers. The Knowledge Scripts in the SQL category monitor the following:

- ◆ SQL Server login failures
- ◆ Blocked SQL Server processes
- ◆ Data growth and shrinkage rates for each SQL Server database
- ◆ Memory used by SQL Server processes
- ◆ SQL Server and reports on jobs that have not completed successfully
- ◆ I/O transactions and page reads per second
- ◆ Frequency with which stored procedures are recompiled
- ◆ The total CPU time used by SQL Server users and their connections

You can set thresholds that specify the boundaries of optimal performance. You can also configure AppManager to raise events when those thresholds are crossed.

In addition to monitoring, you can use [SQL Knowledge Scripts](#) to collect performance data for use in reports. AppManager lets you generate reports that range in scope from minute-by-minute values to monthly values over a period of years. These reports range in purpose from evaluating a narrow window of performance data to illustrating trends that aid in effective planning.



---

# 2 Installing AppManager for Microsoft SQL Server

This chapter provides installation instructions and describes system requirements for AppManager for Microsoft SQL Server.

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

## 2.1 System Requirements

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

AppManager for Microsoft SQL Server has the following system requirements:

Software/Hardware	Version
NetIQ AppManager installed on the AppManager repository (QDB) computers, on the SQL Server computers you want to monitor (agents), and on all console computers	7.0 or later  Support for Control Center remote deployment using AppManager 7.x or later requires AppManager Control Center hotfix 71647 or later.  Support for Windows Server 2008 on AppManager 7.x or later requires AppManager Windows Agent hotfix 71704 or later  For more information, see the <a href="#">AppManager Suite Hotfixes Web</a> page.
Microsoft Windows operating system on agent computers	One of the following: <ul style="list-style-type: none"><li>♦ Windows Server 2012</li></ul> <p><b>NOTE:</b> For clustered SQL Server monitoring, you must ensure that AppManager for Microsoft Windows 7.8 or later is installed on the agent computer.</p> <p>For more information, see the <a href="#">AppManager Module Upgrades &amp; Trials Web</a> page.</p> <ul style="list-style-type: none"><li>♦ Windows Server 2008 R2</li><li>♦ Windows Server 2008 (32-bit or 64-bit)</li><li>♦ Windows Server 2003 R2 (32-bit or 64-bit)</li></ul>

Software/Hardware	Version
AppManager for Microsoft Windows module installed on repository, agent, and console computers	Support for Windows Server 2008 on AppManager 7.x requires the AppManager for Windows module 7.6.170.0 or later. For more information, see the <a href="#">AppManager Module Upgrades &amp; Trials Web</a> page.
Microsoft SQL Server on agent computers	<p>One of the following:</p> <ul style="list-style-type: none"> <li>◆ SQL Server 2012 (32-bit or 64-bit)</li> </ul> <p><b>NOTE:</b> Ensure that the account that runs the SQL Knowledge Scripts has <code>sysadmin</code> and <code>public</code> permissions.</p> <ul style="list-style-type: none"> <li>◆ SQL Server 2008 R2 (32-bit or 64-bit)</li> <li>◆ SQL Server 2008 (32-bit or 64-bit)</li> <li>◆ SQL Server 2005 SP2 (32-bit or 64-bit)</li> </ul>

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

**NOTE:** If you upgrade the Microsoft SQL version on the agent computers to 2012, ensure that you install this release of AppManager for SQL module. If you upgrade only the Microsoft SQL version to 2012 and do not upgrade the AppManager for SQL module to this release, the Knowledge Scripts do not work.

## 2.2 Installing the Module

Run the module installer only once on any computer. The module installer automatically identifies and updates all relevant AppManager components on a computer.

Access the `AM70-SQL-7.x.x.0.msi` module installer from the `AM70_SQL_7.x.x.0` self-extracting installation package on the [AppManager Module Upgrades & Trials](#) page.

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

- ◆ Log in to the server using the account named Administrator. Then run `AM70-SQL-7.x.x.0.msi` from a command prompt or by double-clicking it.
- ◆ Log in to the server as a user with administrative privileges and run `AM70-SQL-7.x.x.0.msi` as an administrator from a command prompt. To open a command-prompt window at the administrative level, right-click a command-prompt icon or a Windows menu item and select **Run as administrator**.

You can install the Knowledge Scripts into local or remote AppManager repositories (QDBs). Install these components only once per QDB.

The module installer now installs Knowledge Scripts for each module directly into the QDB instead of to the `\AppManager\qdb\kp` folder as in previous releases of AppManager.

You can install the module manually, or you can use Control Center to deploy the module on a remote computer where an agent is installed. For more information, see [Section 2.3, “Deploying the Module with Control Center,” on page 15](#). However, if you do use Control Center to deploy the module, Control Center only installs the *agent* components of the module. The module installer installs the QDB and console components as well as the agent components on the agent computer.

**To install the module manually:**

- 1 Double-click the module installer .msi file.
- 2 Accept the license agreement.
- 3 Review the results of the pre-installation check. You can expect one of the following three scenarios:
  - ♦ **No AppManager agent is present:** In this scenario, the pre-installation check fails, and the installer does not install agent components.
  - ♦ **An AppManager agent is present, but some other prerequisite fails:** In this scenario, the default is to not install agent components because of one or more missing prerequisites. However, you can override the default by selecting Install agent component locally. A missing application server for this particular module often causes this scenario. For example, installing the AppManager for Microsoft SharePoint module requires the presence of a Microsoft SharePoint server on the selected computer.
  - ♦ **All prerequisites are met:** In this scenario, the installer installs the agent components.
- 4 To install the Knowledge Scripts into the QDB and to install the Analysis Center reports into the Analysis Center Configuration Database:
  - 4a Select **Install Knowledge Scripts** to install the repository components, including the Knowledge Scripts, object types, and SQL stored procedures.
  - 4b Specify the SQL Server name of the server hosting the QDB, as well as the case-sensitive QDB name.
- 5 (Conditional) If you use Control Center 7.x, run the module installer for each QDB attached to Control Center.
- 6 (Conditional) If you use Control Center 8.x, run the module installer only for the primary QDB. Control Center automatically replicates this module to secondary QDBs.
- 7 Run the module installer on all console computers to install the Help and console extensions.
- 8 Run the module installer on the SQL Server computers you want to monitor (agents) to install agent components.
- 9 (Conditional) If you have not discovered SQL Server resources, run the Discovery\_SQL Knowledge Script on all agent computers where you installed the module. For more information, see [Section 2.6, “Discovering SQL Server Resources,” on page 18](#).
- 10 To get the updates provided in this release, upgrade any running Knowledge Script jobs. For more information, see [Section 2.7, “Upgrading Knowledge Script Jobs,” on page 18](#).

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

## 2.3 Deploying the Module with Control Center

You can use Control Center to deploy the module on a remote 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](#) page.

## 2.3.1 Deployment Overview

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

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

- 1 Verify the default deployment credentials.
- 2 Check in an installation package. For more information, see [Section 2.3.2, “Checking In the Installation Package,” on page 16](#).
- 3 Configure an e-mail address to receive notification of a deployment.
- 4 Create a deployment rule or modify an out-of-the-box deployment rule.
- 5 Approve the deployment task.
- 6 View the results.

## 2.3.2 Checking In the Installation Package

You must check in the installation package, `AM70-SQL-x.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 using an account that is a member of a user group with deployment permissions.
- 2 Navigate to the **Deployment** tab (for AppManager 8.x) or **Administration** tab (for AppManager 7.x).
- 3 In the Deployment folder, select **Packages**.
- 4 On the Tasks pane, click **Check in Deployment Packages** (for AppManager 8.x) or **Check in Packages** (for AppManager 7.x).
- 5 Navigate to the folder where you saved `AM70-SQL-x.x.x.0.xml` and select the file.
- 6 Click **Open**. The Deployment Package Check in Status dialog box displays the status of the package check in.
- 7 To get the updates provided in this release, upgrade any running Knowledge Script jobs. For more information, see [Section 2.7, “Upgrading Knowledge Script Jobs,” on page 18](#).

## 2.4 Silently Installing the Module

To silently (without user intervention) install a module, create an initialization file (`.ini`) for this module that includes the required property names and values to use during the installation.

**To create and use an initialization file for a silent installation:**

- 1 Create a new text file and change the filename extension from `.txt` to `.ini`.
- 2 To specify the user name for the SQL Server user account that connects to the SQL Server, include the following text in the `.ini` file:

```
MO_SQL_USER=user name
```

where *user name* is the user name for the account that connects to the SQL Server. The same account is used for all instances. If you do not specify this parameter, AppManager uses Windows authentication to connect to the SQL Server.



- 3 To specify the password for the SQL Server user account that will connect to the SQL Server, include the following text in the .ini file:

```
MO_SQL_PASSWORD=password
```

where *password* is the password for the account that connects to the SQL Server. The same account is used for all instances.

- 4 Save and close the .ini file.

- 5 Run the following command from the folder in which you saved the module installer:

```
msiexec.exe /i "AM70-SQL-7.x.x.0.msi" /qn MO_CONFIGOUTINI="full path to the initialization file"
```

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

To get the updates provided in this release, upgrade any running Knowledge Script jobs. For more information, see [Section 2.7, "Upgrading Knowledge Script Jobs," on page 18](#).

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

```
/L* "AM70-SQL-7.x.x.0.msi.log"
```

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

---

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

---

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

**Windows authentication:**

```
AM70-SQL-7.x.x.0.msi /qn MO_B_QDBINSTALL=1 MO_B_MOINSTALL=0 MO_B_SQLSVR_WINAUTH=1  
MO_SQLSVR_NAME=SQLServerName MO_QDBNAME=AM-RepositoryName
```

**SQL authentication:**

```
AM70-SQL-7.x.x.0.msi /qn MO_B_QDBINSTALL=1 MO_B_MOINSTALL=0 MO_B_SQLSVR_WINAUTH=0  
MO_SQLSVR_USER=SQLLogin MO_SQLSVR_PWD=SQLLoginPassword  
MO_SQLSVR_NAME=SQLServerName MO_QDBNAME=AM-RepositoryName
```

## 2.5 Permissions for Running Knowledge Scripts

Most Knowledge Scripts in the AppManager for Microsoft SQL Server module requires that the NetIQ AppManager Client Resource Monitor (*netiqmc*) and the NetIQ AppManager Client Communication Manager (*netiqccm*) agent services run using the LocalSystem account.

---

**NOTE:** One exception to this requirement is the [ClusterOwner](#) Knowledge Script. To use the ClusterOwner script, the agent services must run using a domain user account.

---

By default, the setup program configures the agent services to use the Windows LocalSystem account. You can also manually configure the agent services.

**To update the agent services:**

- 1 In Control Panel, navigate to Administrative Tools and double-click **Services**.

- 2 Right-click the NetIQ AppManager Client Communication Manager service and select Properties.
- 3 On the Logon tab, specify the appropriate account to use.
- 4 Click OK.
- 5 Repeat [Step 2](#) through [Step 4](#) for the NetIQ AppManager Client Resource Monitor service.
- 6 Restart both services.

## 2.6 Discovering SQL Server Resources

Use the Discovery\_SQL Knowledge Script to discover SQL Server configurations and resources. By default, Discovery\_SQL runs once for each computer.

---

**NOTE:** In SQL Server 2012, to run this Knowledge Script, the user account should have `sysadmin` and `public` role permissions granted.

---

Set the Values tab parameters as needed:

Description	How to Set It
Raise event if discovery succeeds?	Set to <code>y</code> to raise an event if discovery succeeds. The default is <code>n</code> .
User name	Specify the Microsoft SQL Server user name. This field is optional.
Event severity when discovery succeeds	Set the event severity level, from 1 to 40, to reflect the importance of an event in which discovery succeeds. The default is 25.
Event severity when discovery fails	Set the event severity level, from 1 to 40, to reflect the importance of an event in which discovery fails. The default is 5.
Event severity when discovery partially succeeds	Set the event severity level, from 1 to 40, to reflect the importance of an event in which discovery partially succeeds. The default is 10.
Event severity when discovery is not applicable	Set the event severity level, from 1 to 40, to reflect the importance of an event in which discovery is not applicable. The default is 15.

## 2.7 Upgrading Knowledge Script Jobs

If you are using AppManager 8.x or later, the module upgrade process now *retains* any changes you may have made to the parameter settings for the Knowledge Scripts in the previous version of this module. Before AppManager 8.x, the module upgrade process *overwrote* any settings you may have made, changing the settings back to the module defaults.

As a result, if this module includes any changes to the default values for any Knowledge Script parameter, the module upgrade process ignores those changes and retains all parameter values that you updated. Unless you review the management guide or the online Help for that Knowledge Script, you will not know about any changes to default parameter values that came with this release.

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.

## 2.7.1 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.

## 2.7.2 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. New parameters may need to be set appropriately for your environment or application.

If you are not using AppManager 8.x or later, customized script parameters may have reverted to default parameters during the installation of the module.

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 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. If you are using AppManager 8.x or later, the module upgrade process now <i>retains</i> any changes you may have made to the parameter settings for the Knowledge Scripts in the previous version of this module.

## 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 19](#).

### 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, such as schedule, monitoring values, actions, and advanced options. If you are using AppManager 8.x or later, the module upgrade process now <i>retains</i> any changes you may have made to the parameter settings for the Knowledge Scripts in the previous version of this module.

- 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.

## 2.8 Configuring SQL Server User in Security Manager

To use SQL Server user account, configure your SQL login and password information in the **Custom** tab of AppManager Security Manager before running the Discovery\_SQL Knowledge Script. You must complete the following configuration once for each SQL node that you want to monitor.

Field	Description
Label	<code>sql\$&lt;sql server virtual server name&gt;</code> . For example, type <code>sql\$sql2k8cluster1</code> .  <b>NOTE:</b> If there is a named instance, specify the Label as <code>sql\$&lt;sql server virtual server name&gt;\&lt;named_instance&gt;</code> .
Sub-label	The appropriate SQL Server login name. For example, <code>sa</code> .
Value 1	Password for the user.
Extended application support	Enable to encrypt the password. Do not leave this option unselected.

---

**IMPORTANT:** If you have configured your SQL Server resources within SQL Server clusters, you must specify the credentials of the active server node while configuring the SQL Server user account in AppManager Security Manager.

---



---

# 3 SQL Knowledge Scripts

AppManager provides the following Knowledge Scripts for monitoring SQL Server 2005, 2008, and 2012.

The SQL category of Knowledge Scripts is supported for SQL Server resources installed in clustered and non-clustered environments. In a clustered environment, AppManager raises error events if failover occurs while jobs are running. These error events are expected results of the failover process and can be safely ignored.

When deciding which Knowledge Scripts to run and the appropriate threshold values to use, consider how other applications you manage are dependent on SQL Server.

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
<a href="#">Accessibility</a>	Monitors Microsoft SQL Server and database accessibility.
<a href="#">BackupJob</a>	Monitors Microsoft SQL Server backup jobs.
<a href="#">Bcp</a>	Exports data from a Microsoft SQL Server database and imports the data into another Microsoft SQL Server database.
<a href="#">BlockedProcesses</a>	Monitors the number of blocked SQL Server processes.
<a href="#">CacheHitRatio</a>	Monitors the percentage of time that a requested data page is found in the Microsoft SQL Server data cache.
<a href="#">ClusterOwner</a>	Determines the node ownership of an SQL Virtual Server that is part of a cluster.
<a href="#">Connectivity</a>	Monitors SQL Server connectivity.
<a href="#">CPUUtil</a>	Monitors the percentage of CPU used by SQL Server processes.
<a href="#">DataGrowthRate</a>	Monitors the data growth and shrinkage rates for each SQL Server database.
<a href="#">DataSpace</a>	Monitors available data space and the percentage of data space being used for each database.
<a href="#">DBGrowthRate</a>	Monitors database growth and shrinkage rates.
<a href="#">DBLocks</a>	Monitors the number of locks per database.
<a href="#">DBMirroring</a>	Monitors the Microsoft SQL Server database mirror performance counters.
<a href="#">DBMirrorStatus</a>	Monitors the status of each mirrored database (SQL Server 2005 and above).

<b>Knowledge Script</b>	<b>What It Does</b>
<a href="#">DbOption</a>	Checks to see how Microsoft SQL Server database options are set.
<a href="#">DBSpace</a>	Monitors the available database space and the percentage of database space being used for each database. Monitored database space includes only data space.
<a href="#">DBStats</a>	Monitors the percentage of used space for data and log files.
<a href="#">ErrorLog</a>	Monitors the Microsoft SQL Server error logs.
<a href="#">ErrorLogEx</a>	Monitors the Microsoft SQL Server error log for search strings created using regular expressions or literal searches.
<a href="#">LockUtil</a>	Monitors the length of time that a user must wait for a lock request.
<a href="#">LogGrowthRate</a>	Monitors log growth and shrinkage rates for each SQL Server database.
<a href="#">LoginFailures</a>	Monitors Microsoft SQL Server login failures.
<a href="#">LogShipping</a>	Monitors log shipping metrics.
<a href="#">LogSpace</a>	Monitors the available log space and log space usage of a database.
<a href="#">MemUtil</a>	Monitors the amount of memory used by SQL Server processes.
<a href="#">MonitorDDL</a>	Monitors Data Definition Language (DDL) statements to check for changes in database schema.
<a href="#">MonitorJobs</a>	Monitors Microsoft SQL Server and reports on jobs that have not completed successfully.
<a href="#">NearFileMaxSize</a>	Monitors the size of database files.
<a href="#">NearMaxConnect</a>	Compares the number of connections used to the maximum number of connections configured for the server.
<a href="#">NearMaxLocks</a>	Compares the current number of locks used to the maximum number of locks configured for the server.
<a href="#">NetError</a>	Monitors the number of packet errors that occurred between the current and previous monitoring interval.
<a href="#">ParseErrors</a>	Monitors Microsoft SQL Server parse error messages.
<a href="#">ProcessingTime</a>	Monitors the response time for T-SQL Server statements and other statements.
<a href="#">RepLatency</a>	Monitors the replication latency in milliseconds.
<a href="#">Replication</a>	Monitors the replication latency in milliseconds, the number of transactions marked for replication, the number of transactions being replicated per second, and the replication agent details.
<a href="#">Report_Accessibility</a>	Generates a report about the accessibility of Microsoft SQL Servers and databases.
<a href="#">Report_CacheHitRatio</a>	Generates a report about the percentage of time requested pages are found in the Microsoft SQL Server data cache.
<a href="#">Report_DatabaseDataSpace</a>	Generates a report about the data space available (in MB) and the percentage of data space being used in SQL databases.



<b>Knowledge Script</b>	<b>What It Does</b>
<a href="#">Report_DataSpaceAvailabilitySummary</a>	Generates a summary report about the data space available (in MB) in SQL databases.
<a href="#">Report_DataSpaceUtilizationSummary</a>	Generates a summary report about the percentage of data space used in SQL databases.
<a href="#">Report_DBSpaceAvailabilitySummary</a>	Generates a summary report about the database space available (in MB) in SQL databases.
<a href="#">Report_DBSpaceAvailable</a>	Generates a report about the database space available (in MB) and the percentage of database space used in SQL databases.
<a href="#">Report_DBSpaceUtilizationSummary</a>	Generates a summary report about the percentage of database space used in SQL databases.
<a href="#">Report_ErrorLogSummary</a>	Generates a summary report about entries in the Microsoft SQL Server error logs.
<a href="#">Report_NearMaxConnect</a>	Generates a report about the number of open connections to Microsoft SQL Servers versus the number of allowable connections.
<a href="#">Report_NearMaxLocks</a>	Generates a report about the number of used locks to Microsoft SQL Servers versus the number of allowable locks.
<a href="#">Report_NetError</a>	Generates a report about the number of network packet errors.
<a href="#">Report_Replication</a>	Generates a report about replication latency, the number of transactions in the transaction log marked for replication, the number of transactions replicated per second by Microsoft SQL Servers, and the replication agent details.
<a href="#">Report_ReplicationLatency</a>	Generates a report about replication latency on your Microsoft SQL Servers.
<a href="#">Report_SpaceAvailability</a>	Generates a report about the data space and database space available and the percentage of data space and database space being used in SQL databases.
<a href="#">Report_SpaceAvailabilitySummary</a>	Generates a summary report about the data space and database space available (in MB) in SQL databases.
<a href="#">Report_SpaceUtilizationSummary</a>	Generates a summary report about the percentage of data space and database space used in SQL databases.
<a href="#">Report_To-Be-ReplicatedTransactions</a>	Generates a report about the number of transactions in the transaction log of the publication database that are marked for replication but not yet replicated.
<a href="#">Report_TopCPUUsers</a>	Generates a report about the total CPU time (in milliseconds) consumed by SQL users and their connections.
<a href="#">Report_TopCPUUsersDetail</a>	Generates a detailed report about each data point collected by SQL_TopCPUUsers.
<a href="#">Report_TopIOUsers</a>	Generates a report about the number of I/O read and write operations by SQL users and their connections.
<a href="#">Report_TopIOUsersDetail</a>	Generates a detailed report about each data point collected by SQL_TopIOUsers.
<a href="#">Report_TopLockUsers</a>	Generates a report about the number of locks held by SQL users and their connections.

<b>Knowledge Script</b>	<b>What It Does</b>
<a href="#">Report_TopLockUsersDetail</a>	Generates a detailed report about each data point collected by SQL_TopLockUsers.
<a href="#">Report_TopMemoryUsers</a>	Generates a report about the memory that can be allocated to SQL users and their connections.
<a href="#">Report_TopMemoryUsersDetail</a>	Generates a detailed report about each data point collected by SQL_TopMemoryUsers.
<a href="#">Report_TopResourceUsers</a>	Generates a report on the total CPU time (in milliseconds) used by SQL users and their connections, the number of I/O read and write operations by SQL users and their connections, number of locks held by SQL users and their connections, and the memory that can be allocated to SQL users and their connections.
<a href="#">Report_TransactionsReplicatedPerSec</a>	Generates a report about the number of transactions replicated per second by Microsoft SQL Servers.
<a href="#">Report_UserConnections</a>	Generates a report about the number of Microsoft SQL Server user connections.
<a href="#">Report_UserConnectionsSummary</a>	Generates a summary report about the number of Microsoft SQL Server user connections.
<a href="#">Report_UserMaxConnections</a>	Generates a report on the number of open connections to Microsoft SQL Servers versus the number of allowable connections, and the number of Microsoft SQL Server user connections.
<a href="#">RepTransactions</a>	Monitors the number of transactions in the transaction log that have not yet been replicated.
<a href="#">RepTranSec</a>	Monitors the number of transactions being replicated per second.
<a href="#">RunSql</a>	Runs T-SQL statements or stored procedures.
<a href="#">ServerDown</a>	Monitors the up or down status of Microsoft SQL Server.
<a href="#">ServerThroughput</a>	Monitors the number of I/O transactions and page reads per second.
<a href="#">SPIDsMonitoring</a>	Monitors Microsoft SQL Server for SPID processes that are running for more than a specified time.
<a href="#">StoredProcRecompiles</a>	Monitors the number of times per second that stored procedures are recompiled.
<a href="#">TopCPUUsers</a>	Monitors the total CPU time used by SQL Server users and their connections.
<a href="#">TopIOUsers</a>	Monitors the number of I/O read and write operations used by SQL Server users and their connections.
<a href="#">TopLockUsers</a>	Monitors the total number of locks held by all the SQL Server users and their connections.
<a href="#">TopMemoryUsers</a>	Monitors the total memory pages allocated to all the SQL Server users and their connections.

Knowledge Script	What It Does
<a href="#">TopResourceUsers</a>	Monitors the total CPU time used by Microsoft SQL Server users, the number of I/O read and write operations performed, the total number of locks held by all Microsoft SQL Server users and their connections, and the number of memory pages that can be allocated to all Microsoft SQL Server users and their connections.
<a href="#">UserConnections</a>	Monitors the total number of Microsoft SQL Server user connections.
<a href="#">UserMaxConnection</a>	Monitors the total number of Microsoft SQL Server user connections and the opened connection usage of Microsoft SQL Server.

## 3.1 Accessibility

Use this Knowledge Script to monitor Microsoft SQL Server and database accessibility. This script raises an event if Microsoft SQL Server or a specified database is not accessible. In addition, this script generates data streams for database accessibility.

You can set a timeout to determine how many times the Knowledge Script attempts to contact a server or database.

---

### NOTE

- ◆ This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.
  - ◆ This Knowledge Script incorrectly equates stopping a job with stopping the server on which the job is running, and thus returns incorrect values for server uptime and downtime. For example, you run a job with the Accessibility Knowledge Script for two hours and then for some reason stop the job, but not the server. You restart the job again three hours later, and it runs for an additional two hours. Although the server was running continuously for seven hours, the report will show the server downtime as three hours and server uptime as four hours.
- 

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Once every hour**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Collect data for database accessibility?	<p>Set to <i>y</i> to collect data for charts and reports. If enabled, data collection returns the following:</p> <ul style="list-style-type: none"><li>◆ <b>100</b>--all specified databases are accessible</li><li>◆ <b>50</b>--some of the specified databases are accessible and some are not</li><li>◆ <b>0</b>--none of the specified databases is accessible.</li></ul> <p>The default is <i>n</i>.</p>
SQL Server login	<p>Specify the database user login account needed to access Microsoft SQL Server. The user name you specify must have permission to access the databases to which you want to check accessibility.</p>
Exclude these objects	<p>Specify the name of any database you want to exclude from monitoring. You can specify multiple databases, separated by commas and no spaces. For example: <code>master,model,mdb</code>.</p> <p>These databases are excluded even if dynamic monitoring is not enabled.</p> <p>You can use standard pattern-matching characters when specifying database names.</p> <ul style="list-style-type: none"><li>◆ <b>*</b> matches zero or more instances of a character</li><li>◆ <b>?</b> matches exactly one instance of a character</li><li>◆ <b>#</b> matches any single digit from 0 - 9</li><li>◆ <b>[ ]</b> matches exactly one instance of any character between the brackets, including ranges</li></ul> <p><b>NOTE:</b> If a database name literally matches the pattern you provide, it will be excluded. For example, if you enter <code>m*</code>, the <code>master</code>, <code>model</code>, and <code>msdb</code> databases are not monitored, nor is the database coincidentally titled <code>m*</code>.</p>
Exclude loading/restoring databases?	<p>Set to <i>y</i> if you want to monitor databases that are in a loading or restoring state. The default is <i>n</i>.</p> <p>Note: This Knowledge Script always ignores databases in a mirror or witness role.</p>
Timeout	<p>Specify a timeout period in seconds. The timeout period is the number of seconds to wait for a response before retrying or determining the database is inaccessible. The default is 0 seconds (no waiting period).</p> <p><b>Notes</b> When specifying a timeout that the Knowledge Script continues to wait until it receives a response or the timeout is reached. During this waiting period, other jobs are blocked from execution. Limit your use of this parameter or keep the timeout period to a minimum for regular monitoring jobs.</p> <p>When running this script to troubleshoot a particular problem and not at a regularly scheduled interval, adjust this parameter to allow a longer timeout period.</p>

Description	How to Set It
Number of retries	<p>Specify the number of times to retry connecting to the database before determining the database is inaccessible. The default is 0 (no retry attempts).</p> <p><b>Notes</b> Keep in mind that the Knowledge Script continues waiting until it receives a response or has made the specified number of retry attempts. During this waiting period, other jobs are blocked from execution. Therefore, you should limit your use of this parameter or keep retry attempts to a minimum for regular monitoring jobs.</p> <p>When you are running this script to troubleshoot a particular problem and not at a regularly scheduled interval, you might want to adjust this parameter to allow more retry attempts.</p>
Event severity when database not accessible	<p>Set the event severity level, from 1 to 40, to indicate the importance of an event in which the database is not accessible. The default severity level is 5 (red event indicator).</p>

## 3.2 BackupJob

Use this Knowledge Script to monitor Microsoft SQL Server backup jobs. Microsoft SQL Server backup jobs are important for all administrators. Using this script, administrators can track data backup activities optimally.

On the first job iteration, this script sets a starting point for future log scanning and does not scan the existing entries in the logs. Therefore, it does not return any results on the first iteration. As it continues to run at the interval specified in the Schedule tab, this script scans the logs for any new entries created since the last time it checked.

This script raises an event if the number of successful backup records exceeds the threshold you specify, and if the backup fails for any reason.

---

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

---

### Resource Object

Microsoft SQL Server

### Default Schedule

The default interval for this script is **Every hour**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Event Notification</b>	

Description	How to Set It
<b>Raise event if backup job fails?</b>	Set to Yes to raise an event if a backup job fails. The default is Yes.
Event severity when job fails	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the backup job fails. The default severity level is 5.
<b>Raise event if threshold is exceeded?</b>	Set to <b>Yes</b> to raise an event if the number of backup records exceeds the threshold. The default is Yes.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of backup records exceeds the threshold. Severity level 1 is the highest. The default severity level is 15.
<b>Data Collection</b>	
Collect data for backup jobs?	Set to <b>Yes</b> to collect backup jobs data for charts and reports. If enabled, data collection returns the number of successful backup records. The default is Yes.
Custom data stream legend	Specify a legend for the job's data stream.
<b>Monitoring</b>	
Threshold -- Maximum number of successful backup records	Specify the maximum number of successful backup records to be displayed. An event is raised when this number is exceeded. The default number of backup records is 100.

## 3.3 Bcp

Use this Knowledge Script to copy data from one Microsoft SQL Server database table (the source) into another Microsoft SQL Server database table (the destination). This script uses the bulk copy program (BCP) to copy Microsoft SQL Server data to and from an operating system file. This script raises an event if the copy operation fails for any reason.

If the destination Microsoft SQL Server database table does not exist, the job will fail. BCP will not create a table if one does not already exist.

### Required SQL Permissions

This Knowledge Script requires a SQL Server user login account that has permission to access the Source and Destination databases and tables.

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Once every day**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Source SQL Server	Specify the name of the Microsoft SQL Server that contains the table you want to export. For example, <code>sales_nw</code> . If you do not specify a computer name, the local Microsoft SQL Server is used.
Source SQL Server database name	Specify the name of the database that contains the table you want to export. For example, <code>master</code> .
Source SQL Server table name	Specify the name of the table you want to export. For example, <code>territories</code> .
Source SQL Server login	Specify the database user login account needed to access Microsoft SQL Server. The user name you specify must have permission to access the source database and table. The default is the "sa" user account.  <b>NOTE:</b> Leave the login and password parameters blank to use Windows authentication. When the parameters are blank, the Knowledge Script performs the BCP command using the credentials as specified for the NetIQ agent service.
Source SQL Server password	Specify the password for the database user account being used to access Microsoft SQL Server.
Destination SQL Server	Specify the name of the Microsoft SQL Server from which you want to import the copied data. For example, <code>corp_office</code> .
Destination SQL Server database name	Specify the name of the database to which you want to export the copied data. For example, <code>sales</code> .
Destination SQL Server table name	Specify the name of the table to which you want to export the data. For example, <code>territories</code> .
Destination SQL Server login	Specify the database user login account needed to access Microsoft SQL Server. The user name you specify must have permission to access the destination database and table. The default is the "sa" user account.  <b>NOTE:</b> Leave the login and password parameters blank to use Windows authentication. When the parameters are blank the Knowledge Script performs the BCP command using the credentials as specified for the NetIQ agent service.
Destination SQL Server password	Specify the password for the database user account being used to access the destination Microsoft SQL Server.
SQL Server "..\Tools" path	Specify the path to the <code>Tools</code> directory on the local Microsoft SQL Server computer (where the script is running).  For Microsoft SQL Server 2005, the path is <code>C:\Program Files\Microsoft SQL Server\90\Tools</code> .  For Microsoft SQL Server 2008, the path is <code>C:\Program Files\Microsoft SQL Server\100\Tools</code> .  For Microsoft SQL Server 2012, the path is <code>C:\Program Files\Microsoft SQL Server\110\Tools</code> .  <b>NOTE:</b> Generally, you run this script on either the source or destination Microsoft SQL Server computer. However the script does not require that you run it on the source or destination computer as long as the Microsoft SQL Server you choose as the target has access to those computers and to the BCP program.

Description	How to Set It
Event severity when copy operation fails	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the copy operation fails. The default severity level is 8 (red event indicator).

## 3.4 BlockedProcesses

Use this Knowledge Script to monitor the number of SQL Server processes that are blocked for longer than the period of time you specify. For Microsoft SQL Server 2005 and later, you can set a threshold to determine how long a process in queue before it is considered blocked. This script raises an event when the number of blocked processes exceeds a threshold you set.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Every minute**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if number of blocked processes exceeds threshold?	Set to <i>y</i> to raise an event if the number of blocked processes exceeds the threshold. The default is <i>y</i> .
Collect data for number of currently blocked processes?	Set to <i>y</i> to collect data for charts and reports. If enabled, data collection returns the number of currently blocked processes. The default is <i>n</i> .
SQL Server login	Specify the database user login account needed to access Microsoft SQL Server.  Use the "sa" account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through the AppManager Security Manager.  <b>NOTE:</b> The account must be in the <code>sysadmin</code> Fixed Server Role.
Threshold -- Maximum time in queue	Specify the maximum length of time a process can be queued before it is considered a blocked process. The default is 500 milliseconds.
Threshold -- Maximum number of blocked processes	Specify the maximum number of processes that can be blocked before an event is raised. The default is 5 blocked processes.



Description	How to Set It
Number of blocked processes to include in event	Specify the number of processes to display in the Graph pane of the Operator Console. The default is 20 blocked processes.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of blocked processes exceeds the threshold. The default severity level is 5 (red event indicator).

## 3.5 CacheHitRatio

Use this Knowledge Script to monitor the percentage of time that a requested data page is found in the Microsoft SQL Server data cache. This script raises an event if the cache hit ratio falls below the threshold you set.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Every 10 minutes**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if cache hit ratio falls below threshold?	Set to <i>y</i> to raise an event when the cache hit ratio falls below the threshold. The default is <i>y</i> .
Collect data for cache hit ratio?	Set to <i>y</i> to collect data for charts and reports. If enabled, data collection returns the cache hit percentage. The default is <i>n</i> .
Threshold -- Minimum cache hit ratio	Specify the minimum percentage of time that requested data pages can be found in the data cache before an event is raised.  Ideally this percentage should be set relatively high, because the more frequently Microsoft SQL Server uses the data cache, the better your database performance. When Microsoft SQL Server accesses information in the data cache less frequently than the threshold you set, for example only 50% of the time, an event informs you that database performance has deteriorated. The default is 90%.
Event severity when threshold not met	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the cache hit ratio falls below the threshold. The default severity level is 5 (red event indicator).

## 3.6 ClusterOwner

Use this Knowledge Script to determine whether a Microsoft SQL Server computer that is part of a cluster is the owner of the SQL Resource. This script raises an event if the computer is not the current SQL resource owner. In addition, this script generates data streams for ownership status.

---

**NOTE:** To use the ClusterOwner script, the agent services, `NetIQccm` and `NetIQmc`, must run using a domain user account.

---

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Every 5 minutes**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if not node owner? (y/n)	Set to y to raise an event if the selected computer is in a cluster but is not the node owner. The default is y.
Collect data for ownership status? (y/n)	Set to y to collect data for charts and reports. If enabled, data collection returns the following: <ul style="list-style-type: none"><li>◆ 100--the computer is a cluster owner or the computer is not in a cluster</li><li>◆ 0--the computer is in a cluster but is not the cluster owner.</li></ul> The default is n.
Event severity when not node owner	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the selected computer is not the node owner. The default severity level is 20.
Raise event when node is down? (y/n)	Set to y to raise an event if the selected node is down. The default is y.
Severity when the node is down	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the selected node is down. The default severity level is 5.

## 3.7 Connectivity

Use this Knowledge Script to monitor Microsoft SQL Server connectivity. You can check whether a Microsoft SQL Server instance can be reached. You can also set a timeout to determine the number of times the script should attempt to contact the server.

This script raises an event if, during any monitoring interval, the number of times the server is not available exceeds the number of retries you specify.

## Resource Object

Microsoft SQL Server folder

## Default Schedule

The default interval for this script is **Every hour**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Monitor the server connectivity</b>	
Raise event if connection with the server/instance not possible?	Set to Yes to raise an event if the connection with the server/instance is not possible. By default, raising an event is enabled.
Event severity when connection with the server not possible	Set the event severity level, from 1 to 40, to indicate the importance of an event in which connection with the server/instance is not possible. The default is 5.
<b>Data Collection</b>	
Collect data for server connectivity?	Set to <b>Yes</b> to collect server connectivity data for charts and reports. The default is Yes.
Custom data stream legend	Specify a custom data stream legend for the job.
<b>Monitoring</b>	
TimeOut	Specify the maximum number of seconds the Connectivity script should wait for a response before retrying. The default is 0 seconds.
Number of retries	Specify the number of times the Connectivity script must retry connecting to the Microsoft SQL Server before determining that the database is inaccessible. The default is 0.

## 3.8 CPUUtil

Use this Knowledge Script to monitor the percentage of CPU resources used by the `sqlservr`, `sqlagent`, and `sqlexec` processes. This script raises an event if the CPU usage for SQL Server processes exceeds the threshold you set.

**NOTE:** This script does not raise events or generate data points when you run it on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

## Resource Object

Microsoft SQL Server

## Default Schedule

The default schedule for this script is **Every 10 minutes**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if CPU utilization exceeds threshold?	Set to <i>y</i> to raise an event if CPU utilization exceeds the threshold. The default is <i>y</i> .
Collect data for CPU utilization?	Set to <i>y</i> to collect data for charts and reports. If enabled, data collection returns information about the CPU resources (as percentages of CPU time) used by SQL Server processes. The default is <i>n</i> .
Threshold -- Maximum CPU utilization for all processes	Specify the maximum percentage of CPU resources that can be consumed by all SQL Server processes before an event is raised. The default is 60%.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which CPU utilization exceeds the threshold. The default severity level is 5 (red event indicator).

## 3.9 DataGrowthRate

Use this Knowledge Script to monitor the data growth and shrinkage rates for all Microsoft SQL Server databases. Monitoring only includes database data files. Growth and shrinkage rates are calculated by taking the difference of the data space utilization during the current monitoring interval from the data space utilization during the previous monitoring interval. This script raises an event if either rate exceeds a threshold you set.

---

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

---

### Required SQL Permissions

This Knowledge Script requires a SQL Server user login account that is in the public Fixed Server Role and the *sysadmin* Role. The user login account must also be in the *db\_owner* Fixed Database Role for every database where you want to run this Knowledge Script.

### Resource Objects

Microsoft SQL Server or Database folder, if dynamically observing databases. If you are not observing databases dynamically, you can run this Knowledge Script on the Database folder or on individual database objects. If you run this script on an individual database object, only that object is monitored regardless of how you set the *Dynamically observe databases at each interval?* parameter.

### Default Schedule

The default interval for this script is **Once every hour**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Dynamically observe databases at each interval?	<p>Set to <code>y</code> to dynamically observe databases at each monitoring interval. The default is <code>y</code>.</p> <p><b>NOTE:</b> Dynamic observation takes place only when the script is run on the Databases object, not when it is run on an individual database.</p>
Exclude these objects	<p>Specify the name of any database you want to exclude from monitoring. You can specify multiple databases, separated by commas and no spaces. For example: <code>master,model,mdb</code>.</p> <p>These databases are excluded even if dynamic monitoring is not enabled.</p> <p>You can use standard pattern-matching characters when specifying database names.</p> <ul style="list-style-type: none"><li>◆ <code>*</code> matches zero or more instances of a character</li><li>◆ <code>?</code> matches exactly one instance of a character</li><li>◆ <code>#</code> matches any single digit from 0 - 9</li><li>◆ <code>[ ]</code> matches exactly one instance of any character between the brackets, including ranges</li></ul> <p><b>NOTE:</b> If a database name literally matches the pattern you provide, it will be excluded. For example, if you enter <code>m*</code>, the <code>master</code>, <code>model</code>, and <code>msdb</code> databases are not monitored, nor is the database coincidentally titled <code>m*</code>.</p>
Raise event if rate exceeds threshold?	<p>Set to <code>y</code> to raise events if growth and shrink rates exceed the threshold. The default is <code>y</code>.</p>
Raise event if database is offline?	<p>Set to <code>y</code> to raise events if the database is offline. The default is <code>y</code>.</p>
Collect data for growth and shrinkage rates?	<p>Set to <code>y</code> to collect data for charts and reports. If enabled, data collection returns the data growth and shrinkage rates for each database. The default is <code>n</code>.</p>
SQL Server login	<p>Specify the database user login account needed to access Microsoft SQL Server.</p> <p>Use the “<code>sa</code>” account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.</p> <p><b>NOTE:</b> The account must be in the public Fixed Server Role. It must also be in the <code>db_owner</code> Fixed Database Role for every database where you want to run this job.</p>
Threshold -- Maximum percentage of data growth	<p>Specify the maximum percentage of data growth that is allowed between the last and current interval before an event is raised. The default is 25%.</p>
Threshold -- Maximum percentage of data shrinkage	<p>Specify the maximum percentage of data shrinkage that is allowed between the last and current interval before an event is raised. The default is 25%.</p>
Event severity when threshold exceeded	<p>Set the event severity level, from 1 to 40, to indicate the importance of an event in which a threshold is exceeded. The default severity level is 5 (red event indicator).</p>

Description	How to Set It
Severity for unexpected error	Set the event severity level, from 1 to 40, to indicate the importance of an event in which an unexpected error occurs. The default is 35.

## 3.10 DataSpace

Use this Knowledge Script to monitor available data space and the percentage of data space being used for each database. Monitored database space includes only data space. This script raises an event if the amount of available data space, in MB, is lower or the percentage of data space used is higher than the thresholds you set.

You can set this script to observe new databases dynamically each time it runs. Observing databases dynamically allows you to monitor data space for databases that have been added since you ran the `Discovery_SQL` Knowledge Script and prevents you from attempting to monitor databases that have been dropped since discovery.

---

### NOTE

- ♦ Although this script can observe databases each time it runs, the new databases are not reflected in the Operator Console or Control Center.
  - ♦ This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.
- 

## Required SQL Permissions

This Knowledge Script requires a SQL Server user login account that is in the public Fixed Server Role and the `sysadmin` Role. The user login account must also be in the `db_owner` Fixed Database Role for every database where you want to run this Knowledge Script.

## Resource Objects

Microsoft SQL Server or Database folder, if dynamically observing databases. If you are not observing databases dynamically, you can run this script on the Database folder or individual database objects. If you run the script on a individual database object, only that object is monitored regardless of how you set the *Dynamically observe databases at each interval?* parameter.

## Default Schedule

The default interval for this script is **Once every hour**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Dynamically observe databases at each interval?	<p>Set to <code>y</code> to dynamically observe databases at each monitoring interval. The default is <code>y</code>.</p> <p><b>NOTE:</b> Dynamic observation takes place only when the script is run on the Databases object, not when it is run on an individual database.</p>
Exclude these objects	<p>Specify the name of any database you want to exclude from monitoring. You can specify multiple databases, separated by commas and no spaces. For example: <code>master,model,mdb</code>.</p> <p>These databases are excluded even if dynamic monitoring is not enabled.</p> <p>You can use standard pattern-matching characters when specifying database names.</p> <ul style="list-style-type: none"> <li>◆ <code>*</code> matches zero or more instances of a character</li> <li>◆ <code>?</code> matches exactly one instance of a character</li> <li>◆ <code>#</code> matches any single digit from 0 - 9</li> <li>◆ <code>[ ]</code> matches exactly one instance of any character between the brackets, including ranges</li> </ul> <p><b>NOTE:</b> If a database name literally matches the pattern you provide, it will be excluded. For example, if you enter <code>m*</code>, the <code>master</code>, <code>model</code>, and <code>msdb</code> databases are not monitored, nor is the database coincidentally titled <code>m*</code>.</p>
Raise event if threshold exceeded or not met?	<p>Set to <code>y</code> to raise an event if a monitored value exceeds or falls below the threshold you set. The default is <code>y</code>.</p>
Raise event if database is offline?	<p>Set to <code>y</code> to raise an event if the database is offline. The default is <code>y</code>.</p>
Collect data for available data space and percentage used?	<p>Set to <code>y</code> to collect data for charts and reports. If enabled, data collection returns the available data space (in MB) and the percentage of data space used for each database. The default is <code>n</code>.</p>
SQL Server login	<p>Specify the database user login account needed to access Microsoft SQL Server.</p> <p>Use the <code>sa</code> account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.</p> <p><b>NOTE:</b> The account must be in the public Fixed Server Role. Also it must be in the <code>db_owner</code> Fixed Database Role for every database where you want to run this job.</p>
Threshold -- Minimum available data space	<p>Specify the minimum amount of data space that is required to be available before an event is raised. If the amount of available data space falls below this threshold, an event is raised. The default is 0 MB.</p>
Threshold -- Maximum percentage of data space used	<p>Specify the maximum percentage of data space that can be in use before an event is raised. The default is 90%.</p>

Description	How to Set It
Event severity when threshold exceeded or not met	Set the event severity level, from 1 to 40, to indicate the importance of an event in which a monitored value exceeds or falls below the threshold. The default severity level is 5 (red event indicator).
Severity for unexpected error	Set the event severity level, from 1 to 40, to indicate the importance of the event if an unexpected error occurs. The default is 35 (magenta level indicator).

## 3.11 DBGrowthRate

Use this Knowledge Script to monitor database growth and shrinkage rates. Monitoring includes database data and log files. Growth and shrinkage rates are calculated by taking the difference of the database space utilization from the current monitoring interval and the database space utilization from the previous interval. This script raises an event if either rate exceeds the threshold you set.

If you enable the *Recalculate usage?* parameter, this script calls a Microsoft stored procedure that corrects inaccuracies in the `sysindexes` table. These inaccuracies might result in incorrect space usage reports.

---

**NOTE:** This script does not raise events or generate data points when you run it on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

---

### Resource Objects

Microsoft SQL Server or Database folder, if dynamically observing databases. If you are not observing databases dynamically, you can run this script on the Database folder or individual database objects. If you run the script on a individual database object, only that object is monitored regardless of how you set the *Dynamic observation* parameter.

### Default Schedule

The default interval for this script is **Once every hour**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Dynamically observe databases at each interval	Set to <code>y</code> to dynamically observe databases at each monitoring interval. The default is <code>y</code> .
	<b>NOTE:</b> Dynamic observation takes place only when the script is run on the Databases object, not when it is run on an individual database.



Description	How to Set It
Exclude these objects	<p>Specify the name of any database you want to exclude from monitoring. You can specify multiple databases, separated by commas and no spaces. For example: <code>master,model,mdb</code>.</p> <p>These databases are excluded even if dynamic monitoring is not enabled.</p> <p>You can use standard pattern-matching characters when specifying database names.</p> <ul style="list-style-type: none"> <li>◆ * matches zero or more instances of a character</li> <li>◆ ? matches exactly one instance of a character</li> <li>◆ # matches any single digit from 0 - 9</li> <li>◆ [ ] matches exactly one instance of any character between the brackets, including ranges</li> </ul> <p><b>NOTE:</b> If a database name literally matches the pattern you provide, it will be excluded. For example, if you enter <code>m*</code>, the <code>master</code>, <code>model</code>, and <code>msdb</code> databases are not monitored, nor is the database coincidentally titled <code>m*</code>.</p>
Raise event if rate exceeds threshold?	Set to <code>y</code> to raise an event if growth and shrink rates exceed the threshold. The default is <code>y</code> .
Raise event if database is offline?	Set to <code>y</code> to raise events if a database is offline. The default is <code>y</code> .
Collect data for database growth and shrinkage rates?	Set to <code>y</code> to collect data for charts and reports. If enabled, data collection returns database growth and shrinkage rates. The default is <code>n</code> .
SQL Server login	<p>Specify the database user login account needed to access Microsoft SQL Server.</p> <p>Use the “<code>sa</code>” account or other user login accounts that have been set up in the managed client’s Microsoft SQL Server and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.</p> <p><b>NOTE:</b> The account must be in the public Fixed Server Role. Also it must be in the <code>db_owner</code> Fixed Database Role for every database where you want to run this job.</p>
Recalculate usage?	Set to <code>y</code> to have Microsoft SQL Server recalculate the space usage. If enabled, the Knowledge Script calls a Microsoft stored procedure that corrects inaccuracies in the <code>sysindexes</code> table, which might result in incorrect space usage reports. The default is <code>n</code> .
Threshold -- Maximum percentage of database growth	Specify the maximum percentage of database growth that is allowed between the previous and current interval before an event is raised. The default is 25%.
Threshold -- Maximum percentage of database shrinkage	Specify the maximum percentage of database shrinkage that is allowed between the previous and current interval before an event is raised. The default is 25%.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which growth and shrink rates exceed the threshold. The default severity level is 5 (red event indicator).

## 3.12 DBLocks

Use this Knowledge Script to monitor the number of locks per database. This script raises an event if the number of locks exceeds the threshold. In addition, this script generates data streams for the number of locks, and you can include information about the number of database locks in the events and data for this script.

---

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

---

### Resource Objects

Databases object, or individual databases.

### Default Schedule

The default interval for this script is **Every 30 minutes**.

### Setting Parameter Values

Set the following parameters as needed:

---

Description	How to Set It
Dynamically observe databases at each interval?	<p>Set to <code>y</code> to dynamically observe databases at each monitoring interval. The default is <code>y</code>.</p> <p><b>NOTE:</b> Dynamic observation takes place only when the script is run on the Databases object, not when it is run on an individual database.</p>
Exclude these objects	<p>Specify the name of any database you want to exclude from monitoring. You can specify multiple databases, separated by commas and no spaces. For example: <code>master,model,mdb</code>.</p> <p>These databases are excluded even if dynamic monitoring is not enabled.</p> <p>You can use standard pattern-matching characters when specifying database names.</p> <ul style="list-style-type: none"><li>◆ <code>*</code> matches zero or more instances of a character</li><li>◆ <code>?</code> matches exactly one instance of a character</li><li>◆ <code>#</code> matches any single digit from 0 - 9</li><li>◆ <code>[ ]</code> matches exactly one instance of any character between the brackets, including ranges</li></ul> <p><b>NOTE:</b> If a database name literally matches the pattern you provide, it will be excluded. For example, if you enter <code>m*</code>, the <code>master</code>, <code>model</code>, and <code>msdb</code> databases are not monitored, nor is the database coincidentally titled <code>m*</code>.</p>
Raise event if locks exceed threshold?	<p>Set to <code>y</code> to raise an event when the number of locks for a database exceeds the threshold. The default is <code>y</code>.</p>

---

Description	How to Set It
Collect data for number of database locks?	Set to y to collect data for charts and reports. If enabled, data collection returns the number of locks held on a database, and identifies the application and user holding each lock. The default is y.
SQL Server login	Specify the database user login account needed to access Microsoft SQL Server.  Use the "sa" account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.
Threshold -- Maximum number of database locks	Specify the maximum number of locks that can be held on a database before an event is raised. The default is 10 locks.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of locks held exceeds the threshold. The default severity level is 5 (red event indicator).
<b>Database locks reporting</b>	
Include database locks report in events?	Set to y to include a report of the number of database locks in the events generated for this script. The default is y.
Include database locks report in data?	Set to y to include a report of the number of database locks in the data for charts and reports. The default is y.
Maximum locks to report (0 for no maximum)	Set the maximum number of locks you want the script to report on for events and data. The default is 0.

## 3.13 DBMirroring

Use this Knowledge Script to monitor the Microsoft SQL Server database mirror performance counters.

Database mirroring is a Microsoft SQL Server 2005 technology that improves database availability. Database mirroring transfers transaction log records directly from one server to another. You can code client applications to automatically redirect their connection information, and in the event of a failover, automatically connect to the standby server and database. Fast failover with minimal data loss has traditionally involved higher hardware cost and greater software complexity. Database mirroring, however, can failover quickly with no loss of committed data.

This script collects information regarding various performance counters and raises events when the various thresholds are exceeded.

---

### NOTE

- ◆ This script monitors the transaction delay, redo queue value, log send queue and log bytes sent performance counters. It does not monitor other performance counters.
  - ◆ This script does not work on SQL standalone environments.
  - ◆ This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.
- 

## Resource Objects

Database objects or individual databases

## Default Schedule

The default interval for this script is **Once every hour**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Event Notification</b>	
<b>Raise Event</b>	
Raise event if bytes received exceeds threshold?	Set to <b>Yes</b> to raise an event if the number of bytes received per second exceeds threshold. The default is Yes.
Raise event if bytes sent exceeds threshold?	Set to <b>Yes</b> to raise an event if the number of bytes sent per second exceeds threshold. The default is Yes.
Raise event if log bytes received exceeds threshold?	Set to <b>Yes</b> to raise an event if the number of log bytes received per second exceeds threshold. The default is Yes.
Raise event if log bytes sent exceeds threshold?	Set to <b>Yes</b> to raise an event if the number of log bytes sent exceeds threshold. The default is Yes.
Raise event if log send queue exceeds threshold?	Set to <b>Yes</b> to raise an event if the total number of kilobytes of log that have not been sent to the mirror server exceeds threshold. The default is Yes.
Raise event if pages sent exceeds threshold?	Set to <b>Yes</b> to raise an event if the number of pages sent per second exceeds threshold. The default is Yes.
Raise event if mirror messages received exceeds threshold?	Set to <b>Yes</b> to raise an event if the number of mirroring messages received per second exceeds threshold. The default is Yes.
Raise event if redo bytes received exceeds threshold?	Set to <b>Yes</b> to raise an event if the number of bytes of log redone by the mirror database per second exceeds threshold. The default is Yes.
Raise event if redo queue exceeds threshold?	Set to <b>Yes</b> to raise an event if total number of kilobytes that redo on the mirror database is behind the hardened log. The default is Yes.
Raise event if packets waited in flow control per second exceeds threshold?	Set to <b>Yes</b> to raise an event if the number of milliseconds per second that packets waited in flow control exceeds threshold. The default is Yes.
Raise event if number of sends initiated per second exceeds threshold?	Set to <b>Yes</b> to raise an event if the number of sends initiated per second exceeds threshold. The default is Yes.
Raise event if transaction delay exceeds threshold?	Set to <b>Yes</b> to raise an event if the average amount of delay experienced by transactions waiting for acknowledgement exceeds threshold. The default is Yes.
<b>Data Collection</b>	
Collect data for bytes received?	Set to <b>Yes</b> to collect data points for the number of bytes received per second. The default is Yes.

<b>Description</b>	<b>How to Set It</b>
Collect data for bytes sent?	Set to <b>Yes</b> to collect data points for the number of bytes sent per second. The default is Yes.
Collect data for log bytes received?	Set to <b>Yes</b> to collect data points for the number of bytes of log received per second. The default is Yes.
Collect data for log bytes sent?	Set to <b>Yes</b> to collect data points for the number of bytes of log sent per second. The default is Yes.
Collect data for log send queue?	Set to <b>Yes</b> to collect data points for the total number of kilobytes of log that have not been sent to the mirror server. The default is Yes.
Collect data for pages sent?	Set to <b>Yes</b> to collect data points for the number of pages sent per second. The default is Yes.
Collect data for mirror messages received?	Set to <b>Yes</b> to collect data points for the number of mirror messages received per second. The default is Yes.
Collect data for redo bytes received?	Set to <b>Yes</b> to collect data points for the number of bytes of log redone by the mirror database per second. The default is Yes.
Collect data for redo queue?	Set to <b>Yes</b> to collect data points for the total number of kilobytes that redo on the mirror database is behind the hardened log. The default is Yes.
Collect data for packets waited in flow control per second?	Set to <b>Yes</b> to collect data points for the millisecond packets waited in flow control per second. The default is Yes.
Collect data for number of sends initiated per second?	Set to <b>Yes</b> to collect data points for the number of sends initiated per second. The default is Yes.
Collect data for transaction delay?	Set to <b>Yes</b> to collect data points for the average delay in transaction termination waiting for acknowledgement. The default is Yes.
<b>Monitoring</b>	
Threshold -- Maximum bytes received per second	Specify the maximum number of bytes that can be received per second before an event is raised. The default is 100. The maximum threshold value is 5000; the minimum threshold value is 0.
Threshold -- maximum bytes sent per second	Specify the maximum number of bytes that can be sent per second before an event is raised. The default is 100. The maximum threshold value is 5000; the minimum threshold value is 0.
Threshold -- maximum log bytes received per second	Specify the maximum number of log bytes that can be received per second before an event is raised. The default is 100. The maximum threshold value is 5000; the minimum threshold value is 0.
Threshold -- maximum log bytes sent per second	Specify the maximum number of log bytes that can be sent per second before an event is raised. The default is 100. The maximum threshold value is 5000; the minimum threshold value is 0.
Threshold -- maximum log send queue	Specify the maximum number of log bytes that can be in the send queue before an event is raised. The default is 100. The maximum threshold value is 5000; the minimum threshold value is 0.
Threshold -- maximum pages sent per second	Specify the maximum number of pages that can be sent per second before an event is raised. The default is 100. The maximum threshold value is 5000; the minimum threshold value is 0.

Description	How to Set It
Threshold -- maximum mirror messages received per second	Specify the maximum number of mirror images that can be received per second before an event is raised. The default is 100. The maximum threshold value is 5000; the minimum threshold value is 0.
Threshold -- maximum redo bytes per second	Specify the maximum number of redo bytes that can occur per second before an event is raised. The default is 100. The maximum threshold value is 5000; the minimum threshold value is 0.
Threshold -- maximum redo queue value	Specify the maximum number of redo bytes that can be in queue before an event is raised. The default is 100. The maximum threshold value is 5000; the minimum threshold value is 0.
Threshold -- maximum packets waiting in flow control per second	Specify the maximum number of packets per second that can be waiting in flow control before an event is raised. The default is 100. The maximum threshold value is 5000; the minimum threshold value is 0.
Threshold -- maximum number of sends initiated per second	Specify the maximum number of sends that can be initiated per second before an event is raised. The default is 100. The maximum threshold value is 5000 while the minimum threshold value is 0.
Threshold -- maximum transaction delay	Specify the maximum amount of transaction delay that can occur before an event is raised. The default is 100. The maximum threshold value is 5000; the minimum threshold value is 0.

## 3.14 DBMirrorStatus

Use this Knowledge Script to monitor the status of each mirrored database. This script raises an event if one of the selected factors associated with the mirrored database changes, such as the mirror state, mirror role, or mirror partner, or if a new database is added or removed from mirroring.

### Resource Objects

Microsoft SQL Server

### Default Schedule

The default interval for this script is **Every 10 minutes**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
KS Settings	
SQL Login	Specify the database user login account needed to access Microsoft SQL Server. Leave this field blank if you want to use Windows Authentication, and the netiqmc service is running with the appropriate credentials.  Use the "sa" account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.

<b>Description</b>	<b>How to Set It</b>
Event Settings	
Raise an event if Mirror State changes?	Set to Yes to raise an event if the Mirror State changes. The default is Yes.
Severity	Set the event severity level, from 1 to 40, to indicate the importance of the event if the Mirror State changes. The default severity level is 5 (red event indicator).
Raise an event if Mirror Role changes?	Set to Yes to raise an event if the Mirror Role changes. The default is Yes.
Severity	Set the event severity level, from 1 to 40, to indicate the importance of the event if the Mirror Role changes. The default severity level is 5 (red event indicator).
Raise an event if Mirror Role Sequence changes?	Set to Yes to raise an event if the Mirror Role Sequence changes. The default is Yes.
Severity	Set the event severity level, from 1 to 40, to indicate the importance of the event if the Mirror Role Sequence changes. The default severity level is 5 (red event indicator).
Raise an event if Mirror Safety Level changes?	Set to Yes to raise an event if the Mirror Safety Level changes. The default is Yes.
Severity	Set the event severity level, from 1 to 40, to indicate the importance of the event if the Mirror Safety Level changes. The default severity level is 5 (red event indicator).
Raise an event if Mirror Safety Sequence changes?	Set to Yes to raise an event if the Mirror Safety Sequence changes. The default is Yes.
Severity	Set the event severity level, from 1 to 40, to indicate the importance of the event if the Mirror Safety Sequence changes. The default severity level is 5 (red event indicator).
Raise an event if Mirror Partner changes?	Set to Yes to raise an event if the Mirror Partner changes. The default is Yes.
Severity	Set the event severity level, from 1 to 40, to indicate the importance of the event if the Mirror Partner changes. The default severity level is 5 (red event indicator).
Raise an event if Mirror Witness changes?	Set to Yes to raise an event if the Mirror Witness changes. The default is Yes.
Severity	Set the event severity level, from 1 to 40, to indicate the importance of the event if the Mirror Witness changes. The default severity level is 5 (red event indicator).
Raise an event if Mirror Witness State changes?	Set to Yes to raise an event if the Mirror Witness State changes. The default is Yes.
Severity	Set the event severity level, from 1 to 40, to indicate the importance of the event if the Mirror Witness State changes. The default severity level is 5 (red event indicator).
Raise an event if no mirrored databases found?	Set to Yes to raise an event if no mirrored databases are found. The default is No.
Severity	Set the event severity level, from 1 to 40, to indicate the importance of the event if no mirrored databases are found. The default severity level is 25 (blue level indicator).

Description	How to Set It
Raise an event if a new database is mirrored?	Set to Yes to raise an event if a new database is mirrored. The default is Yes.
Severity	Set the event severity level, from 1 to 40, to indicate the importance of the event if a new database is mirrored. The default severity level is 25 (blue level indicator).
Raise an event if a database is removed from mirroring?	Set to Yes to raise an event if a database is removed from mirroring. The default is Yes.
Severity	Set the event severity level, from 1 to 40, to indicate the importance of the event if a database is removed from mirroring. The default severity level is 5 (red event indicator).
Severity for unexpected error	Set the event severity level, from 1 to 40, to indicate the importance of the event if an unexpected error occurs. The default is 35 (magenta level indicator).

## 3.15 DbOption

Use this Knowledge Script to check how Microsoft SQL Server database options are set. You can select which options to monitor and choose whether to raise an event when a selected option is set (ON) or not set (OFF).

**NOTE:** This script does not raise events or generate data points when you run it on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Object

Database object

### Default Schedule

The default interval for this script is **Once every hour**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Dynamically observe databases at each interval?	Set to y to identify new or deleted databases at each interval, and raise events only on the existing databases. The default is y.
Raise event if option is ON?	Set to y to raise events when the specified options are set (are ON). The default is y.
Raise event if option is OFF?	Set to y to raise events when the specified options are not set (are OFF). The default is n.



Description	How to Set It
Collect data for options on?	<p>Set to <code>y</code> to collect data for charts and reports. If enabled, data collection returns one of the following:</p> <ul style="list-style-type: none"> <li>◆ <b>100</b>--all of the specified options are on</li> <li>◆ <b>50</b>--some options are on</li> <li>◆ <b>0</b>--no options are on.</li> </ul> <p>The default is <code>n</code>.</p>
SQL Server login	<p>Specify the database user login account needed to access Microsoft SQL Server.</p> <p>Use the “sa” account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.</p>
Monitor all options?	<p>Set to <code>y</code> to check all database options and see whether they are on. The default is <code>y</code>.</p>
ANSI null default option?	<p>Set to <code>y</code> to check whether the “ANSI null default” option is on. When set, this database option controls whether database columns are null by default. The default is <code>n</code>.</p>
ANSI nulls option?	<p>Set to <code>y</code> to check whether the “ANSI nulls” option is on. When this database option is set to <code>true</code>, all comparisons to a null value evaluate to <code>unknown</code>. The default is <code>n</code>.</p>
ANSI warnings option?	<p>Set to <code>y</code> to check whether the “ANSI warnings” option is on. This database option controls whether errors or warnings are issued when conditions such as “divide by zero” occur. The default is <code>n</code>.</p>
Auto close option?	<p>Set to <code>y</code> to check whether the “auto close” option is on. When this database option is set to <code>true</code>, the database is shut down cleanly and its resources are freed after the last user exits. The default is <code>n</code>.</p>
Auto create statistics option?	<p>Set to <code>y</code> to check whether the “auto create statistics” option is on. When this database option is set to <code>true</code>, statistics are automatically created on columns used in a predicate. The default is <code>n</code>.</p>
Auto update statistics option?	<p>Set to <code>y</code> to check whether the “auto update statistics” option is on. When this database option is set to <code>true</code>, existing statistics are automatically updated when the statistics become out-of-date. The default is <code>n</code>.</p>
Auto shrink option?	<p>Set to <code>y</code> to check whether the “auto shrink” option is on. When this database option is set to <code>true</code>, the database files are candidates for automatic periodic shrinking. The default is <code>n</code>.</p>
Concat null yields option?	<p>Set to <code>y</code> to check whether the “concat null yields” option is on. When this database option is set to <code>true</code>, if either operand in a concatenation operation is null, the result is null. The default is <code>n</code>.</p>
Cursor close on commit option?	<p>Set to <code>y</code> to check whether the “cursor close on commit” option is on. When this database option is set to <code>true</code>, any cursors that are open when a transaction is committed or rolled back are closed. The default is <code>n</code>.</p>
For dbo use only option?	<p>Set to <code>y</code> to check whether the “dbo use only” option is on. This database option specifies that only the database owner can access the database. The default is <code>n</code>.</p> <p><b>NOTE:</b> This parameter does not work on SQL Server 2012.</p>

Description	How to Set It
Default to local cursor option?	Set to y to check whether the “default to local cursor” option is on. This database option controls whether cursor declarations default to local. The default is n.
Merge publish option?	Set to y to check whether the “merge publish” option is on. This database option controls whether the database can be published for a merge replication. The default is n.
Offline option?	Set to y to check whether the database is configured for offline operation. The default is n.
Published option?	Set to y to check whether the database is configured for publishing (replication). The default is n.
Quoted identifier option?	Set to y to check whether the “quoted identifier” option is on. This database option controls whether double quotation mark characters (“”) can be used to surround delimited identifiers. The default is n.
Read-only option?	Set to y to check whether the “read-only” option is on. When set, this database option specifies that database records are read-only; data cannot be modified. The default is n.
Recursive triggers option?	Set to y to check whether the “recursive raises” option is on. This database option enables recursive firing of raises. The default is n.
Select into/bulkcopy option?	Set to y to check whether the “select into/bulkcopy” option is on. When set, this database option allows unlogged database transactions. The default is n.  <b>NOTE:</b> This parameter does not work on SQL Server 2012.
Single user option?	Set to y to check whether the “single user” option is on. When set, this database option specifies that only one user can access the database at a time. The default is n.
Subscribed option?	Set to y to check whether the database is configured as a subscriber database. The default is n.
Torn page detection option?	Set to y to check whether the “torn page detection” option is on. This database option controls whether Microsoft SQL Server detects incomplete pages. The default is n.
Truncate log on chkpt option?	Set to y to check whether the “truncate log on chkpt” option is on. This database option controls whether the transaction log is truncated when the Checkpoint process runs. The default is n.  <b>NOTE:</b> This parameter does not work on SQL Server 2012.
Event severity when option is on or off	Set the event severity level, from 1 to 40, to indicate the importance of an event in which a selection option is on or off. The default severity level is 5 (red event indicator).

## 3.16 DBSpace

Use this Knowledge Script to monitor available database space and the percentage of database space being used for each database. Monitored database space includes data and log space. This script raises an event if the available database space exceeds the maximum threshold or falls below the minimum threshold you set.

You can set this script to observe new databases dynamically each time it runs. Observing databases dynamically allows you to monitor database space for databases that have been added since running the `Discovery_SQL` Knowledge Script and prevents you from attempting to monitor databases that have been dropped since discovery.

If you enable the *Recalculate space usage?* parameter, this script calls a Microsoft stored procedure that corrects inaccuracies in the `sysindexes` table. These inaccuracies might result in incorrect space usage reports.

---

### NOTE

- ◆ Although this script can observe new databases each time it runs, the new databases are not reflected in the Operator Console or Control Center. To gather more detailed database device information that includes space used by log devices, use the [DBStats](#) Knowledge Script.
  - ◆ This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.
- 

### Resource Objects

Microsoft SQL Server or Database folder, if dynamically observing databases. If you are not observing databases dynamically, you can run this script on the Database folder or individual database objects.

If you run the script on a individual database object, only that object is monitored regardless of how you set the *Dynamically observe databases at each interval?* parameter.

### Default Schedule

The default interval for this script is **Once every hour**.

### Setting Parameter Values

Set the following parameters as needed:

---

Description	How to Set It
Dynamically observe databases at each interval?	Set to <code>y</code> to dynamically observe databases at each monitoring interval. The default is <code>y</code> .  <b>NOTE:</b> Dynamic observation takes place only when the script is run on the Databases object, not when run on an individual database.

---

Description	How to Set It
Exclude these objects	<p>Specify the name of any database you want to exclude from monitoring. You can specify multiple databases, separated by commas and no spaces. For example: <code>master,model,msdb</code>.</p> <p>These databases are excluded even if dynamic monitoring is not enabled.</p> <p>You can use standard pattern-matching characters when specifying database names.</p> <ul style="list-style-type: none"> <li>◆ * matches zero or more instances of a character</li> <li>◆ ? matches exactly one instance of a character</li> <li>◆ # matches any single digit from 0 - 9</li> <li>◆ [ ] matches exactly one instance of any character between the brackets, including ranges</li> </ul> <p><b>NOTE:</b> If a database name literally matches the pattern you provide, it will be excluded. For example, if you enter <code>m*</code>, the <code>master</code>, <code>model</code>, and <code>msdb</code> databases are not monitored, nor is the database coincidentally titled <code>m*</code>.</p>
Raise event if threshold exceeded or not met?	Set to <code>y</code> to raise an event if a monitored value exceeds or falls below the threshold. The default is <code>y</code> .
Raise event if database is offline?	Set to <code>y</code> to raise an event if the database is offline. The default is <code>y</code> .
Collect data for available and used database space?	<p>Set to <code>y</code> to collect data for charts and reports. If enabled, data collection returns the available database space and the percentage of database space used for each database.</p> <p>The default is <code>n</code>.</p>
SQL Server login	<p>Specify the database user login account needed to access Microsoft SQL Server.</p> <p>Use the “sa” account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.</p> <p><b>NOTE:</b> The account must be in the public Fixed Server Role. Also it must be in the <code>db_owner</code> Fixed Database Role for every database where you want to run this script.</p>
Recalculate space usage?	<p>Set to <code>y</code> to have Microsoft SQL Server recalculate the space usage. If enabled, the Knowledge Script calls a Microsoft stored procedure that corrects inaccuracies in the <code>sysindexes</code> table that might result in incorrect space usage reports. If you have a very large database, recalculating space usage will impact database performance.</p> <p>The default is <code>n</code>.</p>
Threshold -- Minimum disk space available	Specify the minimum amount of disk space required for the database (including data space and log space) to prevent an event from being raised. If the amount of disk space falls below this threshold, an event is raised. The default is 0 MB.
Threshold -- Maximum percentage of utilized database space	Specify the maximum percentage of database space that can be used before an event is raised. The default is 90%.
Event severity when threshold exceeded or not met	Set the event severity level, from 1 to 40, to indicate the importance of an event in which a monitored value exceeds or falls below the threshold. The default severity level is 5 (red event indicator).

Description	How to Set It
Event severity for unexpected error	Set the event severity level, from 1 to 40, to indicate the importance of an event for an unexpected error. The default severity level is 35.

## 3.17 DBStats

Use this Knowledge Script to monitor the amount of allocated space used by data and log files. Separate thresholds are available for files whose size is configured to grow automatically and for those whose size is not set to grow automatically.

If a file *is not* set to grow automatically, the percentage of used space is compared to the total space allocated for the file. This script then raises an event if the percentage of used space exceeds the threshold you specify.

If a file *is* set to grow automatically and a maximum file size is specified in Microsoft SQL Server, the percentage of used space is compared to the maximum specified size. This script then raises an event if the percentage of used space exceeds the threshold you specify.

If a file is set to grow automatically but no maximum file size is specified in Microsoft SQL Server, no event is raised.

---

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

The data detail for the Log Utilization and Device Utilization graph data may show a slightly different calculated value. The difference occurs due to rounding when calculating the data and will not exceed one tenth.

The % Of Current value shown in the Devices Triggering Threshold table for the Log Utilization graph data and events is relative to all the log files and not each individual log file.

---

### Resource Objects

Microsoft SQL Server or Database folder, if dynamically observing databases. If you are not observing databases dynamically, you can run this script on the Database folder or on individual database objects.

If you run the script on a individual database object, only that object is monitored regardless of how you set the *Dynamically observe databases at each interval?* parameter.

### Default Schedule

The default interval for this script is **Once every hour**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event for used data file space?	Set to <i>y</i> to raise an event if the percentage of used data file space exceeds the threshold you specify. The default is <i>y</i> .
Raise event for used log file space?	Set to <i>y</i> to raise an event if the percentage of used log file space exceeds the threshold you specify. The default is <i>y</i> .
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the data or log file size exceeds the threshold. The default is 5 (red event indicator).
Event severity when job fails	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the Knowledge Script fails due to an error condition. The default is 5 (red event indicator).
Include values in event message?	Set to <i>y</i> to include the percentages of used file space in event messages. The default is <i>n</i> .
Collect data for file space usage?	Set to <i>y</i> to collect data for charts and reports. If enabled, data collection, returns the percentage of used file space for the data and log files. The default is <i>n</i> .
Collect data for database size?	Set to <i>y</i> to collect data for charts and reports. If enabled, data collection returns the size of the database in MB. The default is <i>n</i> .
Collect data for current allocated space?	Set to <i>y</i> to collect data for charts and reports. If enabled, data collection returns the amount of space currently allocated for a specific database. The default is <i>n</i> .
Collect data for current used space?	Set to <i>y</i> to collect data for charts and reports. If enabled, data collection returns the percentage of allocated data or log file space currently in use for a specific database. The default is <i>n</i> .
SQL user ID	Specify the login ID used to connect to the Microsoft SQL Server managing the databases you want to monitor. Use the same login name and password specified in AppManger Security Manager. For example, if you used Security Manager to store the SQL login account <code>AM_OWNER</code> and the password for this account, then type <code>AM_OWNER</code> .
Use trusted connection?	Set to <i>y</i> to use a trusted connection rather than a SQL user ID. If you use a trusted connection, the Windows account under which the AppManager agent runs must be able to log on to the Microsoft SQL Server. The default is <i>y</i> .
Threshold -- Maximum used space if database file can grow	Specify the maximum percentage of used data file space allowed if the data file can grow automatically. If the percentage exceeds this amount, an event is raised. The default is 90%.
Threshold -- Maximum used space if database file cannot grow	Specify the maximum percentage of used data file space allowed if the data file cannot grow automatically. If the percentage exceeds this amount, an event is raised. The default is 75%.
Threshold -- Maximum used space if log file can grow	Specify the maximum percentage of used log file space allowed if the log file can grow automatically. If the percentage exceeds this amount, an event is raised. The default is 90%.
Threshold -- Maximum used space if log file cannot grow	Specify the maximum percentage of used log file space allowed if the log file cannot grow automatically. If the percentage exceeds this amount, an event is raised. The default is 75%.

Description	How to Set It
Dynamically observe databases at each interval?	<p>Set to <code>y</code> to dynamically observe databases at each monitoring interval. The default is <code>y</code>.</p> <p><b>NOTE:</b> Dynamic observation takes place only when the script is run on the Databases object, not when it is run on an individual database.</p>
Exclude these objects	<p>Specify the name of any database you want to exclude from monitoring. You can specify multiple databases, separated by commas and no spaces. For example: <code>master,model,mdb</code>.</p> <p>These databases are excluded even if dynamic monitoring is not enabled.</p> <p>You can use standard pattern-matching characters when specifying database names.</p> <ul style="list-style-type: none"> <li>◆ <code>*</code> matches zero or more instances of a character</li> <li>◆ <code>?</code> matches exactly one instance of a character</li> <li>◆ <code>#</code> matches any single digit from 0 - 9</li> <li>◆ <code>[ ]</code> matches exactly one instance of any character between the brackets, including ranges</li> </ul> <p><b>NOTE:</b> If a database name literally matches the pattern you provide, it will be excluded. For example, if you enter <code>m*</code>, the <code>master</code>, <code>model</code>, and <code>msdb</code> databases are not monitored, nor is the database coincidentally titled <code>m*</code>.</p>

## 3.18 ErrorLog

Use this Knowledge Script to monitor the Microsoft SQL Server error logs (`Errorlog`, `Errorlog.*` in the Microsoft SQL Server log folder).

On the first job iteration, this script sets a starting point for future log scanning and does not scan the existing entries in the logs. Therefore it does not return any results on the first iteration. As it continues to run at the interval specified in the Schedule tab, this script scans the logs for any new entries created since the last time it checked.

This script raises an event if the number of entries that match the *Log text to match* criteria exceeds the threshold you specify.

**NOTE:** This script does not raise events or generate data points when you run it on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Once every hour**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if new log entries found?	<p>Set to <b>y</b> to raise an event if new log entries are found. The default is <b>y</b>.</p> <p><b>NOTE:</b> In general, the detail message for the Knowledge Script contains details about the occurrences found. If the message is larger than 32 KB, the data is saved in a file on the managed computer in the <code>\NetIQ\AppManager\bin</code> folder, and the detail message contains the truncated data. If you generate these log files, you should periodically remove the files when you are done with them.</p>
Collect data for number of new log entries?	<p>Set to <b>y</b> to collect data for charts and reports. If enabled, data collection returns the number of new event log entries. The default is <b>n</b>.</p>
Case-sensitive?	<p>Set to <b>y</b> to match upper and lower case letters when checking for a match to the search string. The default is <b>n</b>.</p>
Literal match?	<p>Set to <b>y</b> if you want to search for the <i>entire</i> search string. For example, if you set this parameter to <b>y</b> and enter "foo bar" as the search string, only lines containing "foo bar" are considered a match. The default is <b>y</b>.</p> <p>Set to <b>n</b> to match <i>any</i> of the words in the <i>Log text to match</i> parameter value. For example, if you set this parameter to <b>n</b> and enter "foo bar" as the search string, any lines that contain "foo," "bar," or "foo bar" are considered a match.</p>
Log text to match	<p>Specify all or part of the string you want to check for. Separate multiple search strings with commas.</p> <p>The default is <code>Wait-for graph</code>.</p> <p><b>NOTE:</b> The text string <code>Wait-for graph</code> can be used to catch deadlocks that might occur on the Microsoft SQL Server instance you are monitoring. However, if this string is used, the Microsoft SQL Server instance must have additional tracing enabled. For more information, see Microsoft Knowledge Base article 832524.</p>
Text to exclude	<p>Specify a string or series of strings of text that you want to exclude from the search results. Use semi-colons to separate multiple strings.</p>
Threshold -- Maximum number of new log entries	<p>Specify the maximum number of new log entries that can be matched before an event is raised. The default is 0 (the first instance exceeds the threshold and raises an event).</p>
Event severity when threshold exceeded	<p>Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of new log entries exceeds the threshold. The default severity level is 5 (red event indicator).</p>
Event severity for unexpected error	<p>Set the event severity level, from 1 to 40, to indicate the importance of an event for an unexpected error, such as when the SQL server is not accessible, or SQL Server authentication failed. The default severity level is 35.</p>



## 3.19 ErrorLogEx

Use this Knowledge Script to monitor the SQL Server error log for entries added since the last monitoring interval that match your criteria.

This script allows you to exclude log entries based on a set of specified strings, and the script allows you to treat all strings as regular expressions. Also, this script raises an event if the number of new entries exceeds the threshold you set.

On the first job iteration, this script sets a starting point for future log scanning and does not scan the existing entries in the logs. As a result, the script does not return any results on the first iteration. As the script continues to run at the interval specified in the Schedule tab, this script scans the logs for any new entries created since the last time it checked.

---

**NOTE:** This script does not raise events or generate data points when you run it on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

---

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Once every hour**.

### Setting Parameter Values

Set the following parameters as needed:

---

Description	How to Set It
Raise event if new log entries exceed threshold?	Set to <b>y</b> to raise an event if new log entries exceed the threshold you set. The default is <b>y</b> .  <b>NOTE:</b> In general, the detail message for the Knowledge Script contains details about the occurrences found. If the message is larger than 32 KB, the data is saved in a file on the managed computer in the <code>\NetIQ\AppManager\bin</code> folder, and the detail message contains the truncated data. If you generate these log files, you should periodically remove the files when you are done with them.
Collect data for number of new log entries?	Set to <b>y</b> to collect data for charts and reports. If enabled, data collection returns the number of new event log entries. The default is <b>n</b> .
Enforce case-sensitivity in all strings?	Set to <b>y</b> to match upper and lower case letters when checking for a search string matches. The default is <b>n</b> .
Treat all strings as regular expressions?	Set to <b>y</b> if you want to use regular expressions to specify or exclude search strings. The default is <b>n</b> , which allows you to use a literal search instead of a search using regular expressions. Refer to the Windows <code>findstr</code> command for the syntax of regular expressions.

---

Description	How to Set It
Strings to find	<p>Specify all or part of the string you want to find in the error log. If you want to include multiple search strings, separate the strings with commas, without spaces. Do not use semi-colons.</p> <p><b>NOTE:</b> Two successive commas are treated as a single literal comma. For example, the script interprets the following text as two strings: <code>string, ,one,string_two</code> (string,one and string_two). Refer to the Windows <code>findstr</code> command for the syntax of regular expressions.</p> <p>The default is <code>Wait-for graph</code>, which you can use to catch deadlocks that might occur on the Microsoft SQL Server instance you are monitoring. However, if you use this string, the Microsoft SQL Server instance must have additional tracing enabled. For more information, see Microsoft Knowledge Base article 832524.</p>
Strings to exclude	Specify a string or series of strings of text that you want to exclude from the search results. Use commas to separate multiple strings.
Threshold -- Maximum number of new log entries	Specify the maximum number of new log entries that can be matched before an event is raised. The default is 0, which means that the first time the script matches the search string, the script raises an event.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of new log entries exceeds the threshold. The default severity level is 5 (red event indicator).
Event severity when job fails	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the job fails. The default severity level is 5 (red event indicator).

## 3.20 LockUtil

Use this Knowledge Script to monitor how long users must wait for lock requests to expire. This script raises an event if the waiting period for lock requests exceeds the threshold you set.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Object

Microsoft SQL Server

### Default Schedule

The default schedule for this script is **Every 10 minutes**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if lock request wait time exceeds threshold?	Set to y to raise an event if the lock request wait time exceeds the threshold. The default is y.
Collect data for lock request wait time?	Set to y to collect data for charts and reports. If enabled, data collection returns information about how long a user must wait for a lock request to expire. The default is n.
Threshold -- Maximum lock request wait time	Specify the maximum number of milliseconds that a user can spend waiting for a lock request to expire before an event is raised. The default is 100 ms.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the lock request wait time exceeds the threshold. The default severity level is 5 (red event indicator).

### 3.21 LogGrowthRate

Use this Knowledge Script to monitor log growth and shrinkage rates for all Microsoft SQL Server databases. Growth and shrinkage rates are calculated by taking the difference of the log space utilization from the current monitoring interval and the log space utilization from the previous interval. This script raises an event if either rate exceeds the threshold you set.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

#### Resource Objects

Microsoft SQL Server or Database folder, if dynamically observing databases. If you are not observing databases dynamically, you can run this script on the Database folder or individual database objects. If you run the script on a individual database object, only that object is monitored regardless of how you set the *Dynamically observe databases at each interval?* parameter.

#### Default Schedule

The default interval for this script is **Once every hour**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Dynamically observe databases at each interval?	<p>Set to <code>y</code> to dynamically observe databases at each monitoring interval. The default is <code>y</code>.</p> <p><b>NOTE:</b> Dynamic observation takes place only when the script is run on the Databases object, not when it is run on an individual database.</p>
Exclude these objects	<p>Specify the name of any database you want to exclude from monitoring. You can specify multiple databases, separated by commas and no spaces. For example: <code>master,model,mdb</code>.</p> <p>These databases are excluded even if dynamic monitoring is not enabled.</p> <p>You can use standard pattern-matching characters when specifying database names.</p> <ul style="list-style-type: none"> <li>◆ <code>*</code> matches zero or more instances of a character</li> <li>◆ <code>?</code> matches exactly one instance of a character</li> <li>◆ <code>#</code> matches any single digit from 0 - 9</li> <li>◆ <code>[ ]</code> matches exactly one instance of any character between the brackets, including ranges</li> </ul> <p><b>NOTE:</b> If a database name literally matches the pattern you provide, it will be excluded. For example, if you enter <code>m*</code>, the <code>master</code>, <code>model</code>, and <code>msdb</code> databases are not monitored, nor is the database coincidentally titled <code>m*</code>.</p>
Raise event if threshold exceeded or not met?	Set to <code>y</code> to raise an event if a monitored value exceeds or falls below the threshold. The default is <code>y</code> .
Raise event if database is offline?	Set to <code>y</code> to raise an event if the database is offline. The default is <code>y</code> .
Collect data for log growth and shrinkage rates?	Set to <code>y</code> to collect data for charts and reports. If enabled, data collection, returns the log growth and shrinkage rates for each database. The default is <code>n</code> .
SQL Server login	<p>Specify the database user login account needed to access Microsoft SQL Server.</p> <p>Use the “<code>sa</code>” account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.</p> <p><b>NOTE:</b> The account must be in the public Fixed Server Role. Also it must be in the <code>db_owner</code> Fixed Database Role for every database where you want to run this job.</p>
Threshold -- Maximum log growth rate	Specify the maximum log growth rate, as a percentage, that is allowed between the last and current interval before an event is raised. The default is 25%.
Threshold -- Maximum log shrinkage rate	Enter the maximum log shrinkage rate, as a percentage, that is allowed between the last and current interval before an event is raised. The default is 25%.
Event severity when threshold exceeded or not met	Set the event severity level, from 1 to 40, to indicate the importance of an event in which a monitored value exceeds or falls below the threshold. The default severity level is 5 (red event indicator).

## 3.22 LoginFailures

Use this Knowledge Script to monitor Microsoft SQL Server login failures. You can use this information to check for unauthorized attempts to access SQL Server and also to monitor login failure of specific login names.

You can specify the maximum number of failed logins to be displayed and specify whether data needs to be collected for creating charts and reports. You can also specify the maximum number of rows of failed login information to be written to a file, which you can view later.

This script raises an event if SQL login fails or if the script is run on a version of SQL Server earlier than version 2005.

---

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

---

### Resource Objects

Microsoft SQL Server and database levels

### Default Schedule

The default interval for this script is **Asynchronous**. All other schedule types are unavailable.

### Setting Parameter Values

Set the following parameters as needed:

---

Description	How to Set It
<b>Event Notification</b>	
Event severity when login fails	Set the event severity level, from 1 to 40, to indicate the importance of an event in which a login to SQL Server fails. The default event severity level is 15.
<b>Event Detail Options</b>	
Maximum number of failed logins to display	Specify the maximum number of failed logins to display in an event message. The default is 10 logins.
<b>Data Collection</b>	
Collect data for top login failures?	Set to <b>Yes</b> to collect data about top login failures data for charts and reports. By default, data collection is disabled.
<b>Data Detail Options</b>	
Number of rows to display in data details	Specify the maximum number of rows of data details to be displayed. The default is 10 rows.
<b>Monitoring</b>	
Microsoft SQL Server login	Specify the Microsoft SQL Server user name needed to access the Microsoft SQL Servers. This login must have permission to access the servers on which you want to monitor login failure. If you do not enter the Microsoft SQL Server login, AppManager uses Windows authentication.

---

Description	How to Set It
Comma-separated user names to monitor	Specify the specific Microsoft SQL Server user names to monitor, using commas as separators. AppManager runs the Knowledge Script and displays the filtered results based on the specific user names you enter. By default, this Knowledge Script monitors login failures for all users.
<b>Save top failed login user information to a file?</b>	Select the <b>Yes</b> check box to save login failure information to a file. By default, saving login information is disabled.
Full path to the file	Specify the full path to the file where you want to save the login failure information.
<b>File Content Options</b>	
User information to write to file	Specify the maximum number of rows of failed login information to be written to the file. The information includes the login name and the number of times that login fails. The default is 10 rows.

## 3.23 LogShipping

Use this Knowledge Script to monitor log shipping metrics. Log shipping is a process in which transaction logs from a primary Microsoft SQL Server are applied sequentially on a scheduled basis to another Microsoft SQL Server.

On the first job iteration, this script sets a starting point for future log scanning and does not scan the existing entries in the logs. Therefore, it does not return any results on the first iteration. As it continues to run at the interval specified in the Schedule tab, this script scans the logs for any new entries created since the last time it checked.

This script raises an event if the number of successful log shipping records exceeds the threshold you specify, and if log shipping fails for any reason.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Objects

Microsoft SQL Server instances

### Default Schedule

The default interval for this script is **Every hour**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Event Notification</b>	

Description	How to Set It
<b>Raise event if log shipping fails?</b>	Set to <b>Yes</b> to raise an event if log shipping fails. The default is Yes.
Event severity when log shipping fails	Set the event severity level, from 1 to 40, to indicate the importance of an event in which log shipping fails. The default severity level is 5.
<b>Raise event if threshold is exceeded?</b>	Select the <b>Yes</b> check box to raise an event if the number of successful log shipping records exceeds threshold. The default is Yes.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of successful log shipping records exceeds the threshold. The default severity level is 15.
<b>Data Collection</b>	
Collect data for log shipping?	Set to <b>Yes</b> to collect log shipping data for charts and reports. The default is Yes.
Custom data stream legend	Specify a custom data stream legend to display in the <b>Graph Data</b> tab.
<b>Monitoring</b>	
Threshold - Maximum number of successful log shipping records	Specify the maximum number of successful log shipping records that can be found before an event is raised. The default number of records is 100.

## 3.24 LogSpace

Use this Knowledge Script to monitor a database's available log space and track log space usage. This script raises an event if the available log space falls below the threshold you set, or if the percentage of log space used exceeds the threshold you set.

You can set this script to observe new databases dynamically each time it runs. Observing databases dynamically allows you to monitor log space for databases that have been added since you ran the `Discovery_SQL` Knowledge Script and prevents you from attempting to monitor databases that have been dropped since discovery.

---

### NOTE

- ◆ Although this script can observe new databases each time it runs, the new databases are not reflected in the Operator Console or Control Center.
  - ◆ This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.
- 

## Resource Objects

Microsoft SQL Server or Database folder, if dynamically observing databases. If you are not observing databases dynamically, you can run this script on the Database folder or individual database objects. If you run the script on a individual database object, only that object is monitored regardless of how you set the *Dynamically observe databases at each interval?* parameter.

## Default Schedule

The default interval for this script is **Once every hour**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Dynamically observe databases at each interval?	<p>Set to <i>y</i> to dynamically observe databases at each monitoring interval. The default is <i>y</i>.</p> <p><b>NOTE:</b> Dynamic observation takes place only when the script is run on the Databases object, not when it is run on an individual database.</p>
Exclude these objects	<p>Specify the name of any database you want to exclude from monitoring. You can specify multiple databases, separated by commas and no spaces. For example: <code>master,model,mdb</code>.</p> <p>These databases are excluded even if dynamic monitoring is not enabled.</p> <p>You can use standard pattern-matching characters when specifying database names.</p> <ul style="list-style-type: none"><li>◆ <code>*</code> matches zero or more instances of a character</li><li>◆ <code>?</code> matches exactly one instance of a character</li><li>◆ <code>#</code> matches any single digit from 0 - 9</li><li>◆ <code>[ ]</code> matches exactly one instance of any character between the brackets, including ranges</li></ul> <p><b>NOTE:</b> If a database name literally matches the pattern you provide, it will be excluded. For example, if you enter <code>m*</code>, the <code>master</code>, <code>model</code>, and <code>msdb</code> databases are not monitored, nor is the database coincidentally titled <code>m*</code>.</p>
Raise event if threshold exceeded or not met?	<p>Set to <i>y</i> to raise an event if a monitored value exceeds or falls below the threshold. The default is <i>y</i>.</p>
Raise event if database is offline?	<p>Set to <i>y</i> to raise an event if the database is offline. The default is <i>y</i>.</p>
Collect data for space available and space used?	<p>Set to <i>y</i> to collect data for charts and reports. If enabled, data collection, returns the available log space and the percentage of log space used for each database. The default is <i>n</i>.</p>
SQL Server login	<p>Specify the database user login account needed to access Microsoft SQL Server.</p> <p>Use the <code>sa</code> account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.</p> <p><b>NOTE:</b> The account must be in the public Fixed Server Role. Also it must be in the <code>db_owner</code> Fixed Database Role for every database where you want to run this job.</p>
Threshold -- Minimum disk space available	<p>Specify the minimum disk space required for the database's log space. If the amount of disk space falls below this threshold, an event is raised. The default is 0 MB.</p>



Description	How to Set It
Threshold -- Maximum percentage of log space used	Specify the maximum percentage of log space that can be used before an event is raised. The default is 90%.
Event severity when threshold exceeded or not met	Set the event severity level, from 1 to 40, to indicate the importance of an event in which a monitored value exceeds or falls below the threshold. The default severity level is 5 (red event indicator).

## 3.25 MemUtil

Use this Knowledge Script to monitor the amount of memory used by Microsoft SQL Server processes: `sqlservr`, `sqlagent`, and `sqlexec`. This script raises an event if memory usage exceeds the maximum threshold you set, and if the number of free pages falls below the minimum threshold you set.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Object

Microsoft SQL Server

### Default Schedule

The default schedule for this script is **Every 10 minutes**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if threshold exceeded or not met	Set to <b>y</b> to raise an event if a monitored value exceeds or falls below the threshold. The default is <b>y</b> .
Collect data for memory usage and free pages?	Set to <b>y</b> to collect data for charts and reports. If enabled, data collection returns total server memory in MB, the number of free pages, and the working set, in MB, of each associated SQL Server process. The default is <b>n</b> .
Threshold -- Maximum memory usage	Specify the maximum amount of memory that can be consumed by Microsoft SQL Server processes before an event is raised. The default is 75 MB.
Threshold -- Minimum number of free pages	Specify the minimum number of pages that must be free to prevent an event from being raised. The default is 50 pages.  <b>NOTE:</b> This parameter does not work on SQL Server 2012, because Buffer Manager/Free pages counter does not exist in SQL Server 2012.
Threshold -- Maximum server memory usage	Specify the maximum amount of memory that can be consumed by Microsoft SQL Server and all related processes before an event is raised. The default is 3000 MB.

Description	How to Set It
Event severity when threshold exceeded or not met	Set the event severity level, from 1 to 40, to indicate the importance of an event in which a monitored value exceeds or falls below the threshold. The default severity level is 5 (red event indicator).

## 3.26 MonitorDDL

Use this Knowledge Script to monitor Data Definition Language (DDL) statements. DDL statements are executed by database administrators during the setup and modification of database schema. Any change in schema results in a change in the data model and therefore monitoring such changes on a production server is crucial.

This script raises an event when a DDL execution takes place. You can then determine whether the change is authorized by a competent authority.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

If you move a cluster group in Cluster Administrator:

- ◆ Stop the MonitorDDL Knowledge Script running on the clustered nodes.
- ◆ Delete the `logddlstatements` trigger and `ddl_log` table from the monitored database.
- ◆ Run a new job on the clustered nodes.

### Required SQL Permissions

This Knowledge Script requires a SQL Server user login account that has `CREATE TABLE` and `ALTER SCHEMA` permissions.

### Resource Objects

Microsoft SQL Server instances

### Default Schedule

The default interval for this script is **Asynchronous**. All other schedule types are unavailable.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Event Notification</b>	
<b>Event Detail Options</b>	
Include DDL executed statements in event details?	Set to <b>Yes</b> to allow events to contain DDL statements in an event message. If set to Yes, a DDL Statement column is displayed in the detailed event message. By default, including DDL statements in the event details is enabled.

Description	How to Set It
Number of executed DDL statements to display	Specify the maximum number of executed DDL statements to display in the event message. This number must be between 1 and 1000. The default is 10 statements.
<b>Data Collection</b>	
Collect data for DDL statements executed?	Set to <b>Yes</b> to collect DDL statements data for charts and reports. By default, data is disabled.
<b>Data Detail Options</b>	
Include DDL statements in the data details?	<p>Set to <b>Yes</b> to display data details in a table. The data consists of:</p> <ul style="list-style-type: none"> <li>◆ Time: Statement execution time.</li> <li>◆ Microsoft SQL Server: Microsoft SQL Server name.</li> <li>◆ Database Name: Database name on which query is executed.</li> <li>◆ User Name: Name of the user executing the query.</li> <li>◆ DDL Statement: Executed DDL statement.</li> </ul> <p>By default, including DDL statements in the data details is disabled.</p>
Number of statements to display in data details	Specify the maximum number of rows to display in the data details. This number must be between 1 and 1000. The default is 10 rows.
<b>Monitoring</b>	
Microsoft SQL Server login	Specify the secondary database user login account needed to access Microsoft SQL Server. The user name you enter must have the permission to access the databases on which you want to monitor DDL statements.
Database to be monitored	Specify the name of the database on which to monitor the DDL statements. This is a mandatory field.
<b>Save executed DDL statements to a file?</b>	Set to <b>Yes</b> to save executed DDL statements to a file. By default, saving executed DDL statements is disabled.
Full path to file	Specify the full path to the file that contains the executed DDL statements information.
<b>File Content Options</b>	
Number of rows to write to the file	Specify the maximum number of rows to write to the file. This number must be between 1 and 1000. The default number is 10.
Append to the file?	Set to <b>Yes</b> to append new rows to the existing rows in the file. Not setting to Yes clears the data from the file before storing new rows. By default, appending to the file is disabled.

## 3.27 MonitorJobs

Use this Knowledge Script to query Microsoft SQL Server and report on any jobs that have not successfully completed. If a job fails, an event contains the following message: `N SQL jobs failed on ServerName`. In addition, if the number of failed jobs exceeds the threshold you specify, an event is raised. By default, this script raises events only when new job failures occur since the last monitoring interval. You can specify the jobs to monitor.

---

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

---

## Required SQL Permissions

This Knowledge Script requires a SQL Server user login account that has Select access to the `sysjobs` and `sysjobobservers` tables.

## Resource Object

Microsoft SQL Server folder

## Default Schedule

The default interval for this script is **Every 10 minutes**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
SQL login	<p>Specify the database user login account that will run the SQL statements.</p> <p>Use the “sa” account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.</p> <p><b>NOTE:</b> In general, permission to run specific SQL commands and statements is derived from the permissions granted to the login account you are using to run this Knowledge Script. However, the <code>dbcc</code> command can only be run by:</p> <ul style="list-style-type: none"><li>◆ <code>dbo</code> account (Microsoft SQL Server 2005, 2008, and 2012.)</li><li>◆ <code>db_backupoperator</code> account (Microsoft SQL Server 2005, 2008, and 2012.)</li></ul>
Collect data for number of failed jobs?	<p>Set to <b>Yes</b> to collect data for charts and reports. If enabled, data collection returns the number of jobs that have failed, including the job name and the reason for the failure. The default is Yes.</p>
Raise event if job failures exceed threshold?	<p>Set to <b>Yes</b> to raise an event if the number of job failures exceeds the threshold. The default is Yes.</p>
Threshold -- Maximum number of failed jobs	<p>Specify the maximum number of failed jobs that can be detected before an event is raised. The default is 0 jobs.</p>
Event severity when threshold exceeded	<p>Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of failed jobs exceeds the threshold. The default severity level is 5 (red event indicator).</p>

Description	How to Set It
Only event when new job failures occur?	<p>Set to <b>Yes</b> to raise events for failed jobs <i>only</i> when failures have occurred since the last monitoring interval. When this option is selected, an event is not raised on previously failed jobs until a new failure is detected.</p> <p>By default, events are raised if the time of the job error is later than the last monitoring interval.</p>
Only event on these jobs	<p>Specify the names of jobs to include in monitoring. Separate multiple names with a comma. Only specified job names are included in data collection and have events raised if job failures are detected.</p> <p>By default, all jobs are monitored.</p>
Event severity for unexpected error	<p>Set the event severity level, from 1 to 40, to indicate the importance of an event for an unexpected error, such as when the SQL server is not accessible, or SQL Server authentication failed. The default severity level is 35.</p>

## 3.28 NearFileMaxSize

Use this Knowledge Script to monitor the size of Microsoft SQL Server database files. You can set a threshold to determine when a file is reaching its maximum size. Thresholds are available for a maximum file size and for a maximum percentage of the allowed file size that a database file can reach. This script raises an event if the size of any database file exceeds a threshold you set.

You can set this script to observe new databases dynamically each time it runs. Observing databases dynamically allows you to monitor file size for databases that have been added since running the Discovery\_SQL Knowledge Script and prevents you from attempting to monitor databases that have been dropped since discovery.

---

### NOTE

- ◆ Although this script observes new databases each time it runs, the new databases are not reflected in the Operator Console or Control Center.
  - ◆ This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.
- 

## Resource Objects

Microsoft SQL Server or Database folder, if dynamically observing databases. If you are not observing databases dynamically, you can run this script on the Database folder or individual database objects. If you run the script on a individual database object, only that object is monitored regardless of how you set the *Dynamically observe databases at each interval?* parameter.

## Default Schedule

The default interval for this script is **Once every day**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Dynamically observe databases at each interval?	<p>Set to <i>y</i> to dynamically observe databases at each monitoring interval. The default is <i>y</i>.</p> <p><b>NOTE:</b> Dynamic observation takes place only when the script is run on the Databases object, not when it is run on an individual database.</p>
Exclude these objects	<p>Specify the name of any database you want to exclude from monitoring. You can specify multiple databases, separated by commas and no spaces. For example: <code>master,model,mdb</code>.</p> <p>These databases are excluded even if dynamic monitoring is not enabled.</p> <p>You can use standard pattern-matching characters when specifying database names.</p> <ul style="list-style-type: none"><li>◆ <code>*</code> matches zero or more instances of a character</li><li>◆ <code>?</code> matches exactly one instance of a character</li><li>◆ <code>#</code> matches any single digit from 0 - 9</li><li>◆ <code>[ ]</code> matches exactly one instance of any character between the brackets, including ranges</li></ul> <p><b>NOTE:</b> If a database name literally matches the pattern you provide, it will be excluded. For example, if you enter <code>m*</code>, the <code>master</code>, <code>model</code>, and <code>msdb</code> databases are not monitored, nor is the database coincidentally titled <code>m*</code>.</p>
Raise event if file size exceeds threshold?	<p>Set to <i>y</i> to raise an event if database file size exceeds the threshold. The default is <i>y</i>.</p>
Raise event if database is offline?	<p>Set to <i>y</i> to raise an event if the database is offline. The default is <i>y</i>.</p>
Collect data for database file size?	<p>Set to <i>y</i> to collect data for charts and reports. If enabled, data collection returns the size of the database files. The default is <i>n</i>.</p>
SQL Server login	<p>Specify the database user login account needed to access Microsoft SQL Server.</p> <p>Use the “<code>sa</code>” account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.</p> <p><b>NOTE:</b> The account must be in the public Fixed Server Role. Also it must be in the <code>db_owner</code> Fixed Database Role for every database where you want to run this job.</p>
Threshold -- Maximum database file size	<p>Specify the maximum file size that database files can reach before an event is raised. The default is 500 MB.</p>
Threshold -- Maximum percentage of allowed size	<p>Specify the maximum percentage of its maximum allowed size that a file can use before an event is raised. The default is 90%.</p>
Event severity when threshold exceeded	<p>Set the event severity level, from 1 to 40, to indicate the importance of an event in which database file size exceeds the threshold. The default severity level is 5 (red event indicator).</p>

## 3.29 NearMaxConnect

Use this Knowledge Script to monitor the opened connection usage of Microsoft SQL Server. This script compares the current number of connections being used to the maximum number of connections configured for the server. This script raises an event if the used percentage (current connections or maximum connections) exceeds the threshold you set.

---

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

---

### Version Compatibility

If the user connection configuration variable is a value, you can run this script on Microsoft SQL Server 2005, 2008, and 2012 to monitor user connections. If you are using Microsoft SQL Server 2005, 2008, or 2012 and have not set the maximum user connections (that is, you let Microsoft SQL Server configure the maximum number of user connections on its own), then you cannot use this script to collect data. A value of 0 is always returned.

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Once every hour**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if used connections exceed threshold?	Set to <b>y</b> to raise an event if the percentage of used connections exceeds the threshold. The default is <b>y</b> .
Collect data for number of connections used?	Set to <b>y</b> to collect data for charts and reports. If enabled, data collection returns information about the number of open connections being used. The default is <b>n</b> .
SQL Server login	Specify the database user login account needed to access Microsoft SQL Server.  Use the "sa" account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.  <b>NOTE:</b> The account must be in the public Fixed Server Role. Also it must be in the <code>db_owner</code> Fixed Database Role for every database where you want to run this job.
Threshold -- Maximum percentage of connections used	Specify the maximum percentage of connections that can be in use before an event is raised. The default is 95%.

Description	How to Set It
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the percentage of used connections exceeds the threshold. The default severity level is 5 (red event indicator).

## 3.30 NearMaxLocks

Use this Knowledge Script to monitor the lock usage of Microsoft SQL Server. This script compares the current number of locks being used to the maximum number of locks configured for the server. This script raises an event if the used percentage of current locks or maximum locks exceeds the threshold you set.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Version Compatibility

If you have set the lock configuration variable to a value, you can run this script on Microsoft SQL Server 2005, 2008, and 2012 to monitor lock usage. You cannot use this script to collect data for SQL Server 2005, 2008, or 2012 if you have not set the maximum number of locks. In other words, you let SQL Server configure the maximum number of locks for you, in which case a value of 0 is always returned.

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Once every hour**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if percentage of used locks exceeds threshold?	Set to y to raise an event if the percentage of used locks exceeds the threshold. The default is y.
Collect data for percentage of used locks?	Set to y to collect data for charts and reports. If enabled, data collection returns information about the percentage of locks being used. The default is n.



Description	How to Set It
SQL Server login	Specify the database user login account needed to access Microsoft SQL Server.  Use the "sa" account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.  <b>NOTE:</b> The account must be in the public Fixed Server Role. Also it must be in the db_owner Fixed Database Role for every database where you want to run this job.
Threshold --Maximum percentage of locks utilized	Specify the maximum percentage of locks that can be in use before an event is raised. The default is 95%.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the percentage of used locks exceeds the threshold. The default severity level is 5 (red event indicator).

## 3.31 NetError

Use this Knowledge Script to monitor Microsoft SQL Server network errors. This script compares the number of packet errors that occurred between the current and previous monitoring intervals. This script raises an event if the number of errors exceeds the threshold you set. In addition, this script generates data streams for the number of network errors.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Every 10 minutes**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if network errors exceed threshold?	Set to y to raise an event if the number of network errors exceeds the threshold. The default is y.
Collect data for number of network errors?	Set to y to collect data for charts and reports. If enabled, data collection returns the number of network errors. The default is n.

Description	How to Set It
SQL Server login	Specify the database user login account needed to access Microsoft SQL Server.  Use the “sa” account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.  The account must be in the public Fixed Server Role and you must explicitly grant the “select” privilege on the master database.
Threshold -- Maximum number of network errors	Specify the maximum number of network errors allowed before an event is raised. The default is 0 errors.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of network errors exceeds the threshold. The default severity level is 5 (red event indicator).

## 3.32 ParseErrors

Use this Knowledge Script to monitor all Microsoft SQL Server parse error messages. Parse errors are Microsoft SQL Server messages that are displayed in case of any errors or exceptions. Hackers use the SQL injection technique to try and bypass the security controls of a database application. Failed attempts usually result in SQL parse errors. Using this script, you can monitor and prevent SQL injection attacks.

In addition, this script raises an event if a parse error occurs on Microsoft SQL Server.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Object

Microsoft SQL Server

### Default Schedule

The default interval for this script is **Asynchronous**. All other schedule types are unavailable.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Event Notification</b>	
<b>Raise event if parse errors are found?</b>	Set to <b>Yes</b> to raise an event if parse errors occur. The default is Yes.
Event severity when parse errors are found	Set the event severity level, from 1 to 40, to indicate the importance of an event in which parse errors are found. The default severity level is 5.
<b>Event Detail Options</b>	

Description	How to Set It
Number of rows to display	Specify the maximum number of parse error detail rows to be displayed in the event message. This number must be between 0 and 5000. The default number is 10.
<b>Data Collection</b>	
Collect data for number of parse errors?	Set to <b>Yes</b> to collect parse error data for charts and reports. Data details are shown as a table in the data details dialog box. The following columns are shown in the data details dialog box: <ul style="list-style-type: none"> <li>◆ Row</li> <li>◆ ParseError</li> </ul> <p>By default, collection of parse errors data is disabled.</p>
<b>Monitoring</b>	
Microsoft SQL Server login	Specify the Microsoft SQL Server user login needed to access the SQL Servers. This login must have the permission to access the servers on which you want to monitor parse errors. If you do not enter the Microsoft SQL Server login, AppManager uses Windows authentication.

## 3.33 ProcessingTime

Use this Knowledge Script to monitor the processing time of any T-SQL statements or stored procedures. You can enter the T-SQL statements to be executed when you run this script, or you can load the statements from a script file. Use the system administrator role or `dbo` account where necessary;. For example, use `dbo` for running Database Console Commands (DBCC).

This script raises an event if the processing time for any T-SQL statement or stored procedure exceeds the threshold you set. If an index is used in the query, the results contain details of the index.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Object

Microsoft SQL Server

### Default Schedule

The default schedule for this script is **Every hour**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if processing time exceeds threshold?	Set to <code>y</code> to raise an event if the amount of processing time exceeds the threshold. The default is <code>y</code> .

Description	How to Set It
Collect data for processing time?	Set to y to collect data for charts and reports. If enabled, data collection returns information about the amount of processing time used by T-SQL statements or stored procedures. The default is y.
SQL Server login	Specify the database user login account needed to access Microsoft SQL Server.  Use the "sa" account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.  <b>NOTE:</b> The account needs to have sufficient privileges to run the specified command.
Load SQL statements from file?	Set to y to load SQL statements from a file. The default is n.
Full path to SQL script file	If you enabled <i>Load SQL statements from file?</i> , specify the complete file path for the script file containing SQL statements to execute. For example, enter <code>F:\NetIQ Corporation\Sample.sql</code>  You cannot enter a path in the form of <code>\\computer\dir\Sample.sql</code> if the NetIQ Corporation Client Resource Monitor service ( <code>netiqmc</code> ) is running as a system account.
SQL statement to execute	Specify the SQL statement to be executed. The default is <code>sp_who</code> .  <b>NOTE:</b> Unless you are entering very simple queries, you might find typing SQL statements into this field is error-prone. To avoid this, use the <i>Load SQL statements from file?</i> parameter. Or, if you have an AppManager Developer's license, you can check this Knowledge Script out of the repository, use the Knowledge Script Editor to paste the desired SQL statements into the SQL statement field, and then check the modified Knowledge Script back in.
Legend for output	Specify a legend for the output of your SQL Server statement. The default is blank. If left blank, AppManager constructs a legend based on the column number. For example, if the Column Number is 0, the constructed legend is "# Result Rows". If the Column Number is greater than 0, the constructed legend is the specified column heading. If no heading exists, the constructed legend is:  <code>"Column &lt;num&gt; Value"</code>
Threshold -- Maximum processing time	Specify the maximum amount of time that T-SQL statements or stored procedures have to respond before an event is raised. The default is 10 seconds.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the amount of processing time exceeds the threshold. The default severity level is 5 (red event indicator).

## 3.34 RepLatency

Use this Knowledge Script to monitor replication latency in milliseconds. This script raises an event if replication latency exceeds the threshold you set. In addition, this script generates data streams for replication latency.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

## Resource Object

Microsoft SQL Server folder

## Default Schedule

The default interval for this script is **Once every hour**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if latency exceeds threshold?	Set to y to raise an event if replication latency exceeds the threshold you set. The default is y.
Collect data for replication latency?	Set to y to collect data for charts and reports. If enabled, data collection returns information about replication latency. The default is n.
SQL Server login	Specify the database user login account needed to access Microsoft SQL Server.  Use the “sa” account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.  <b>NOTE:</b> The account needs to have sufficient privileges to run the specified command.
Threshold -- Maximum replication latency	Specify the maximum amount of replication latency allowed before an event is raised. The default is 20000 milliseconds.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which replication latency exceeds the threshold. The default severity level is 5 (red event indicator).

## 3.35 Replication

Use this Knowledge Script to monitor replication latency in milliseconds, the number of transactions in the transaction log of the publication database that are marked for replication but have not yet been replicated, and the number of transactions being replicated per second. It also monitors the replication agent to check whether it is running.

This script consolidates functionality that is also available in three separate SQL Knowledge Scripts: [RepLatency](#), [RepTransactions](#), and [RepTranSec](#). Changes to the individual script do not affect the functionality of the consolidated script.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

## Required SQL Permissions

This Knowledge Script requires a SQL Server user login account that is in the public Fixed Server Role and the `sysadmin` Role.

## Resource Object

Microsoft SQL Server folder

## Default Schedule

The default interval for this script is **Every 5 minutes**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Replication Latency</b>	Set to <b>Yes</b> to check for replication latency. By default, replication latency is disabled.
<b>Raise event if latency exceeds threshold?</b>	Set to <b>Yes</b> to raise an event if replication latency exceeds the threshold you set. The default is Yes.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which replication latency exceeds the threshold. The default severity level is 5.
Collect data for replication latency?	Set to <b>Yes</b> to collect replication latency data for charts and reports. By default, data collection is disabled.
Threshold - Maximum replication latency	Specify the maximum amount of replication latency allowed before an event is raised. The default is 20000 milliseconds.
<b>Pending Replication Transaction</b>	Set to <b>Yes</b> to check for any pending replication transaction. By default, pending replication transaction is enabled.
<b>Raise event if pending replications exceed threshold?</b>	Set to <b>Yes</b> to raise an event if the number of pending replications exceeds threshold. The default is Yes.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of the an event in which the number of pending replication transactions exceeds the threshold. The default severity level is 5.
Collect data for number of pending replications?	Set to <b>Yes</b> to collect data for charts and reports. If enabled, data collection returns the number of transactions in the transaction log marked for replication. By default, data collection is disabled.
Threshold -- Maximum number of pending replication transactions	Specify the maximum number of transactions that can be replicated in the publication database before an event is raised. The default is 1000 pending replications.
<b>Replication Rate</b>	Set to <b>Yes</b> to check for replication rate. By default, checking replication rate is enabled.
<b>Raise event if replication rate exceeds threshold?</b>	Set to <b>Yes</b> to raise an event if the replication rate exceeds the threshold you set. The default is Yes.

Description	How to Set It
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the replication rate exceeds the threshold. The default severity level is 5.
Collect data for replication rate?	Set to <b>Yes</b> to collect data for charts and reports. If enabled, data collection returns the number of transactions being replicated per second. By default, data collection is disabled.
Threshold -- Maximum replication rate	Specify the maximum number of transactions that can be replicated per second before an event is raised. The default is 1000 transactions per second.
<b>Replication Agent</b>	Set to <b>Yes</b> to run the replication agent. By default, replication agent is disabled.
<b>Raise event if replication agent is not running?</b>	Set to <b>Yes</b> to raise an event if the replication agent is not running. The default is Yes.
Event severity when agent is not running	Set the event severity level, from 1 to 40, to indicate the importance of the an event in which the replication agent is not running. The default severity level is 5.
Collect data for agent running?	Set to <b>Yes</b> to collect data for charts and reports. By default, data collection is disabled.
Threshold -- Maximum agent running	Specify the maximum number of agents that can be running before an event is raised. The default is 10 agents.
<b>Monitor</b>	
Microsoft SQL Server login	Specify the database user login account needed to access Microsoft SQL Server. The user name you enter must have the permission to access the databases on which you want to monitor replication.

## 3.36 Report\_Accessibility

Use this Knowledge Script to generate a report about the accessibility of Microsoft SQL Servers and databases. This report uses data collected by the [Accessibility](#) Knowledge Script.

**NOTE:** The Accessibility Knowledge Script incorrectly equates stopping a job with stopping the server on which the job is running, and thus returns incorrect values for server uptime or downtime. For example, you run a job with the Accessibility Knowledge Script for two hours and then for some reason, stop the job (but not the server). You restart the job again three hours later, and it runs for an additional two hours. Although the server was running continuously for seven hours, the report will show the server downtime as three hours and server uptime as four hours.

### Resource Object

Report agent

### Default Schedule

The default schedule for this script is **Run once**. You should run the report script every 30 minutes for optimal report generation.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
<b>Data settings</b>	
Hours or percentage on chart	Select whether to illustrate availability by hours or by percentage.
Select sorting/display option	Select whether data is sorted, or the method of display: <ul style="list-style-type: none"> <li>◆ <b>No sort:</b> Data is not sorted</li> <li>◆ <b>Sort:</b> Data is sorted by value. Lowest to highest from front to back; highest to lowest from left to right.</li> <li>◆ <b>Top %:</b> Chart only the top <i>N</i>% of selected data (sorted by default)</li> <li>◆ <b>Top N:</b> Chart only the top <i>N</i> of selected data (sorted by default)</li> <li>◆ <b>Bottom %:</b> Chart only the bottom <i>N</i>% of data (sorted by default)</li> <li>◆ <b>Bottom N:</b> Chart only the bottom <i>N</i> of selected data (sorted by default)</li> </ul>
Percentage/count for top/bottom	Specify a number for either the percent or count defined in the previous parameter. For example, Top 10%, or Top 10. The 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. The default is no.
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.



Description	How to Set It
Add time stamp to title?	<p>Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.</p> <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> <p>The default is no.</p>
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.37 Report\_CacheHitRatio

Use this Knowledge Script to generate a report about the percentage of time requested pages are found in the Microsoft SQL Server data cache. This script lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.

Description	How to Set It
Select the style	<p>Select the style for the first page of the report:</p> <ul style="list-style-type: none"> <li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers. Each page shows all the data streams collected from a single computer.</li> <li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers. Each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer.</li> <li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li> <li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li> </ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	<p>Select the aggregation method for the data in your report:</p> <ul style="list-style-type: none"> <li>◆ Minute</li> <li>◆ Hour</li> <li>◆ Day</li> </ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.
Statistics to show per period	<p>Select a statistical method by which to display data in the report:</p> <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the aggregation interval. For example, the average value for 1 Hour</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the aggregation interval</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the aggregation interval</li> <li>◆ <b>Count:</b> The number of data points for the aggregation interval</li> <li>◆ <b>Sum:</b> The total value of data points for the aggregation interval</li> <li>◆ <b>3Sigma:</b> The average + (3 * standard deviation) and average - (3 * standard deviation)</li> <li>◆ <b>Std:</b> The standard deviation</li> <li>◆ <b>Box:</b> Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li> <li>◆ <b>Open:</b> The first value for the aggregation interval</li> <li>◆ <b>Close:</b> the last value for the aggregation interval</li> </ul>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The default is yes.
Include chart?	Set to yes to include a chart of data stream values in the report. The default is yes.

Description	How to Set It
Select chart style	Define the graphic properties of the charts in your report.
Select output folder	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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.  Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.  The default is no.
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

### 3.38 Report\_DatabaseDataSpace

Use this Knowledge Script to generate a report about the data space available in MB and the percentage of data space being used in SQL databases. This script lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour. Use the `Sysadmin` role account for SQL 7.0 or later.

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

#### Resource Objects

Report agent

#### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select the style	Select the style for the first page of the report: <ul style="list-style-type: none"><li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li><li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li><li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li><li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li></ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	Select the aggregation method for the data in your report: <ul style="list-style-type: none"><li>◆ Minute</li><li>◆ Hour</li><li>◆ Day</li></ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.
Statistics to show per period	Select a statistical method by which to display data in the report: <ul style="list-style-type: none"><li>◆ <b>Average</b>: The average value of data points for the aggregation interval. For example, the average value for 1 Hour</li><li>◆ <b>Minimum</b>: The minimum value of data points for the aggregation interval</li><li>◆ <b>Maximum</b>: The maximum value of data points for the aggregation interval</li><li>◆ <b>Count</b>: The number of data points for the aggregation interval</li><li>◆ <b>Sum</b>: The total value of data points for the aggregation interval</li><li>◆ <b>3Sigma</b>: The average + (3 * standard deviation) and average - (3 * standard deviation)</li><li>◆ <b>Std</b>: The standard deviation</li><li>◆ <b>Box</b>: Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li><li>◆ <b>Open</b>: The first value for the aggregation interval</li><li>◆ <b>Close</b>: the last value for the aggregation interval</li></ul>
<b>Report settings</b>	

<b>Description</b>	<b>How to Set It</b>
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.  Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.  The default is no.
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

### 3.39 Report\_DataSpaceAvailabilitySummary

Use this Knowledge Script to generate a report about the data space available in MB in SQL databases. This script allows you to develop a statistical summary of the data you select, for example, the average value of data points over the period you define for the report.

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

#### Resource Objects

Report agent

## Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Select the style	Select the style for the report: <ul style="list-style-type: none"><li>♦ <b>By computer</b> shows one value for each computer you selected.</li><li>♦ <b>By legend</b> shows one value for each different legend. The legend is a truncated form of the data stream legend visible in the Operator Console.</li><li>♦ <b>By computer and legend</b> shows one value for each unique legend from each computer.</li></ul>
<b>Data settings</b>	
Statistics to show	Select a statistical method by which to display data in the report: <ul style="list-style-type: none"><li>♦ <b>Average</b>: The average value of data points for the period covered by the report</li><li>♦ <b>Minimum</b>: The minimum value of data points for the period covered by the report</li><li>♦ <b>Maximum</b>: The maximum value of data points for the period covered by the report</li><li>♦ <b>Min/Avg/Max</b>: The minimum, average, and maximum values of data points for the period covered by the report</li><li>♦ <b>Range</b>: The range of values in the data stream (maximum - minimum = range)</li><li>♦ <b>Standard Deviation</b>: The measure of how widely values are dispersed from the mean</li><li>♦ <b>Sum</b>: The total value of data points for the period covered by the report</li><li>♦ <b>Close</b>: The last value for the period covered by the report</li><li>♦ <b>Change</b>: The difference between the first and last values for the period covered by the report (close - open = change)</li><li>♦ <b>Count</b>: The number of data points for the period covered by the report</li></ul>

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"> <li>◆ <b>No sort:</b> Data is not sorted</li> <li>◆ <b>Sort:</b> Data is sorted by value. Lowest to highest from front to back; highest to lowest from left to right.</li> <li>◆ <b>Top %:</b> Chart only the top <i>N</i>% of selected data (sorted by default)</li> <li>◆ <b>Top N:</b> Chart only the top <i>N</i> of selected data (sorted by default)</li> <li>◆ <b>Bottom %:</b> Chart only the bottom <i>N</i>% of data (sorted by default)</li> <li>◆ <b>Bottom N:</b> Chart only the bottom <i>N</i> of selected data (sorted by default)</li> </ul>
Percentage/count for top/bottom	Specify a number for either the percent or count defined in the previous parameter. For example, Top 10%, or Top 10. The 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. The default is no.
Show totals on the table?	If set to yes, then 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"> <li>◆ <b>Report Average:</b> An average of all values in a column</li> <li>◆ <b>Report Minimum:</b> The minimum value in a column</li> <li>◆ <b>Report Maximum:</b> The maximum value in a column</li> <li>◆ <b>Report Total:</b> The total of all values in a column</li> </ul> The default is no.
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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. <p>This is helpful to make the correlation between a specific instance of a Report Script and the corresponding report.</p> The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated. <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> The default is no.

Description	How to Set It
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.40 Report\_DataSpaceUtilizationSummary

Use this Knowledge Script to generate a report about the percentage of data space used in SQL databases. This script allows you to develop a statistical summary of the data you select, for example, the average value of data points over the period you define for the report.

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

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.



Description	How to Set It
Select the style	Select the style for the report: <ul style="list-style-type: none"> <li>◆ <b>By computer</b> shows one value for each computer you selected.</li> <li>◆ <b>By legend</b> shows one value for each different legend (the legend is a truncated form of the data stream legend visible in the Operator Console).</li> <li>◆ <b>By computer and legend</b> shows one value for each unique legend from each computer.</li> </ul>
<b>Data settings</b>	
Statistics to show	Select a statistical method by which to display data in the report: <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the period covered by the report</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the period covered by the report</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the period covered by the report</li> <li>◆ <b>Min/Avg/Max:</b> The minimum, average, and maximum values of data points for the period covered by the report</li> <li>◆ <b>Range:</b> The range of values in the data stream (maximum - minimum = range)</li> <li>◆ <b>Standard Deviation:</b> The measure of how widely values are dispersed from the mean</li> <li>◆ <b>Sum:</b> The total value of data points for the period covered by the report</li> <li>◆ <b>Close:</b> The last value for the period covered by the report</li> <li>◆ <b>Change:</b> The difference between the first and last values for the period covered by the report (close - open = change)</li> <li>◆ <b>Count:</b> The number of data points for the period covered by the report</li> </ul>
Select sorting/display option	Select whether data is sorted, or the method of display: <ul style="list-style-type: none"> <li>◆ <b>No sort:</b> Data is not sorted</li> <li>◆ <b>Sort:</b> Data is sorted by value. Lowest to highest from front to back; highest to lowest from left to right.</li> <li>◆ <b>Top %:</b> Chart only the top <i>N</i>% of selected data (sorted by default)</li> <li>◆ <b>Top N:</b> Chart only the top <i>N</i> of selected data (sorted by default)</li> <li>◆ <b>Bottom %:</b> Chart only the bottom <i>N</i>% of data (sorted by default)</li> <li>◆ <b>Bottom N:</b> Chart only the bottom <i>N</i> of selected data (sorted by default)</li> </ul>
Percentage/count for top/bottom	Specify a number for either the percent or count defined in the previous parameter. For example, Top 10%, or Top 10. The 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. The default is no.

Description	How to Set It
Show totals on the table?	<p>If set to yes, then additional calculations are made for each column of numbers in a table, and the following values are listed at the end of the table:</p> <ul style="list-style-type: none"> <li>◆ <b>Report Average:</b> An average of all values in a column</li> <li>◆ <b>Report Minimum:</b> The minimum value in a column</li> <li>◆ <b>Report Maximum:</b> The maximum value in a column</li> <li>◆ <b>Report Total:</b> The total of all values in a column</li> </ul> <p>The default is no.</p>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options for the output folder.
Add job ID to output folder name?	<p>Set to yes to append the job ID to the name of the output folder.</p> <p>This is helpful to make the correlation between a specific instance of a Report Script and the corresponding report.</p> <p>The default is no.</p>
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	<p>Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.</p> <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> <p>The default is no.</p>
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.41 Report\_DBSpaceAvailabilitySummary

Use this Knowledge Script to generate a report about the database space available in MB in SQL databases. This script allows you to develop a statistical summary of the data you select, for example, the average value of data points over the period you define for the report.

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

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Select the style	Select the style for the report: <ul style="list-style-type: none"><li>◆ <b>By computer</b> shows one value for each computer you selected.</li><li>◆ <b>By legend</b> shows one value for each different legend (the legend is a truncated form of the data stream legend visible in the Operator Console).</li><li>◆ <b>By computer and legend</b> shows one value for each unique legend from each computer.</li></ul>
<b>Data settings</b>	

Description	How to Set It
Statistics to show	<p>Select a statistical method by which to display data in the report:</p> <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the period covered by the report</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the period covered by the report</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the period covered by the report</li> <li>◆ <b>Min/Avg/Max:</b> The minimum, average, and maximum values of data points for the period covered by the report</li> <li>◆ <b>Range:</b> The range of values in the data stream (maximum - minimum = range)</li> <li>◆ <b>Standard Deviation:</b> The measure of how widely values are dispersed from the mean</li> <li>◆ <b>Sum:</b> The total value of data points for the period covered by the report</li> <li>◆ <b>Close:</b> The last value for the period covered by the report</li> <li>◆ <b>Change:</b> The difference between the first and last values for the period covered by the report (close - open = change)</li> <li>◆ <b>Count:</b> The number of data points for the period covered by the report</li> </ul>
Select sorting/display option	<p>Select whether data is sorted, or the method of display:</p> <ul style="list-style-type: none"> <li>◆ <b>No sort:</b> Data is not sorted</li> <li>◆ <b>Sort:</b> Data is sorted by value. Lowest to highest from front to back; highest to lowest from left to right.</li> <li>◆ <b>Top %:</b> Chart only the top <i>N</i>% of selected data (sorted by default)</li> <li>◆ <b>Top N:</b> Chart only the top <i>N</i> of selected data (sorted by default)</li> <li>◆ <b>Bottom %:</b> Chart only the bottom <i>N</i>% of data (sorted by default)</li> <li>◆ <b>Bottom N:</b> Chart only the bottom <i>N</i> of selected data (sorted by default)</li> </ul>
Percentage/count for top/bottom	<p>Specify a number for either the percent or count defined in the previous parameter. For example, Top 10%, or Top 10. The default is 25.</p>
Truncate top/bottom?	<p>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. The default is no.</p>
Show totals on the table?	<p>If set to yes, then additional calculations are made for each column of numbers in a table, and the following values are listed at the end of the table:</p> <ul style="list-style-type: none"> <li>◆ <b>Report Average:</b> An average of all values in a column</li> <li>◆ <b>Report Minimum:</b> The minimum value in a column</li> <li>◆ <b>Report Maximum:</b> The maximum value in a column</li> <li>◆ <b>Report Total:</b> The total of all values in a column</li> </ul> <p>The default is no.</p>
<b>Report settings</b>	
Include parameter help card?	<p>Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.</p>

<b>Description</b>	<b>How to Set It</b>
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.  Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.  The default is no.
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.42 Report\_DBSpaceAvailable

Use this Knowledge Script to generate a report about the database space available in MB and the percentage of database space used in SQL databases. This script lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

### Resource Objects

Report agent

## Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select the style	Select the style for the first page of the report: <ul style="list-style-type: none"><li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li><li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li><li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li><li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li></ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	Select the aggregation method for the data in your report: <ul style="list-style-type: none"><li>◆ Minute</li><li>◆ Hour</li><li>◆ Day</li></ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.

Description	How to Set It
Statistics to show per period	<p>Select a statistical method by which to display data in the report:</p> <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the aggregation interval</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the aggregation interval</li> <li>◆ <b>Count:</b> The number of data points for the aggregation interval</li> <li>◆ <b>Sum:</b> The total value of data points for the aggregation interval</li> <li>◆ <b>3Sigma:</b> The average + (3 * standard deviation) and average - (3 * standard deviation)</li> <li>◆ <b>Std:</b> The standard deviation</li> <li>◆ <b>Box:</b> Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li> <li>◆ <b>Open:</b> The first value for the aggregation interval</li> <li>◆ <b>Close:</b> the last value for the aggregation interval</li> </ul>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options for the output folder.
Add job ID to output folder name?	<p>Set to yes to append the job ID to the name of the output folder.</p> <p>This is helpful to make the correlation between a specific instance of a Report Script and the corresponding report.</p> <p>The default is no.</p>
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	<p>Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.</p> <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> <p>The default is no.</p>
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).

Description	How to Set It
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.43 Report\_DBSpaceUtilizationSummary

Use this Knowledge Script to generate a report about the percentage of database space used in SQL databases. This script allows you to develop a statistical summary of the data you select, for example, the average value of data points over the period you define for the report.

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

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Select the style	Select the style for the report: <ul style="list-style-type: none"> <li>◆ <b>By computer</b> shows one value for each computer you selected.</li> <li>◆ <b>By legend</b> shows one value for each different legend (the legend is a truncated form of the data stream legend visible in the Operator Console).</li> <li>◆ <b>By computer and legend</b> shows one value for each unique legend from each computer.</li> </ul>
<b>Data settings</b>	



Description	How to Set It
Statistics to show	<p>Select a statistical method by which to display data in the report:</p> <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the period covered by the report</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the period covered by the report</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the period covered by the report</li> <li>◆ <b>Min/Avg/Max:</b> The minimum, average, and maximum values of data points for the period covered by the report</li> <li>◆ <b>Range:</b> The range of values in the data stream (maximum - minimum = range)</li> <li>◆ <b>Standard Deviation:</b> The measure of how widely values are dispersed from the mean</li> <li>◆ <b>Sum:</b> The total value of data points for the period covered by the report</li> <li>◆ <b>Close:</b> The last value for the period covered by the report</li> <li>◆ <b>Change:</b> The difference between the first and last values for the period covered by the report (close - open = change)</li> <li>◆ <b>Count:</b> The number of data points for the period covered by the report</li> </ul>
Select sorting/display option	<p>Select whether data is sorted, or the method of display:</p> <ul style="list-style-type: none"> <li>◆ <b>No sort:</b> Data is not sorted</li> <li>◆ <b>Sort:</b> Data is sorted by value. Lowest to highest from front to back; highest to lowest from left to right.</li> <li>◆ <b>Top %:</b> Chart only the top <i>N</i>% of selected data (sorted by default)</li> <li>◆ <b>Top N:</b> Chart only the top <i>N</i> of selected data (sorted by default)</li> <li>◆ <b>Bottom %:</b> Chart only the bottom <i>N</i>% of data (sorted by default)</li> <li>◆ <b>Bottom N:</b> Chart only the bottom <i>N</i> of selected data (sorted by default)</li> </ul>
Percentage/count for top/bottom	<p>Specify a number for either the percent or count defined in the previous parameter. For example, Top 10%, or Top 10. The default is 25.</p>
Truncate top/bottom?	<p>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. The default is no.</p>
Show totals on the table?	<p>If set to yes, then additional calculations are made for each column of numbers in a table, and the following values are listed at the end of the table:</p> <ul style="list-style-type: none"> <li>◆ <b>Report Average:</b> An average of all values in a column</li> <li>◆ <b>Report Minimum:</b> The minimum value in a column</li> <li>◆ <b>Report Maximum:</b> The maximum value in a column</li> <li>◆ <b>Report Total:</b> The total of all values in a column</li> </ul> <p>The default is no.</p>
<b>Report settings</b>	
Include parameter help card?	<p>Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.</p>

<b>Description</b>	<b>How to Set It</b>
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.  Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.  The default is no.
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.44 Report\_ErrorLogSummary

Use this Knowledge Script to generate a report about entries in the Microsoft SQL Server error logs. This script allows you to develop a statistical summary of the data you select, for example, the average value of data points over the period you define for the report.

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

### Resource Objects

Report agent

## Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Select the style	Select the style for the report: <ul style="list-style-type: none"><li>♦ <b>By computer</b> shows one value for each computer you selected.</li><li>♦ <b>By legend</b> shows one value for each different legend (the legend is a truncated form of the data stream legend visible in the Operator Console).</li><li>♦ <b>By computer and legend</b> shows one value for each unique legend from each computer.</li></ul>
<b>Data settings</b>	
Statistics to show	Select a statistical method by which to display data in the report: <ul style="list-style-type: none"><li>♦ <b>Average</b>: The average value of data points for the period covered by the report</li><li>♦ <b>Minimum</b>: The minimum value of data points for the period covered by the report</li><li>♦ <b>Maximum</b>: The maximum value of data points for the period covered by the report</li><li>♦ <b>Min/Avg/Max</b>: The minimum, average, and maximum values of data points for the period covered by the report</li><li>♦ <b>Range</b>: The range of values in the data stream (maximum - minimum = range)</li><li>♦ <b>Standard Deviation</b>: The measure of how widely values are dispersed from the mean</li><li>♦ <b>Sum</b>: The total value of data points for the period covered by the report</li><li>♦ <b>Close</b>: The last value for the period covered by the report</li><li>♦ <b>Change</b>: The difference between the first and last values for the period covered by the report (close - open = change)</li><li>♦ <b>Count</b>: The number of data points for the period covered by the report</li></ul>

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"> <li>◆ <b>No sort:</b> Data is not sorted</li> <li>◆ <b>Sort:</b> Data is sorted by value (lowest to highest from front to back; highest to lowest from left to right)</li> <li>◆ <b>Top %:</b> Chart only the top <i>N</i>% of selected data (sorted by default)</li> <li>◆ <b>Top N:</b> Chart only the top <i>N</i> of selected data (sorted by default)</li> <li>◆ <b>Bottom %:</b> Chart only the bottom <i>N</i>% of data (sorted by default)</li> <li>◆ <b>Bottom N:</b> Chart only the bottom <i>N</i> of selected data (sorted by default)</li> </ul>
Percentage/count for top/bottom	Specify a number for either the percent or count defined in the previous parameter. For example, Top 10%, or Top 10. The 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. The default is no.
Show totals on the table?	If set to yes, then 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"> <li>◆ <b>Report Average:</b> An average of all values in a column</li> <li>◆ <b>Report Minimum:</b> The minimum value in a column</li> <li>◆ <b>Report Maximum:</b> The maximum value in a column</li> <li>◆ <b>Report Total:</b> The total of all values in a column</li> </ul> The default is no.
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report. The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated. Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output. The default is no.

Description	How to Set It
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.45 Report\_NearMaxConnect

Use this Knowledge Script to generate a report about the number of open connections to Microsoft SQL Servers versus the number of allowable connections. This script lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.

Description	How to Set It
Select the style	<p>Select the style for the first page of the report:</p> <ul style="list-style-type: none"> <li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li> <li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li> <li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li> <li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li> </ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	<p>Select the aggregation method for the data in your report:</p> <ul style="list-style-type: none"> <li>◆ Minute</li> <li>◆ Hour</li> <li>◆ Day</li> </ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.
Statistics to show per period	<p>Select a statistical method by which to display data in the report:</p> <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the aggregation interval</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the aggregation interval</li> <li>◆ <b>Count:</b> The number of data points for the aggregation interval</li> <li>◆ <b>Sum:</b> The total value of data points for the aggregation interval</li> <li>◆ <b>3Sigma:</b> The average + (3 * standard deviation) and average - (3 * standard deviation)</li> <li>◆ <b>Std:</b> The standard deviation</li> <li>◆ <b>Box:</b> Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li> <li>◆ <b>Open:</b> The first value for the aggregation interval</li> <li>◆ <b>Close:</b> the last value for the aggregation interval</li> </ul>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The default is yes.
Include chart?	Set to yes to include a chart of data stream values in the report. The default is yes.

Description	How to Set It
Select chart style	Define the graphic properties of the charts in your report.
Select output folder	Set options for the output folder.
Add job ID to output folder name?	<p>Set to yes to append the job ID to the name of the output folder.</p> <p>This is helpful to make the correlation between a specific instance of a Report Script and the corresponding report.</p> <p>The default is no.</p>
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	<p>Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.</p> <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> <p>The default is no.</p>
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.46 Report\_NearMaxLocks

Use this Knowledge Script to generate a report about the number of used locks to Microsoft SQL Servers versus the number of allowable locks. This script lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select the style	Select the style for the first page of the report: <ul style="list-style-type: none"><li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li><li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li><li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li><li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li></ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	Select the aggregation method for the data in your report: <ul style="list-style-type: none"><li>◆ Minute</li><li>◆ Hour</li><li>◆ Day</li></ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.
Statistics to show per period	Select a statistical method by which to display data in the report: <ul style="list-style-type: none"><li>◆ <b>Average:</b> The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li><li>◆ <b>Minimum:</b> The minimum value of data points for the aggregation interval</li><li>◆ <b>Maximum:</b> The maximum value of data points for the aggregation interval</li><li>◆ <b>Count:</b> The number of data points for the aggregation interval</li><li>◆ <b>Sum:</b> The total value of data points for the aggregation interval</li><li>◆ <b>3Sigma:</b> The average + (3 * standard deviation) and average - (3 * standard deviation)</li><li>◆ <b>Std:</b> The standard deviation</li><li>◆ <b>Box:</b> Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li><li>◆ <b>Open:</b> The first value for the aggregation interval</li><li>◆ <b>Close:</b> the last value for the aggregation interval</li></ul>
<b>Report settings</b>	



<b>Description</b>	<b>How to Set It</b>
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.  Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.  The default is no.
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.47 Report\_NetError

Use this Knowledge Script to generate a report about the number of packet errors. This script lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

### Resource Objects

Report agent

## Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Click Browse to select the computers for your report.
Select the style	Select the style for the first page of the report: <ul style="list-style-type: none"><li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li><li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li><li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li><li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li></ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	Select the aggregation method for the data in your report: <ul style="list-style-type: none"><li>◆ Minute</li><li>◆ Hour</li><li>◆ Day</li></ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.

Description	How to Set It
Statistics to show per period	<p>Select a statistical method by which to display data in the report:</p> <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the aggregation interval</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the aggregation interval</li> <li>◆ <b>Count:</b> The number of data points for the aggregation interval</li> <li>◆ <b>Sum:</b> The total value of data points for the aggregation interval</li> <li>◆ <b>3Sigma:</b> The average + (3 * standard deviation) and average - (3 * standard deviation)</li> <li>◆ <b>Std:</b> The standard deviation</li> <li>◆ <b>Box:</b> Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li> <li>◆ <b>Open:</b> The first value for the aggregation interval</li> <li>◆ <b>Close:</b> the last value for the aggregation interval</li> </ul>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options for the output folder.
Add job ID to output folder name?	<p>Set to yes to append the job ID to the name of the output folder.</p> <p>This is helpful to make the correlation between a specific instance of a Report Script and the corresponding report.</p> <p>The default is no.</p>
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	<p>Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.</p> <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> <p>The default is no.</p>
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).

Description	How to Set It
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.48 Report\_Replication

Use this Knowledge Script to generate a report about replication latency on your Microsoft SQL Servers, the number of transactions in the transaction log marked for replication, the number of transactions replicated per second by Microsoft SQL Servers, and replication agent details. This script lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Replication Type</b>	Set to yes to create a Replication Type report. By default, report creation is disabled.
Replication Latency report	Set to yes to create a Replication Latency report. By default, report creation is disabled.
Transaction Replicated Per Second Report	Set to yes to create a Transaction Replicated Per Second report. By default, report creation is disabled.
To Be Replicated Transaction Report	Set to yes to create a To Be Replicated Transaction report. By default, report creation is disabled.
Agent Running Report	Set to yes to create an Agent Running report. By default, report creation is disabled.
<b>Data source</b>	
Select computer(s)	Select the computers for your report.

Description	How to Set It
Select the style	<p>Select the style for the first page of the report:</p> <ul style="list-style-type: none"> <li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li> <li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li> <li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li> <li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li> </ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	<p>Select the aggregation method for the data in your report:</p> <ul style="list-style-type: none"> <li>◆ Minute</li> <li>◆ Hour</li> <li>◆ Day</li> </ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.
Statistics to show per period	<p>Select a statistical method by which to display data in the report:</p> <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the aggregation interval</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the aggregation interval</li> <li>◆ <b>Count:</b> The number of data points for the aggregation interval</li> <li>◆ <b>Sum:</b> The total value of data points for the aggregation interval</li> <li>◆ <b>3Sigma:</b> The average + (3 * standard deviation) and average - (3 * standard deviation)</li> <li>◆ <b>Std:</b> The standard deviation</li> <li>◆ <b>Box:</b> Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li> <li>◆ <b>Open:</b> The first value for the aggregation interval</li> <li>◆ <b>Close:</b> the last value for the aggregation interval</li> </ul>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes
Include table?	Set to yes to include a table of data stream values in the report. The default is yes.
Include chart?	Set to yes to include a chart of data stream values in the report. The default is yes.

Description	How to Set It
Select chart style	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 helps make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as desired.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.  Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.  The default is no.
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.49 Report\_ReplicationLatency

Use this Knowledge Script to generate a report about replication latency on your Microsoft SQL Servers. This report lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select the style	Select the style for the first page of the report: <ul style="list-style-type: none"><li>♦ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li><li>♦ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li><li>♦ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li><li>♦ <b>All data streams on one page</b> generates a report with all data on a single page</li></ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	Select the aggregation method for the data in your report: <ul style="list-style-type: none"><li>♦ Minute</li><li>♦ Hour</li><li>♦ Day</li></ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.
Statistics to show per period	Select a statistical method by which to display data in the report: <ul style="list-style-type: none"><li>♦ <b>Average</b>: The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li><li>♦ <b>Minimum</b>: The minimum value of data points for the aggregation interval</li><li>♦ <b>Maximum</b>: The maximum value of data points for the aggregation interval</li><li>♦ <b>Count</b>: The number of data points for the aggregation interval</li><li>♦ <b>Sum</b>: The total value of data points for the aggregation interval</li><li>♦ <b>3Sigma</b>: The average + (3 * standard deviation) and average - (3 * standard deviation)</li><li>♦ <b>Std</b>: The standard deviation</li><li>♦ <b>Box</b>: Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li><li>♦ <b>Open</b>: The first value for the aggregation interval</li><li>♦ <b>Close</b>: the last value for the aggregation interval</li></ul>
<b>Report settings</b>	

Description	How to Set It
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.  Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.  The default is no.
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.50 Report\_SpaceAvailability

Use this Knowledge Script to generate a report about the data space and database space available in MB, and the percentage of data space and database space used in SQL databases.

This script consolidates functionality also available from two separate SQL Knowledge Scripts: [Report\\_DatabaseDataSpace](#) and [Report\\_DBSpaceAvailable](#). Changes made to the individual scripts do not affect the functionality of this consolidated script.

### Resource Objects

Report agent



## Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Database Report</b>	
Database Data Space Report	Set to yes to generate the Database Data Space report. The default is no.
DB Space Availability Report	Set to yes to generate the DB Space Availability report. The default is no.
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select the style	Select the style for the first page of the report: <ul style="list-style-type: none"><li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li><li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li><li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li><li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li></ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	Select the aggregation method for the data in your report: <ul style="list-style-type: none"><li>◆ Minute</li><li>◆ Hour</li><li>◆ Day</li></ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.

Description	How to Set It
Statistics to show per period	<p>Select a statistical method by which to display data in the report:</p> <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the aggregation interval</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the aggregation interval</li> <li>◆ <b>Count:</b> The number of data points for the aggregation interval</li> <li>◆ <b>Sum:</b> The total value of data points for the aggregation interval</li> <li>◆ <b>3Sigma:</b> The average + (3 * standard deviation) and average - (3 * standard deviation)</li> <li>◆ <b>Std:</b> The standard deviation</li> <li>◆ <b>Box:</b> Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li> <li>◆ <b>Open:</b> The first value for the aggregation interval</li> <li>◆ <b>Close:</b> the last value for the aggregation interval</li> </ul>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options for the output folder.
Add job ID to output folder name?	<p>Set to yes to append the job ID to the name of the output folder.</p> <p>This is helpful to make the correlation between a specific instance of a Report Script and the corresponding report.</p> <p>The default is no.</p>
Select database data space properties	Set miscellaneous report properties as needed.
Add time stamp to title?	<p>Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.</p> <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> <p>The default is no.</p>
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.

Description	How to Set It
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.51 Report\_SpaceAvailabilitySummary

Use this Knowledge Script to generate a summary report about the data space and database space available in MB in SQL databases.

This script consolidates functionality also available from two separate Knowledge Scripts: [Report\\_DataSpaceAvailabilitySummary](#) and [Report\\_DBSpaceAvailabilitySummary](#). Changes to the individual scripts do not affect the functionality of this consolidated script.

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. You should run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Database Report</b>	
Data Space Availability Summary Report	Set to yes if you want to generate the Data Space Availability Summary report. The default is no.
DB Space Availability Summary Report	Set to yes if you want to generate the DB Space Availability Summary report. The default is no.
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.

Description	How to Set It
Select the style	Select the style for the report: <ul style="list-style-type: none"> <li>◆ <b>By computer</b> shows one value for each computer you select</li> <li>◆ <b>By legend</b> shows one value for each different legend (the legend is a truncated form of the data stream legend visible in the Operator Console)</li> <li>◆ <b>By computer and legend</b> shows one value for each unique legend from each computer</li> </ul>
<b>Data settings</b>	
Statistics to show	Select a statistical method by which to display data in the report: <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the period covered by the report</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the period covered by the report</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the period covered by the report</li> <li>◆ <b>Min/Avg/Max:</b> The minimum, average, and maximum values of data points for the period covered by the report</li> <li>◆ <b>Range:</b> The range of values in the data stream (maximum - minimum = range)</li> <li>◆ <b>Standard Deviation:</b> The measure of how widely values are dispersed from the mean</li> <li>◆ <b>Sum:</b> The total value of data points for the period covered by the report</li> <li>◆ <b>Close:</b> The last value for the period covered by the report</li> <li>◆ <b>Change:</b> The difference between the first and last values for the period covered by the report (close - open = change)</li> <li>◆ <b>Count:</b> The number of data points for the period covered by the report</li> </ul>
Select sorting/display option	Select the sorting order for data, or the method of display: <ul style="list-style-type: none"> <li>◆ <b>No sort:</b> Data is not sorted</li> <li>◆ <b>Sort:</b> Data is sorted by value. Lowest to highest from front to back; highest to lowest from left to right.</li> <li>◆ <b>Top %:</b> Chart only the top <i>N</i>% of selected data (sorted by default)</li> <li>◆ <b>Top N:</b> Chart only the top <i>N</i> of selected data (sorted by default)</li> <li>◆ <b>Bottom %:</b> Chart only the bottom <i>N</i>% of data (sorted by default)</li> <li>◆ <b>Bottom N:</b> Chart only the bottom <i>N</i> of selected data (sorted by default)</li> </ul>
Percentage/count for top/bottom	Specify a number for either the percent or count defined in the previous parameter. For example, Top 10%, or Top 10. The 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. The default is no.

Description	How to Set It
Show totals on the table?	<p>If set to yes, then additional calculations are made for each column of numbers in a table, and the following values are listed at the end of the table:</p> <ul style="list-style-type: none"> <li>◆ <b>Report Average:</b> An average of all values in a column</li> <li>◆ <b>Report Minimum:</b> The minimum value in a column</li> <li>◆ <b>Report Maximum:</b> The maximum value in a column</li> <li>◆ <b>Report Total:</b> The total of all values in a column</li> </ul> <p>The default is no.</p>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options for the output folder.
Add job ID to output folder name?	<p>Set to yes to append the job ID to the name of the output folder.</p> <p>This helps make the correlation between a specific instance of a Report Script and the corresponding report.</p> <p>The default is no.</p>
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	<p>Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.</p> <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> <p>The default is no.</p>
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.52 Report\_SpaceUtilizationSummary

Use this Knowledge Script to generate a summary report about the percentage of data space and database space used in SQL databases.

This script consolidates functionality also available from two separate SQL Knowledge Scripts: [Report\\_DataSpaceUtilizationSummary](#) and [Report\\_DBSpaceUtilizationSummary](#). Changes made to the individual scripts do not affect the functionality of this consolidated script.

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Database Report</b>	
Data Space Utilization Summary Report	Set to yes to generate the Data Space Utilization Summary report. The default is no.
DB Space Utilization Summary Report	Set to yes to generate the DB Space Utilization Summary report. The default is no.
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Select the style	Select the style for the report: <ul style="list-style-type: none"><li>♦ <b>By computer</b> shows one value for each computer you select</li><li>♦ <b>By legend</b> shows one value for each different legend (the legend is a truncated form of the data stream legend visible in the Operator Console)</li><li>♦ <b>By computer and legend</b> shows one value for each unique legend from each computer</li></ul>
<b>Data settings</b>	

Description	How to Set It
Statistics to show	<p>Select a statistical method by which to display data in the report:</p> <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the period covered by the report</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the period covered by the report</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the period covered by the report</li> <li>◆ <b>Min/Avg/Max:</b> The minimum, average, and maximum values of data points for the period covered by the report</li> <li>◆ <b>Range:</b> The range of values in the data stream (maximum - minimum = range)</li> <li>◆ <b>Standard Deviation:</b> The measure of how widely values are dispersed from the mean</li> <li>◆ <b>Sum:</b> The total value of data points for the period covered by the report</li> <li>◆ <b>Close:</b> The last value for the period covered by the report</li> <li>◆ <b>Change:</b> The difference between the first and last values for the period covered by the report (close - open = change)</li> <li>◆ <b>Count:</b> The number of data points for the period covered by the report</li> </ul>
Select sorting/display option	<p>Select the sorting order for data, or the method of display:</p> <ul style="list-style-type: none"> <li>◆ <b>No sort:</b> Data is not sorted</li> <li>◆ <b>Sort:</b> Data is sorted by value. Lowest to highest from front to back; highest to lowest from left to right.</li> <li>◆ <b>Top %:</b> Chart only the top <i>N</i>% of selected data (sorted by default)</li> <li>◆ <b>Top N:</b> Chart only the top <i>N</i> of selected data (sorted by default)</li> <li>◆ <b>Bottom %:</b> Chart only the bottom <i>N</i>% of data (sorted by default)</li> <li>◆ <b>Bottom N:</b> Chart only the bottom <i>N</i> of selected data (sorted by default)</li> </ul>
Percentage/count for top/bottom	<p>Specify a number for either the percent or count defined in the previous parameter. For example, Top 10%, or Top 10. The default is 25.</p>
Truncate top/bottom?	<p>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. The default is no.</p>
Show totals on the table?	<p>If set to yes, then additional calculations are made for each column of numbers in a table, and the following values are listed at the end of the table:</p> <ul style="list-style-type: none"> <li>◆ <b>Report Average:</b> An average of all values in a column</li> <li>◆ <b>Report Minimum:</b> The minimum value in a column</li> <li>◆ <b>Report Maximum:</b> The maximum value in a column</li> <li>◆ <b>Report Total:</b> The total of all values in a column</li> </ul> <p>The default is no.</p>
<b>Report settings</b>	
Include parameter help card?	<p>Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.</p>

<b>Description</b>	<b>How to Set It</b>
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.  Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.  The default is no.
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

### 3.53 Report\_To-Be-ReplicatedTransactions

Use this Knowledge Script to generate a report about the number of transactions in the transaction log of the publication database that are marked for replication but not yet replicated. This report lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

#### Resource Objects

Report agent



## Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select the style	Select the style for the first page of the report: <ul style="list-style-type: none"><li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li><li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li><li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li><li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li></ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	Select the aggregation method for the data in your report: <ul style="list-style-type: none"><li>◆ Minute</li><li>◆ Hour</li><li>◆ Day</li></ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.

Description	How to Set It
Statistics to show per period	<p>Select a statistical method by which to display data in the report:</p> <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the aggregation interval</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the aggregation interval</li> <li>◆ <b>Count:</b> The number of data points for the aggregation interval</li> <li>◆ <b>Sum:</b> The total value of data points for the aggregation interval</li> <li>◆ <b>3Sigma:</b> The average + (3 * standard deviation) and average - (3 * standard deviation)</li> <li>◆ <b>Std:</b> The standard deviation</li> <li>◆ <b>Box:</b> Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li> <li>◆ <b>Open:</b> The first value for the aggregation interval</li> <li>◆ <b>Close:</b> the last value for the aggregation interval</li> </ul>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options for the output folder.
Add job ID to output folder name?	<p>Set to yes to append the job ID to the name of the output folder.</p> <p>This is helpful to make the correlation between a specific instance of a Report Script and the corresponding report.</p> <p>The default is no.</p>
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	<p>Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.</p> <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> <p>The default is no.</p>
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).

Description	How to Set It
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.54 Report\_TopCPUUsers

Use this Knowledge Script to generate a report about the total CPU time (in milliseconds) used by SQL users and their connections. This script lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select the style	Select the style for the first page of the report: <ul style="list-style-type: none"> <li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li> <li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li> <li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li> <li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li> </ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.

Description	How to Set It
Aggregation by	Select the aggregation method for the data in your report: <ul style="list-style-type: none"> <li>◆ Minute</li> <li>◆ Hour</li> <li>◆ Day</li> </ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.
Statistics to show per period	Select a statistical method by which to display data in the report: <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the aggregation interval</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the aggregation interval</li> <li>◆ <b>Count:</b> The number of data points for the aggregation interval</li> <li>◆ <b>Sum:</b> The total value of data points for the aggregation interval</li> <li>◆ <b>3Sigma:</b> The average + (3 * standard deviation) and average - (3 * standard deviation)</li> <li>◆ <b>Std:</b> The standard deviation</li> <li>◆ <b>Box:</b> Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li> <li>◆ <b>Open:</b> The first value for the aggregation interval</li> <li>◆ <b>Close:</b> the last value for the aggregation interval</li> </ul>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.

Description	How to Set It
Add time stamp to title?	<p>Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.</p> <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> <p>The default is no.</p>
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.55 Report\_TopCPUUsersDetail

Use this Knowledge Script to generate a detailed report about each data point collected by the [TopCPUUsers](#) script during the time range you specify. Details include:

- ◆ Computer name
- ◆ Data stream name
- ◆ Time at which the data point was collected
- ◆ The user name
- ◆ The number of milliseconds of CPU time for that user

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	

<b>Description</b>	<b>How to Set It</b>
Select computer(s)	Select the computers for your report.
Select time range	Set a specific or sliding time range for data included in your report.
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.  Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.  The default is no.
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.56 Report\_TopIOUsers

Use this Knowledge Script to generate a report about the number of I/O read and write operations by SQL users and their connections. This script lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

## Resource Objects

Report agent

## Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select the style	Select the style for the first page of the report: <ul style="list-style-type: none"><li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li><li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li><li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li><li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li></ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	Select the aggregation method for the data in your report: <ul style="list-style-type: none"><li>◆ Minute</li><li>◆ Hour</li><li>◆ Day</li></ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.

Description	How to Set It
Statistics to show per period	<p>Select a statistical method by which to display data in the report:</p> <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the aggregation interval</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the aggregation interval</li> <li>◆ <b>Count:</b> The number of data points for the aggregation interval</li> <li>◆ <b>Sum:</b> The total value of data points for the aggregation interval</li> <li>◆ <b>3Sigma:</b> The average + (3 * standard deviation) and average - (3 * standard deviation)</li> <li>◆ <b>Std:</b> The standard deviation</li> <li>◆ <b>Box:</b> Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li> <li>◆ <b>Open:</b> The first value for the aggregation interval</li> <li>◆ <b>Close:</b> the last value for the aggregation interval</li> </ul>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options for the output folder.
Add job ID to output folder name?	<p>Set to yes to append the job ID to the name of the output folder.</p> <p>This is helpful to make the correlation between a specific instance of a Report Script and the corresponding report.</p> <p>The default is no.</p>
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	<p>Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.</p> <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> <p>The default is no.</p>
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).



Description	How to Set It
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.57 Report\_TopIOUsersDetail

Use this Knowledge Script to generate a detailed report about each data point collected by the [TopIOUsers](#) script during the time range you specify. Details include:

- ◆ Computer name
- ◆ Data stream name
- ◆ Time at which the data point was collected
- ◆ The user name
- ◆ The cumulative number of I/O operations for that user

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select time range	Set a specific or sliding time range for data included in your report.
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.

Description	How to Set It
Select output folder	Set options for the output folder.
Add job ID to output folder name?	<p>Set to yes to append the job ID to the name of the output folder.</p> <p>This is helpful to make the correlation between a specific instance of a Report Script and the corresponding report.</p> <p>The default is no.</p>
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	<p>Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.</p> <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> <p>The default is no.</p>
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.58 Report\_TopLockUsers

Use this Knowledge Script to generate a report about the number of locks held by SQL users and their connections. This script lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select the style	Select the style for the first page of the report: <ul style="list-style-type: none"><li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li><li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li><li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li><li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li></ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	Select the aggregation method for the data in your report: <ul style="list-style-type: none"><li>◆ Minute</li><li>◆ Hour</li><li>◆ Day</li></ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.
Statistics to show per period	Select a statistical method by which to display data in the report: <ul style="list-style-type: none"><li>◆ <b>Average</b>: The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li><li>◆ <b>Minimum</b>: The minimum value of data points for the aggregation interval</li><li>◆ <b>Maximum</b>: The maximum value of data points for the aggregation interval</li><li>◆ <b>Count</b>: The number of data points for the aggregation interval</li><li>◆ <b>Sum</b>: The total value of data points for the aggregation interval</li><li>◆ <b>3Sigma</b>: The average + (3 * standard deviation) and average - (3 * standard deviation)</li><li>◆ <b>Std</b>: The standard deviation</li><li>◆ <b>Box</b>: Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li><li>◆ <b>Open</b>: The first value for the aggregation interval</li><li>◆ <b>Close</b>: the last value for the aggregation interval</li></ul>
<b>Report settings</b>	

<b>Description</b>	<b>How to Set It</b>
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.  Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.  The default is no.
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.59 Report\_TopLockUsersDetail

Use this Knowledge Script to generate a detailed report about each data point collected by the [TopLockUsers](#) script during the time range you specify. Details include:

- ◆ Computer name
- ◆ Data stream name
- ◆ Time at which the data point was collected
- ◆ The user name
- ◆ The number of locks held by that user

## Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select time range	Set a specific or sliding time range for data included in your report.
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.  Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.  The default is no.
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).

Description	How to Set It
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.60 Report\_TopMemoryUsers

Use this Knowledge Script to generate a report about the memory (by number of 8-KB pages) that can be allocated to SQL users and their connections. This report lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select the style	Select the style for the first page of the report: <ul style="list-style-type: none"> <li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li> <li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li> <li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li> <li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li> </ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.

Description	How to Set It
Aggregation by	Select the aggregation method for the data in your report: <ul style="list-style-type: none"> <li>◆ Minute</li> <li>◆ Hour</li> <li>◆ Day</li> </ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.
Statistics to show per period	Select a statistical method by which to display data in the report: <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the aggregation interval</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the aggregation interval</li> <li>◆ <b>Count:</b> The number of data points for the aggregation interval</li> <li>◆ <b>Sum:</b> The total value of data points for the aggregation interval</li> <li>◆ <b>3Sigma:</b> The average + (3 * standard deviation) and average - (3 * standard deviation)</li> <li>◆ <b>Std:</b> The standard deviation</li> <li>◆ <b>Box:</b> Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li> <li>◆ <b>Open:</b> The first value for the aggregation interval</li> <li>◆ <b>Close:</b> the last value for the aggregation interval</li> </ul>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.

Description	How to Set It
Add time stamp to title?	<p>Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.</p> <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> <p>The default is no.</p>
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.61 Report\_TopMemoryUsersDetail

Use this Knowledge Script to generate a detailed report about each data point collected by the [TopMemoryUsers](#) script during the time range you specify. Details include:

- ◆ Computer name
- ◆ Data stream name
- ◆ Time at which the data point was collected
- ◆ The user name
- ◆ The number of memory pages allocated to that user

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	



<b>Description</b>	<b>How to Set It</b>
Select computer(s)	Select the computers for your report.
Select time range	Set a specific or sliding time range for data included in your report.
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options for the output folder.
Add job ID to output folder name?	<p>Set to yes to append the job ID to the name of the output folder.</p> <p>This is helpful to make the correlation between a specific instance of a Report Script and the corresponding report.</p> <p>The default is no.</p>
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	<p>Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.</p> <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> <p>The default is no.</p>
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.62 Report\_TopResourceUsers

Use this Knowledge Script to generate a report on the total CPU time (in milliseconds) used by SQL users and their connections, the number of I/O read and write operations by SQL users and their connections, number of locks held by SQL users and their connections, and the memory (by number of 8-KB pages) that can be allocated to SQL users and their connections.

This script consolidates functionality also available from four separate Knowledge Scripts: [Report\\_TopCPUUsers](#), [Report\\_TopIOUsers](#), [Report\\_TopLockUsers](#) and [Report\\_TopMemoryUsers](#). Changes to the individual scripts do not affect the functionality of this consolidated script.

This script lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select the style	Select the style for the first page of the report: <ul style="list-style-type: none"><li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li><li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li><li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li><li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li></ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.

Description	How to Set It
Aggregation by	Select the aggregation method for the data in your report: <ul style="list-style-type: none"> <li>◆ Minute</li> <li>◆ Hour</li> <li>◆ Day</li> </ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.
Statistics to show per period	Select a statistical method to display data in the report: <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the aggregation interval</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the aggregation interval</li> <li>◆ <b>Count:</b> The number of data points for the aggregation interval</li> <li>◆ <b>Sum:</b> The total value of data points for the aggregation interval</li> <li>◆ <b>3Sigma:</b> The average + (3 * standard deviation) and average - (3 * standard deviation)</li> <li>◆ <b>Std:</b> The standard deviation</li> <li>◆ <b>Box:</b> Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li> <li>◆ <b>Open:</b> The first value for the aggregation interval</li> <li>◆ <b>Close:</b> the last value for the aggregation interval</li> </ul>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	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 helps make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.

Description	How to Set It
Add time stamp to title?	<p>Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.</p> <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> <p>The default is no.</p>
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

### 3.63 Report\_TransactionsReplicatedPerSec

Use this Knowledge Script to generate a report about the number of transactions replicated per second by Microsoft SQL Servers. This script lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

#### Resource Objects

Report agent

#### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

#### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.

Description	How to Set It
Select the style	Select the style for the first page of the report: <ul style="list-style-type: none"> <li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li> <li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li> <li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li> <li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li> </ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	Select the aggregation method for the data in your report: <ul style="list-style-type: none"> <li>◆ Minute</li> <li>◆ Hour</li> <li>◆ Day</li> </ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.
Statistics to show per period	Select a statistical method by which to display data in the report: <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the aggregation interval</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the aggregation interval</li> <li>◆ <b>Count:</b> The number of data points for the aggregation interval</li> <li>◆ <b>Sum:</b> The total value of data points for the aggregation interval</li> <li>◆ <b>3Sigma:</b> The average + (3 * standard deviation) and average - (3 * standard deviation)</li> <li>◆ <b>Std:</b> The standard deviation</li> <li>◆ <b>Box:</b> Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li> <li>◆ <b>Open:</b> The first value for the aggregation interval</li> <li>◆ <b>Close:</b> the last value for the aggregation interval</li> </ul>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The default is yes.
Include chart?	Set to yes to include a chart of data stream values in the report. The default is yes.

Description	How to Set It
Select chart style	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.  Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.  The default is no.
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.64 Report\_UserConnections

Use this Knowledge Script to generate a report about the number of Microsoft SQL Server user connections. This script lets you aggregate data by period (minute, hour, or day) and calculate statistics for each period. For example, the average value per hour.

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

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select the style	Select the style for the first page of the report: <ul style="list-style-type: none"><li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li><li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li><li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li><li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li></ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	Select the aggregation method for the data in your report: <ul style="list-style-type: none"><li>◆ Minute</li><li>◆ Hour</li><li>◆ Day</li></ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.
Statistics to show per period	Select a statistical method by which to display data in the report: <ul style="list-style-type: none"><li>◆ <b>Average</b>: The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li><li>◆ <b>Minimum</b>: The minimum value of data points for the aggregation interval</li><li>◆ <b>Maximum</b>: The maximum value of data points for the aggregation interval</li><li>◆ <b>Count</b>: The number of data points for the aggregation interval</li><li>◆ <b>Sum</b>: The total value of data points for the aggregation interval</li><li>◆ <b>3Sigma</b>: The average + (3 * standard deviation) and average - (3 * standard deviation)</li><li>◆ <b>Std</b>: The standard deviation</li><li>◆ <b>Box</b>: Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li><li>◆ <b>Open</b>: The first value for the aggregation interval</li><li>◆ <b>Close</b>: the last value for the aggregation interval</li></ul>
<b>Report settings</b>	

<b>Description</b>	<b>How to Set It</b>
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.  Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.  The default is no.
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.65 Report\_UserConnectionsSummary

Use this Knowledge Script to generate a report about the number of Microsoft SQL Server user connections. This script allows you to develop a statistical summary of the data you select, for example, the average value of data points over the period you define for the report.

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

### Resource Objects

Report agent



## Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Select the style	Select the style for the report: <ul style="list-style-type: none"><li>♦ <b>By computer</b> shows one value for each computer you selected.</li><li>♦ <b>By legend</b> shows one value for each different legend (the legend is a truncated form of the data stream legend visible in the Operator Console).</li><li>♦ <b>By computer and legend</b> shows one value for each unique legend from each computer.</li></ul>
<b>Data settings</b>	
Statistics to show	Select a statistical method by which to display data in the report: <ul style="list-style-type: none"><li>♦ <b>Average</b>: The average value of data points for the period covered by the report</li><li>♦ <b>Minimum</b>: The minimum value of data points for the period covered by the report</li><li>♦ <b>Maximum</b>: The maximum value of data points for the period covered by the report</li><li>♦ <b>Min/Avg/Max</b>: The minimum, average, and maximum values of data points for the period covered by the report</li><li>♦ <b>Range</b>: The range of values in the data stream (maximum - minimum = range)</li><li>♦ <b>Standard Deviation</b>: The measure of how widely values are dispersed from the mean</li><li>♦ <b>Sum</b>: The total value of data points for the period covered by the report</li><li>♦ <b>Close</b>: The last value for the period covered by the report</li><li>♦ <b>Change</b>: The difference between the first and last values for the period covered by the report (close - open = change)</li><li>♦ <b>Count</b>: The number of data points for the period covered by the report</li></ul>

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"> <li>◆ <b>No sort:</b> Data is not sorted</li> <li>◆ <b>Sort:</b> Data is sorted by value. Lowest to highest from front to back; highest to lowest from left to right.</li> <li>◆ <b>Top %:</b> Chart only the top <i>N</i>% of selected data (sorted by default)</li> <li>◆ <b>Top N:</b> Chart only the top <i>N</i> of selected data (sorted by default)</li> <li>◆ <b>Bottom %:</b> Chart only the bottom <i>N</i>% of data (sorted by default)</li> <li>◆ <b>Bottom N:</b> Chart only the bottom <i>N</i> of selected data (sorted by default)</li> </ul>
Percentage/count for top/bottom	Specify a number for either the percent or count defined in the previous parameter. For example, Top 10%, or Top 10. The 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. The default is no.
Show totals on the table?	If set to yes, then 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"> <li>◆ <b>Report Average:</b> An average of all values in a column</li> <li>◆ <b>Report Minimum:</b> The minimum value in a column</li> <li>◆ <b>Report Maximum:</b> The maximum value in a column</li> <li>◆ <b>Report Total:</b> The total of all values in a column</li> </ul> The default is no.
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The 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	Define the graphic properties of the charts in your report.
Select output folder	Set options 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. <p>This is helpful to make the correlation between a specific instance of a Report Script and the corresponding report.</p> The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated. <p>Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.</p> The default is no.

Description	How to Set It
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.66 Report\_UserMaxConnections

Use this Knowledge Script to generate a report on the number of open connections to Microsoft SQL Servers versus the number of allowable connections, and the number of Microsoft SQL Server user connections.

This script consolidates functionality also available from two separate Knowledge Scripts: [Report\\_NearMaxConnect](#) and [Report\\_UserConnections](#). Changes made to the individual scripts do not affect the functionality of this consolidated script.

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

### Resource Objects

Report agent

### Default Schedule

The default schedule is **Run once**. Run the report script every 30 minutes for optimal report generation.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Data source</b>	
Select computer(s)	Select the computers for your report.

Description	How to Set It
Select the style	<p>Select the style for the first page of the report:</p> <ul style="list-style-type: none"> <li>◆ <b>By computer</b> provides links to pages showing the data collected from individual computers (each page shows all the data streams collected from a single computer)</li> <li>◆ <b>By data stream</b> provides links to pages showing a side-by-side comparison of values for the same data stream collected from different computers (each page shows, for example, the value of the <i>NT_CpuResource-All Threads(#)</i> data stream from each computer)</li> <li>◆ <b>By computer and data stream</b> provides links to pages showing a single data stream collected from a computer</li> <li>◆ <b>All data streams on one page</b> generates a report with all data on a single page</li> </ul>
Select time range	Set a specific or sliding time range for data included in your report.
Select peak weekday(s)	Select the days of the week to include in your report.
Aggregation by	<p>Select the aggregation method for the data in your report:</p> <ul style="list-style-type: none"> <li>◆ Minute</li> <li>◆ Hour</li> <li>◆ Day</li> </ul>
Aggregation interval	Select the interval by which the data in your report is aggregated. Possible values range from 1 to 90.
Statistics to show per period	<p>Select a statistical method by which to display data in the report:</p> <ul style="list-style-type: none"> <li>◆ <b>Average:</b> The average value of data points for the aggregation interval. For example, the average value for 1 Hour.</li> <li>◆ <b>Minimum:</b> The minimum value of data points for the aggregation interval</li> <li>◆ <b>Maximum:</b> The maximum value of data points for the aggregation interval</li> <li>◆ <b>Count:</b> The number of data points for the aggregation interval</li> <li>◆ <b>Sum:</b> The total value of data points for the aggregation interval</li> <li>◆ <b>3Sigma:</b> The average + (3 * standard deviation) and average - (3 * standard deviation)</li> <li>◆ <b>Std:</b> The standard deviation</li> <li>◆ <b>Box:</b> Lower fence, 25% point, median, 75% point, and upper fence for the aggregation interval</li> <li>◆ <b>Open:</b> The first value for the aggregation interval</li> <li>◆ <b>Close:</b> the last value for the aggregation interval</li> </ul>
<b>Report settings</b>	
Include parameter help card?	Set to yes to include a table in the report that lists parameter settings for the report script. The default is yes.
Include table?	Set to yes to include a table of data stream values in the report. The default is yes.
Include chart?	Set to yes to include a chart of data stream values in the report. The default is yes.

Description	How to Set It
Select chart style	Define the graphic properties of the charts in your report.
Select output folder	Set options 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 make the correlation between a specific instance of a Report Script and the corresponding report.  The default is no.
Select properties	Set miscellaneous report properties as needed.
Add time stamp to title?	Set to yes to append a time stamp to the title of the report, making each title unique. The time stamp is made up of the date and time the report was generated.  Adding a time stamp is useful in order to run consecutive iterations of the same report without overwriting previous output.  The default is no.
<b>Event notification</b>	
Event for report success?	Set to yes to raise an event when the report is successfully generated. The default is yes.
Severity level for report success	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is successfully generated. The default is 35 (magenta level indicator).
Severity level for report with no data	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the generated report contains no data. The default is 25 (blue level indicator).
Severity level for report failure.	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the report is not generated. The default is 5 (red level indicator).

## 3.67 RepTransactions

Use this Knowledge Script to monitor the number of transactions in the transaction log of the publication database that are marked for replication but have not yet been replicated. This script raises an event if the number is higher than the threshold you set. In addition, this script generates data streams for the number of pending replications.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwnerKnowledge](#) Script to determine which computer owns the SQL resource.

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Once every hour**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if pending replications exceed threshold?	Set to y to raise an event if the number of pending replications exceeds the threshold you set. The default is y.
Collect data for number of pending replications?	Set to y to collect data for charts and reports. If enabled, data collection returns the number of transactions in the transaction log marked for replication. The default is n.
Threshold -- Maximum number of pending replication transactions	Specify the maximum number of transactions that can be replicated in the publication database before an event is raised. The default is 1000 pending replications.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of pending replications exceeds the threshold. The default severity level is 5 (red event indicator).

## 3.68 RepTranSec

Use this Knowledge Script to monitor the number of transactions being replicated per second. This script raises an event if the replication rate exceeds the threshold you set. In addition, this script generates data streams for the number of transactions replicated per second.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Once every hour**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if replication rate exceeds threshold?	Set to y to raise an event if the replication rate exceeds the threshold you set. The default is y.
Collect data for replication rate?	Set to y to collect data for charts and reports. If enabled, data collection returns the number of transactions being replicated per second. The default is n.
Threshold -- Maximum replication rate	Specify the maximum number of transactions that can be replicated per second before an event is raised. The default is 1000 transactions per second.

Description	How to Set It
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the replication rate exceeds the threshold. The default severity level is 5 (red event indicator).

## 3.69 RunSql

Use this Knowledge Script to run SQL statements or stored procedures. You can enter the SQL Server statements to be executed when you run this script, or you can load the statements from a script file and specify a full path to the file you want to use.

You can set maximum and minimum thresholds to be compared against the SQL Server statement's primary output value--either the number of rows returned, or the value found in the column you specified. This script raises an event if the output value exceeds the maximum threshold or falls below the minimum threshold you set.

When constructing a SQL statement for use with this script, include the database name in the syntax. Here are some examples:

- ◆ `select categoryid from Northwind.dbo.categories`
- ◆ `use northwind select dbo.categories.categoryid from dbo.categories`

This script might encounter problems if you employ the `USE` command to qualify queries. Instead, specify `select * from mydatabase..mytable` to fully qualify queries. Do not run a command such as  
`use mydatabase select * from mytable.`

AppManager does not provide a syntax-checking mechanism. Syntax checking is performed by the Microsoft SQL Server on the monitored server when the job is run. If an error is detected, the Microsoft SQL Server passes an error to the Knowledge Script.

---

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

---

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Once every hour**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Event notification	

Description	How to Set It
<b>Raise event if maximum threshold is exceeded?</b>	Set to <b>Yes</b> to raise an event when the T-SQL statements run by this script return more rows than the threshold, or if the value in the specified column exceeds the threshold you set.  The default is Yes.
Event severity when maximum threshold exceeded	Set the severity level, from 1 to 40, to indicate the importance of an event in which the maximum threshold is exceeded.  The default is 15 (yellow event indicator).
<b>Raise event if minimum threshold is not met?</b>	Set to <b>Yes</b> to raise an event when the T-SQL statements run by this script return fewer rows than the threshold, or if the value in the specified column falls below the threshold value you set.  The default is unselected.
Event severity when minimum threshold not met	Set the severity level, from 1 to 40, to indicate the importance of an event in which the minimum threshold is not met.  The default is 15 (yellow event indicator).
Raise event if no rows are returned?	Set to <b>Yes</b> to raise an event if no rows are returned.  The default is Yes.
<b>Event detail options</b>	
Include query results in event details?	Set to <b>Yes</b> to include the results of your query or command in the event detail message.  By default, query results are not included.
Number of rows to display	Specify the number of rows to display in the event detail message.  The default is 10 rows.  <b>NOTE:</b> You can enter 0 to indicate all rows. However, the detail message has a 32-KB limit.
<b>Raise event for SQL Server informational messages?</b>	Set to <b>Yes</b> to raise an event when your query generates a Microsoft SQL Server informational message.  The text of the message is returned in the event detail message. This option is helpful when Microsoft SQL Server returns the query result as an informational message rather than as data. For example, when using the <code>dbcc checktable</code> command.  By default, this script does not raise an event under these conditions.
Event severity for SQL Server informational messages	Set the severity level, from 1 to 40, to indicate the importance of an event in which a SQL Server information message is generated.  The default is 35 (magenta event indicator).
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the script fails to run properly.  The default is 5 (red event indicator).
<b>Data Collection</b>	



Description	How to Set It
Collect data for number of rows returned?	<p>Set to <b>Yes</b> to collect the number of rows returned by your query. If this parameter is set to <b>Yes</b> and the value returned is -1 or any negative number, an error occurred while attempting to collect data.</p> <p>By default, this script does not collect data.</p>
Custom data stream legend	Specify a custom legend for the data stream returned by this Knowledge Script.
<b>Data Detail Options</b>	
Include query results in data details?	<p>Set to <b>Yes</b> to include the results of your query in the data detail message.</p> <p>By default, query results are not included.</p>
Number of results to display in data details	<p>Specify the number of rows to display in the data detail message.</p> <p>The default is 10 rows.</p> <p><b>NOTE:</b> Enter 0 to indicate all rows. However, the detail message has a 32-KB limit.</p>
<b>Monitoring</b>	
SQL Server login	<p>Specify the database user login that will run the SQL statements.</p> <p>Set this parameter to use the “sa” account, or use other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Knowledge Scripts from the AppManager for SQL Server Security Manager.</p> <p><b>NOTE:</b> In general, permission to run specific SQL commands and statements is derived from the permissions granted to the login account you are using to run this Knowledge Script. However, the <code>dbcc</code> command can only be run by:</p> <ul style="list-style-type: none"> <li>◆ <code>dbo</code> account (Microsoft SQL Server 2005, 2008, and 2012.)</li> <li>◆ <code>db_backupoperator</code> account (Microsoft SQL Server 2005, 2008, and 2012.)</li> </ul>
SQL query or command source	<p>Select whether you want this script or a separate file as the source of your SQL query. The possible values for this parameter are:</p> <ul style="list-style-type: none"> <li>◆ <b>Parameter:</b> Use the T-SQL statement you entered for the <i>SQL query or command statement</i> parameter.</li> <li>◆ <b>File:</b> Use the T-SQL statements contained in the file identified by the <i>Full path to SQL query or command file</i> parameter.</li> </ul>
SQL query or command statement	<p>If you are using this script as the source of your T-SQL statement, enter that statement here. You can enter only single-line statements. This parameter does not accept multi-line statements.</p> <p>The default is <code>sp_who2</code>.</p> <p>Tip Unless you are entering very simple statements, you might find that typing them into this field is error-prone. To avoid errors, you can copy and paste statements, or use the <i>Full path to SQL query or command file</i> parameter.</p>

Description	How to Set It
Full path to SQL query or command file	<p>If you are using T-SQL statements contained in a file, enter the complete file path. For example, <code>F:\NetIQ Corporation\Sample.sql</code>, or <code>\\&lt;computer&gt;\&lt;dir&gt;\Sample.sql</code>. The T-SQL statements in the file must be separated by semi-colons.</p> <p>For more information, see <a href="#">“Loading SQL Server Statements From a Script File” on page 155</a>.</p> <p>You cannot use a UNC path if the NetIQ AppManager Client Resource Monitor service is running as a system account.</p>
Threshold type	<p>Select whether you want to perform threshold checking on one of the following:</p> <ul style="list-style-type: none"> <li>◆ <b>Number of rows returned:</b> Perform threshold checkin on the number of rows returned by the command or query. If the number of rows exceeds the maximum threshold or falls below the minimum threshold, an event is raised.</li> <li>◆ <b>Value in column number:</b> Perform threshold checking on the value found in a column, specified by the number of the column. Column numbers start with 0 for the leftmost column. If the value in the specified column exceeds the maximum threshold or falls below the minimum threshold, an event is raised.</li> <li>◆ <b>Value in column name:</b> Perform threshold checking on the value found in a column, specified by the name of the column. If the value in the specified column exceeds the maximum threshold or falls below the minimum threshold, an event is raised.</li> </ul>
Column number	<p>If the threshold is comparing values found by column number, indicate the column number to use as the primary output value. The column you specify must contain numeric data. A value of 0 returns the first column from the SQL statements. Any other positive value returns the value for the first row of data from the specified column. If the specified column is not a numeric field, an error is raised and the Knowledge Script returns a -1 result. If you do not select by column number, you can select by column name. The default is 0.</p> <p><b>NOTE:</b> You should execute your query in SQL Query Analyzer to ensure that the proper rows and number of columns are returned. The leftmost column is column zero. Also note that if a query is doing a <code>“Select * ...”</code> and if the table schema changes, the column numbering might change.</p>
Column name	<p>If the threshold is comparing values found by column name, indicate the column name to use as the primary output value. The column you specify must contain numeric data. The value for the first row of data in the specified column is returned. If the specified column is not a numeric field, an error is raised and the Knowledge Script fails.</p>
Threshold -- Maximum	<p>Specify the maximum number of rows that can returned by the query or for the value found in the column. If the number of rows exceeds the threshold value, an event is raised. The default is 100.</p>
Threshold -- Minimum	<p>Specify the minimum number of rows that can be returned by the query or for the value found in the column. If the number of rows falls below the threshold value, an event is raised.</p> <p>The default is 0.</p>
<b>Save query results to a file?</b>	<p>Set to <b>Yes</b> to save the query results to a file. By default, query results are not saved to a file.</p>

Description	How to Set It
Full path to results file	<p>If you are saving query results to a file, enter the complete file path and filename. For example, F:\NetIQ Corporation\QueryResult, or \\&lt;computer&gt;\&lt;dir&gt;\QueryResult.</p> <p>You cannot use a UNC path if the NetIQ Corporation AppManager Client Resource Monitor service is running as a system account.</p>
<b>Results File Content Options</b>	
Number of rows to write to results file	Specify the number of rows to write to the result file. The default is 10.
Append to results file?	<p>Set to <b>Yes</b> to append the results of the query to the existing contents of the results file. If disabled, the results file is overwritten each time.</p> <p>By default, the contents of the results file are appended each time a query or command is run.</p>

## Loading SQL Server Statements From a Script File

Because these SQL Server statements are passed through the ODBC driver, you do not need to enter the `go` statements normally required in the command line tool, `osql`. Example of a simple SQL Server script:

```
/* Script to get the number of open events. */
SELECT COUNT(*) FROM QBD.dbo.Event
WHERE ParentEventId IS NOT NULL AND Status = 0;
SELECT EventID, JobID, MachineName, KPName, Severity, Occurrence,
ModificationTime, EventMsg FROM QBD.dbo.Event
WHERE ParentEventId IS NOT NULL AND Status = 0
```

## 3.70 ServerDown

Use this Knowledge Script to monitor the up or down status of a Microsoft SQL Server. If the Microsoft SQL Server is down, this script raises an event and, optionally, attempts to start the Microsoft SQL Server.

This script can also identify the downtime of the Microsoft SQL Server since the server was started. This information is returned in the event detail message.

---

**NOTE:** The ServerDown Knowledge Script is not supported when running jobs on clusters. Use the MSCS\_ResourceDown Knowledge Script to monitor a SQL Server instance on a cluster. If the MSCS (Microsoft Cluster Server) view does not exist in the AppManager console, run the Discovery\_MSCS Knowledge Script on the cluster nodes.

---

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Every 5 minutes**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if attempt to restart fails or succeeds?	Set to <b>y</b> to raise an event if a restart fails or succeeds. The default is <b>y</b> .
Collect data for server downtime?	Set to <b>y</b> to collect data for charts and reports. If enabled, data collection returns the number of hours the server has been down since it was started. The default is <b>n</b> .
Restart SQL Server automatically if down?	Set to <b>y</b> to automatically restart Microsoft SQL Server if it is detected down. The default is <b>y</b> .
Event severity when attempt to restart fails	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the server is down and AppManager for SQL Server cannot restart it. The default is 5 (red event indicator).
Event severity when attempt to restart succeeds	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the server is down and AppManager for SQL Server successfully restarted it. The default is 25 (blue event indicator).
Event severity when Restart parameter is disabled	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the server is down and the <i>Restart SQL Server automatically if down?</i> parameter has been set to "n". The default is 18 (yellow event indicator).
Raise event if the SQL Server server or agent service does not exist	Set to <b>y</b> to raise an event if the SQL Server server or agent service does not exist on the selected computer. The default is <b>n</b> .

### 3.71 ServerThroughput

Use this Knowledge Script to monitor the throughput of Microsoft SQL Server by measuring the number of T-SQL batch requests executed per second and the number of physical page reads per second.

You can set thresholds for the maximum number of batch requests or the maximum number of page reads. This script raises an event if either threshold is exceeded.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

#### Resource Object

Microsoft SQL Server folder

#### Default Schedule

The default interval for this script is **Every 5 minutes**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if batch requests or page reads exceed threshold?	Set to y to raise an event if the number of batch requests or page reads exceeds the threshold. The default is y.
Collect data for server throughput?	Set to y to collect data for charts and reports. If enabled, data collection returns information about the throughput for Microsoft SQL Server. The default is n.
Threshold -- Maximum batch requests	Specify the maximum number of batch request transactions allowed per second before an event is raised. The default is 120.
Threshold -- Maximum page reads	Specify the maximum number of page reads allowed per second before an event is raised. The default is 100.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of batch requests or page reads exceeds the threshold. The default severity level is 5 (red event indicator).

## 3.72 SPIDs Monitoring

Use this Knowledge Script to monitor SQL Server Process ID (SPID) processes that run for longer than a specified time. The SPID is assigned by Microsoft SQL Server to each new connection. SPID starts with one (1) and is globally unique.

### Resource Object

Microsoft SQL Server

### Default Schedule

The default interval for this script is Every minute.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Event severity	Set the event severity level, from 1 to 30, to indicate the importance of an event in which SPID processes run for longer than the threshold you set. The default severity level is 5.
Collect data if process exceeds the threshold value	Set to y to collect data for charts and graphs. If enabled, data collection returns the amount of time by which SPID processes exceeded the threshold value. The default is y.
<b>Monitoring</b>	
SQL login	Specify the database user login account needed to access Microsoft SQL Server.

Description	How to Set It
Number of processes to include in an event	Specify the maximum number of SPID processes to display in an event message. The default value is 50 SPIDs.
Units	Select the unit of time ( <b>Hours</b> or <b>Minutes</b> ) to be represented by the threshold value. The default is Minutes.
Threshold -- Specified time	Specify the maximum amount of time SPID processes can run before an event is raised. The default value is 500. Use the <i>Units</i> parameter to select whether the threshold represents hour or minutes.

## 3.73 StoredProcRecompiles

Use this Knowledge Script to monitor the number of times per second stored procedures are recompiled. This script raises an event if the stored procedure recompilation rate exceeds the threshold you set. In addition, this script generates data streams for recompilation rates.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Every hour**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if stored procedure recompilation rate exceeds threshold?	Set to <i>y</i> to raise an event if the recompilation rate exceeds the threshold. The default is <i>y</i> .
Collect data for stored procedure recompilations rate?	Set to <i>y</i> to collect data for charts and reports. If enabled, data collection returns the number of times per second stored procedures were recompiled. The default is <i>n</i> .
Threshold -- Maximum stored procedure recompilations rate	Specify the maximum number of stored procedure recompilations per second that is allowed before an event is raised. The default is 10 recompilations per second.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the recompilation rate exceeds the threshold. The default is 5 (red event indicator).

## 3.74 TopCPUUsers

Use this Knowledge Script to monitor the total CPU time (in milliseconds) used by SQL Server users. This script raises an event if the value exceeds the threshold you set. In addition, this script generates data streams for CPU time usage.

You can specify the number of the highest CPU-consuming user connections to display in the event details. The event detail message includes the CPU time used, the user names of the top CPU users, the most recent SQL Server statements executed by that user, and the `spid`.

---

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

---

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Every 30 minutes**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if CPU time used exceeds threshold?	Set to <code>y</code> to raise an event if CPU time usage exceeds the threshold. The default is <code>y</code> .
Collect data for CPU time used?	Set to <code>y</code> to collect data for charts and reports. If enabled, data collection returns the total amount of CPU time used by the top <i>n</i> CPU-consuming users. The default is <code>n</code> .
SQL Server login	Specify the database user login account needed to access Microsoft SQL Server.  Use the “ <code>sa</code> ” account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.  <b>NOTE:</b> The account must be in the <code>sysadmin</code> Fixed Server Role.
Include T-SQL statements in event details?	Set to <code>y</code> to display the executing T-SQL statements in the detail message. The default is <code>y</code> .  <b>NOTE:</b> The executing T-SQL statements are only included in the detail message when you use the “system administrator” account.
Applications to exclude	Specify the names of the applications you do not want to monitor, separated by commas and no spaces. The default is <code>SQLAgent</code> .
Threshold -- Maximum CPU time used	Specify the maximum amount of CPU time that a user can use before an event is raised. The default is 9999999 milliseconds.  <b>NOTE:</b> This is the <i>cumulative</i> CPU time for a user connection and checkpoint process.

Description	How to Set It
Number of top CPU users to include in event (0 for all)	Specify the number of top CPU-consuming users you want displayed in the detail message (event or data). Enter 0 if you want all users displayed. The default is 5.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which CPU time usage exceeds the threshold. The default severity level is 5 (red event indicator).

## 3.75 TopIOUsers

Use this Knowledge Script to monitor the number of I/O read and write operations performed by Microsoft SQL Server users and their connections. This script raises an event if the number of I/O operations exceeds the threshold you set.

You can specify the number of user connections with the highest number of I/O read and write operations to display in the event detail message. The detail message includes the number of operations performed by each of the top users, their user name, the most recent SQL Server statements they executed, and their `spid`.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Every 30 minutes**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if number of I/O operations exceeds threshold?	Set to <code>y</code> to raise an event if the number of I/O operations exceeds the threshold. The default is <code>y</code> .
Collect data for number of I/O operations?	Set to <code>y</code> to collect data for charts and reports. If enabled, data collection, returns the number of I/O read and write operations used by SQL Server users and their connections. The event details include the user names of top I/O users, the last T-SQL statement executed, and the <code>spid</code> . The default is <code>n</code> .
SQL Server login	Specify the database user login account needed to access Microsoft SQL Server.  Use the “ <code>sa</code> ” account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.  <b>NOTE:</b> The account must be in the <code>sysadmin</code> Fixed Server Role.



Description	How to Set It
Include T-SQL statements in event	Set to y to display the executing T-SQL statements in the event detail message. The default is y.  <b>NOTE:</b> The executing T-SQL statements are only included in the detail message when you use the “system administrator” account.
Applications to exclude	Specify the names of the applications you do not want to monitor, separated by commas and no spaces. The default is <code>SQLAgent</code> .
Threshold -- Maximum I/O operations	Specify the maximum number of I/O operations allowed by a user before an event is raised. The default is 9999999 operations.  <b>NOTE:</b> This the <i>cumulative</i> operations for a user connection.
Number of top I/O users to include in event (0 for all)	Specify the number of top I/O users to display in the event detail message. Enter 0 to display all users. The default is 5.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of I/O operations exceeds the threshold. The default severity level is 5 (red event indicator).

## 3.76 TopLockUsers

Use this Knowledge Script to monitor the total number of locks held by all Microsoft SQL Server users and their connections. This script raises an event if the number of user locks held exceeds the threshold you set. In addition, this script generates data streams for the number of locks held.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Every 30 minutes**.

### Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if locks held exceed threshold?	Set to y to raise an event if the number of held locks exceeds the threshold. The default is y.
Collect data for total locks held?	Set to y to collect data for charts and reports. If enabled, data collection returns the total number of locks held by SQL Server users and their connections. The default is n.

Description	How to Set It
SQL Server login	Specify the database user login account needed to access Microsoft SQL Server.  Use the “sa” account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.  <b>NOTE:</b> The account must be in the <code>sysadmin</code> Fixed Server Role.
Include T-SQL statements in event?	Set to <code>y</code> to display the executing T-SQL statements in the event detail message. The default is <code>y</code> .  <b>NOTE:</b> The executing T-SQL statements are only included in the detail message when you use the “system administrator” account.
Applications to exclude	Specify the names of the applications you do not want to monitor, separated by commas and no spaces. The default is <code>SQLAgent</code> .
Threshold -- Maximum user locks	Specify the maximum number of user locks allowed before an event is raised. The default is 1000 locks.
Number of top lock users to include in event	Specify the number of top lock users to display in the detail message (event or data). The maximum allowed value is 100; minimum is 1. The default is 5 users.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of locks held exceeds the threshold. By default, the severity level is 5 (red event indicator).

## 3.77 TopMemoryUsers

Use this Knowledge Script to monitor the number of memory pages that can be allocated to all Microsoft SQL Server users and their connections. This script raises an event if the total number of pages allocated exceeds the threshold you set. In addition, this script generates data streams for the number of memory pages allocated.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

### Resource Object

Microsoft SQL Server folder

### Default Schedule

The default interval for this script is **Every 30 minutes**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if allocated memory exceeds threshold?	Set to <i>y</i> to raise an event if the number of allocated memory pages exceeds the threshold. The default is <i>y</i> .
Collect data for total memory pages allocated?	Set to <i>y</i> to collect data for charts and reports. If enabled, data collection returns information about the total memory pages allocated to SQL Server users and their connections. The default is <i>n</i> .
SQL Server login	Specify the database user login account needed to access Microsoft SQL Server.  Use the “sa” account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.  <b>NOTE:</b> The account must be in the <code>sysadmin</code> Fixed Server Role.
Include T-SQL statements in event?	Set to <i>y</i> to display the executing T-SQL statements in the detail message. The default is <i>y</i> .  <b>NOTE:</b> The executing T-SQL statements are only included in the detail message when you use the “system administrator” account.
Applications to exclude	Specify the names of the applications you do not want to monitor, separated by commas. The default is <code>SQLAgent</code> .
Threshold -- Maximum memory allocated	Specify the maximum number of memory pages that can be allocated to user connections before an event is raised. The default is 15000 pages.
Number of top memory users to include in event (enter 0 for all)	Specify the number of top memory users to display in the detail message (event or data). Enter 0 to display all users. The default is 5.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of allocated memory pages exceeds the threshold. The default severity level is 5 (red event indicator).

## 3.78 TopResourceUsers

Use this Knowledge Script to monitor the total CPU time used by Microsoft SQL Server users, the number of I/O read and write operations performed by SQL Server users and their connections, the total number of locks held by all SQL Server users and their connections, and the number of memory pages that can be allocated to all SQL Server users and their connections. This script raises an event if the value exceeds the threshold you set.

This script consolidates functionality also available in four separate Knowledge Scripts: [TopCPUUsers](#), [TopIOUsers](#), [TopLockUsers](#), and [TopMemoryUsers](#). Changes to the individual scripts do not affect the functionality of this consolidated script.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

## Resource Object

Microsoft SQL Server folder

## Default Schedule

The default interval for this script is **Every 30 minutes**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Resources</b>	
Top CPU users	Set to <b>Yes</b> to monitor the top CPU users in Microsoft SQL Server. By default, monitoring is disabled.
Top Lock users	Set to <b>Yes</b> to monitor the top lock users in Microsoft SQL Server. By default, monitoring is disabled.
Top I/O users	Set to <b>Yes</b> to monitor the top I/O users in Microsoft SQL Server. By default, monitoring is disabled.
Top Memory users	Set to <b>Yes</b> to monitor the top memory users in Microsoft SQL Server. By default, monitoring is disabled.
<b>Event Notification</b>	
<b>Raise event if CPU time exceeds threshold?</b>	Set to <b>Yes</b> to raise an event if CPU time exceeds threshold. By default, raising an event is enabled.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which CPU time exceeds the threshold. The default severity level is 5.
Threshold - Maximum CPU time used	Specify the maximum amount of CPU time that can be used before an event is raised. The default is 9999999 milliseconds.
<b>Raise event if number of I/O operations exceeds threshold?</b>	Set to <b>Yes</b> to raise an event if the number of I/O operations exceeds threshold. By default, raising an event is enabled.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of I/O operations exceeds the threshold. The default severity level is 5.
Threshold - Maximum number of I/O operations	Specify the maximum number of I/O operations that can be used before an event is raised. The default is 9999999 operations.
<b>Raise event if number of locks held exceeds threshold?</b>	Set to <b>Yes</b> to raise an event if the number of locks held exceeds threshold. By default, raising an event is enabled.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of locks held exceeds the threshold. The default severity level is 5.
Threshold - Maximum user locks	Specify the maximum number of user locks that can be held before an event is raised. The default is 1000 locks.

Description	How to Set It
<b>Raise event if allocated memory exceeds threshold?</b>	Set to <b>Yes</b> to raise an event if allocated memory exceeds threshold. By default, raising an event is enabled.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which allocated memory exceeds the threshold. The default severity level is 5.
Threshold - Maximum memory allocated	Specify the maximum amount of memory that can be allocated before an event is raised. The default is 15000 pages.
<b>Event Detail Options</b>	
Maximum number of Top Users to include in event	Specify the maximum number of Top Users to include in the event message. The default is 10 rows.  Enter 0 to display all the rows.
<b>Data Collection</b>	
Collect data for CPU time used?	Set to <b>Yes</b> to collect data for charts and reports. If enabled, data collection returns the total amount of CPU time used by the top CPU-consuming users. By default, data collection is disabled.
Collect data for number of IO operations?	Set to <b>Yes</b> to collect data for charts and reports. If enabled, data collection returns the number of I/O read and write operations used by SQL Server users and their connections. The event details include the user names of top I/O users, the last T-SQL statement executed, and the <code>spid</code> . By default, data collection is disabled.
Collect data for total locks held?	Set to <b>Yes</b> to collect data for charts and reports. If enabled, data collection returns the total number of locks held by SQL Server users and their connections. By default, data collection is disabled.
Collect data for total memory pages allocated?	Set to <b>Yes</b> to collect data for charts and reports. If enabled, data collection returns information about the total memory pages allocated to SQL Server users and their connections. By default, data collection is disabled.
<b>Monitoring</b>	
SQL Server login	Specify the database user login account needed to access Microsoft SQL Server.  Use the "sa" account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.  <b>NOTE:</b> The account must be in the <code>sysadmin</code> Fixed Server Role.
Applications to exclude	Specify the names of the applications you want to exclude from monitoring. Separate multiple names by commas (,) and no spaces.

## 3.79 UserConnections

Use this Knowledge Script to monitor the total number of Microsoft SQL Server user connections. This script raises an event if the total number of Microsoft SQL Server user connections exceeds the threshold you set.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

## Resource Object

Microsoft SQL Server folder.

## Default Schedule

The default interval for this script is **Every 30 minutes**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
Raise event if number of connections exceeds threshold?	Set to y to raise an event if the number of user connections exceeds the threshold. The default is y.
Collect data for total number of user connections?	Set to y to collect data for charts and reports. If enabled, data collection returns the total number of Microsoft SQL Server connections. The default is n.
SQL Server login	Specify the database user login account needed to access Microsoft SQL Server.  Use the "sa" account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.  <b>NOTE:</b> The account must be in the <code>sysadmin</code> Fixed Server Role.
Threshold -- Maximum number of user connections	Specify the maximum number of user connections allowed before an event is raised. The default is 100 connections.
Number of connections to include in event	Specify the number of user connections to display in the event detail message. Enter 0 to display all connections. The default is 20 connections.
Event severity when threshold exceeded	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of user connections exceeds the threshold. The default severity level is 5 (red event indicator).

## 3.80 UserMaxConnection

Use this Knowledge Script to monitor the total number of Microsoft SQL Server user connections and the opened connection usage of Microsoft SQL Server.

This script consolidates functionality also available in two separate Knowledge Scripts: [NearMaxConnect](#) and [UserConnections](#). Changes to the individual scripts do not affect the functionality of this consolidated script.

**NOTE:** This script does not raise events or generate data points when it runs on a computer that is part of a cluster but is not the node owner. Run the [ClusterOwner](#) Knowledge Script to determine which computer owns the SQL resource.

## Resource Object

Microsoft SQL Server folder

## Default Schedule

The default interval for this script is **Every 30 minutes**.

## Setting Parameter Values

Set the following parameters as needed:

Description	How to Set It
<b>Event Notification</b>	
<b>Raise event if number of connections exceeds threshold?</b>	Set to <b>Yes</b> to raise events if the number of user connections exceeds threshold. The default is Yes.
Event severity when number of user connections exceeds threshold	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of user connections exceeds the threshold. The default severity level is 5.
Threshold -- Maximum number of user connections	Specify the maximum number of user connections allowed before an event is raised. The default is 100 connections.
<b>Raise event if used connections exceeds threshold?</b>	Set to <b>Yes</b> to raise events if the number of used connections exceeds threshold. The default is Yes.
Event severity when number of used connections exceeds threshold	Set the event severity level, from 1 to 40, to indicate the importance of an event in which the number of used connections exceeds the threshold. The default severity level is 5.
Threshold -- Maximum percentage of connections used	Specify the maximum percentage of user connections allowed before an event is raised. The default is 0%.
<b>Data Collection</b>	
Collect data for total number of user connections?	Set to <b>Yes</b> to collect data for charts and reports. If enabled, data collection returns the total number of Microsoft SQL Server connections. The default is Yes.
Collect data for number of connections used?	Set to <b>Yes</b> to collect data for charts and reports. If enabled, data collection returns the total number of used Microsoft SQL Server connections. The default is Yes.
<b>Monitoring</b>	
SQL Server login	Specify the database user login account needed to access Microsoft SQL Server. Use the "sa" account or other user login accounts that have been set up in the Microsoft SQL Server on the managed client and have been given permission to run SQL Server Knowledge Scripts through AppManager Security Manager.  <b>NOTE:</b> The account must be in the <code>sysadmin</code> Fixed Server Role.

