

# **NetIQ® AppManager® for Nortel Contact Center Manager Server**

## **Management Guide**

July 2011



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# About this Book and the Library

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

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

## Intended Audience

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

## Other Information in the Library

The library provides the following information resources:

### Installation Guide for AppManager

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

### User Guide for AppManager Control Center

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

### Administrator Guide for AppManager

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

### Upgrade and Migration Guide for AppManager

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

### Management guides

Provide information about installing and monitoring specific applications with AppManager.

### Help

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

The AppManager library is available in Adobe Acrobat (PDF) format from the NetIQ Web site: [www.netiq.com/support/am/extended/documentation/default.asp?version=AMDocumentation](http://www.netiq.com/support/am/extended/documentation/default.asp?version=AMDocumentation).

## Conventions

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

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

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# About NetIQ Corporation

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

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## Chapter 1

# Introducing AppManager for Nortel Contact Center Manager Server

This chapter introduces AppManager for Nortel Contact Center Manager Server (AppManager for Nortel CC). Contact Center Manager Server provides networking, real-time reporting, call handling, and advanced eBusiness applications for contact centers.

## Features and Benefits

AppManager is designed to help you gain easy access to Contact Center Manager Server data, and to help you analyze and manage that data. The AppManager for Nortel CC solution minimizes the cost of maintaining Contact Center Manager Server services and functions, aids in capacity planning, and can prevent downtime.

With AppManager for Nortel CC, administrators gain access to a new set of tools they can leverage to gather a wide range of diagnostic and management data, which can help prevent outages and keep things running smoothly.

AppManager for Nortel CC includes Knowledge Scripts for creating jobs that monitor the health and status of key Contact Center Manager Server components. These scripts allow you to monitor and manage crucial services at a depth unparalleled by any other solution. Each Knowledge Script can be configured to send an alert, collect data for reporting, and perform automated problem management when an event occurs.

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### Note

For more information about the Knowledge Scripts for monitoring Contact Center Manager Server, see the AppManager Help for any specific script.

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AppManager for Nortel CC is not intended to replace the daily reporting features supplied by Contact Center Manager Server itself. It does, however, extend the application's reporting and monitoring capabilities in several ways:

- The AppManager eventing feature notifies administrators of events by such methods as page and email. Administrators do not need to be sitting in front of an AppManager console in order to learn of an event condition.
- The AppManager repository provides a longer data retention period than Contact Center Manager Server. More data in the repository means more accurate and useful trending analyses.
- When used in conjunction with NetIQ Analysis Center, the data collected by AppManager can be used to create comparison reports.

With AppManager for Nortel CC, you can monitor the following features of Contact Center Manager Server:

- Contact Center Manager Server agents and their status
- Critical, major, minor, and indeterminate alarms
- Number and percentage of abandoned calls, and the total, average, and maximum delay of abandoned calls
- Number and percentage of answered calls, the total, average, and maximum delay of answered calls, and the total, average, and maximum delay of calls answered at a particular skillset level
- Calls that are transferred in and out and conferenced in and out of Contact Center Manager Server
- Offered calls
- Number and percentage of terminated calls
- Time that calls spend in Contact Center Manager Server before being transferred or receiving a type of call treatment, and monitoring the types of treatments that calls receive.
- Space in the Master, Blue, and Call-by-Call databases
- Availability of services on the Contact Center Manager Server
- Usage of system resources: CPU, interrupts, page faults, committed bytes, CLAN, and ELAN
- Time that skillsets spend in Active, All Agents Busy, and Staffed states

## Counting AppManager Licenses

AppManager for Nortel CC consumes one AppManager license per active agent. The number of active agents displays on the **Details** tab after you highlight the root NortelCC object in the TreeView pane.

Name	Site Name	Site Id	ELAN IP Address	CLAN IP Address	Number of Agents
NortelCC SCCS: n/a	n/a	n/a	10.41.4.24	10.42.1.21	2

The number of active agents is based on the number of unique agent IDs that were logged on during the first shift (09:00 to 17:00). Each time you run `Discovery_NortelCC`, the script queries the database for the number of logged-on agent IDs and returns the greater of two values: current agent count or previous agent count. The “Number of Agents” value in the **Details** tab is then updated to the larger number.

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## Chapter 2

# Installing AppManager for Nortel CC

This chapter provides installation instructions and describes system requirements for AppManager for Nortel CC.

This chapter assumes you have AppManager installed. For more information about installing AppManager or about AppManager system requirements, see the *Installation Guide for AppManager*, which is available on the AppManager Documentation Web site: <https://www.netiq.com/support/am/extended/documentation/default.asp>.

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### Note

Only the following AppManager managed objects should be installed on a Contact Center Manager Server:

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- Nortel CC (qNortelCC.dll)
- CIM (qcima4.dll)
- Dell (qdella4.dll)
- IBM Netfinity (qnfda4.dll)
- IIS (qiisa4.dll)
- NT (qnta4.dll)
- WTS (qwtsa4.dll)

## System Requirements

AppManager for Nortel CC has the following system requirements:

Software/Hardware	Version
NetIQ AppManager installed on the repository, agent, and console computers	7.0 or later
Nortel Contact Center Manager Server installed on the agent computer	6.0, 5.0
<b>Note</b> To monitor the other peripheral computers in a Contact Center deployment, use the AppManager for Windows and AppManager for IIS modules.	
Microsoft Windows operating system on agent computers	Windows Server 2003 R2 (32-bit)

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

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

## Installing the Module

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

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

- Run the module setup program, `AM70-NortelCC-7.x.x.0.msi`, which you downloaded from the Web. Save the module setup files on the distribution computer, and then delete the older versions of the module setup files. For more information about the distribution computer, see the *Installation Guide for AppManager*.
- Use Control Center to install the module on the remote computer where an agent is installed. For more information, see “[Deploying the Module with Control Center](#)” on page 5.

### To install the module:

1. Run the module setup program on all AppManager repository (QDB) computers to install the Knowledge Scripts and reports.
  - Run the setup program on the primary repository computer first. Then run the setup program on all other repository computers.
  - For repositories running in active/active and active/passive clusters, run the setup program on the active node. Then, copy the following Registry key to the non-active node.  
`HKEY_LOCAL_MACHINE\SOFTWARE\NetIQ\AppManager\4.0`
2. Install the module on the Nortel Contact Center computer you want to monitor (agent computer). Use one of the following methods:
  - Run the module setup program.
  - Use Control Center to deploy the installation package.
3. Run the module setup program on all Operator Console and Control Center computers to install the Help and console extensions.
4. *If you have not already discovered Nortel Contact Center resources*, run the `Discovery_NortelCC` Knowledge Script on all agent computers where you installed the module. For more information, see “[Discovering Nortel CC Resources](#)” on page 7.
5. Upgrade running jobs for any Knowledge Script changes. For more information, see “[Upgrading Knowledge Script Jobs](#)” on page 8.

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

# Deploying the Module with Control Center

You can use Control Center to deploy the module on a remote computer where an agent is installed. This topic briefly describes the steps involved in deploying a module and provides instructions for checking in the module installation package. For more information, see the *Control Center User Guide for AppManager*, which is available on the AppManager Documentation Web site: <https://www.netiq.com/support/am/extended/documentation/default.asp>.

## Deployment Overview

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

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

1. Verify the default deployment credentials.
2. Check in an installation package.
3. Configure an 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.

## Checking In the Installation Package

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

**To check in a module installation package:**

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

## Silently Installing the Module

You can run the module setup program, `AM70-NortelCC-7.x.x.0.msi`, silently (without user intervention) from a command prompt on the local computer.

Run the following command from the directory in which you saved the module setup program. This command installs the module using default settings.

```
msiexec.exe /i "AM70-NortelCC-7.x.x.0.msi" /qn
```

where `x.x` is the actual version number of the module setup program.

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

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

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

For more information, see “Performing a Silent Installation” in the *Installation Guide for AppManager*.

## Verifying Your Installed Module

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

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

**To verify your installed module with the Operator Console:**

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

## Configuring Security Manager

Before you can successfully discover Contact Center Manager Server resources, configure AppManager Security Manager with the user name and password that provide access to the Blue database.

Complete the following fields on the Custom tab in AppManager Security Manager:

Field	Description
Label	NortelCC
Sub-Label	DBLogin
Value 1	sysadmin, which is the user name that provides access to the Blue database. Some Contact Center installations may have other valid user name/password combinations, but sysadmin will work on most systems.
Value 2	Password associated with the user name you supplied in <b>Value 1</b> .
Extended application support	Encrypts the user name and password in Security Manager. Do not leave this option unselected.

# Discovering Nortel CC Resources

Use the Discovery\_NortelCC Knowledge Script to discover Nortel Contact Center Manager Servers and resources: applications, CDNs, databases, DNISs, IVR queues, IVR ports, skillsets, and application-skillset pairs.

Before you run Discovery\_NortelCC, configure Security Manager with the login and password that provide access to the Contact Center Manager Server database. For more information, see [“Configuring Security Manager”](#) on page 6.

Run Discovery\_NortelCC on NT\_MachineFolder objects. By default, this script runs every Sunday at 3 AM.

Set the Values tab parameters as needed:

Parameter	How to Set It
<b>General Settings</b>	
<b>Job Failure Notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the Discovery_NortelCC job fails. The default is 5.
<b>Discovery Failure Notification</b>	
<b>Raise event if SQL query fails?</b>	Select <b>Yes</b> to raise an event if the SQL query fails. The default is Yes. Discovery_NortelCC uses a SQL query to retrieve Contact Center Manager Server configuration information from the Blue database. By default, this script runs once every week. However, this script will also run if the Contact Center Manager Server (SCCS) is rebooted. Should a reboot occur, it is possible that the SCCS SQL Server will not yet be running when the script attempts to query the SCCS database for configuration information. In this case, the script will raise an event indicating the failure of the SQL queries. However, once the SCCS SQL Server restarts, subsequent iterations of this script will run without a SQL error.
Event severity when SQL query fails	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the SQL query fails to discover database configuration information. The default is 15.
<b>Raise event if Registry read fails?</b>	Select <b>Yes</b> to raise an event if AppManager cannot read the Registry to search for the Nortel CC ELAN and CLAN IP addresses. The default is Yes.
Event severity when Registry read fails	Set the event severity level, from 1 to 40, to reflect the importance of an event in which AppManager cannot read the Registry. The default is 5.
<b>Raise event if database userid and password are not configured?</b>	Select <b>Yes</b> to raise an event if AppManager Security Manager has not been configured with the user ID and password that provide access to the Contact Center Manager Server database. The default is Yes. For more information, see <a href="#">“Configuring Security Manager”</a> on page 6.
Event severity when database userid and password are not configured	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the user ID and password are not configured in Security Manager. The default is 5.
<b>Raise event if discovery succeeds?</b>	Select <b>Yes</b> to raise an event when discovery succeeds. The default is Yes.
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.

# Upgrading Knowledge Script Jobs

This release of AppManager for Nortel CC might contain updated Knowledge Scripts. You can push the changes for these updated script to running Knowledge Script jobs in one of the following ways:

- Use the AMAdmin\_UpgradeJobs Knowledge Script.
- Use the Properties Propagation feature.

## Running AMAdmin\_UpgradeJobs

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

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

For more information, see the Help for the AMAdmin\_UpgradeJobs Knowledge Script.

## Propagating Knowledge Script Changes

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

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

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

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

## Propagating Changes to Ad Hoc Jobs

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

To propagate changes to ad hoc Knowledge Script jobs:

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

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

## Propagating Changes to Knowledge Script Groups

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

After you propagate script changes to Knowledge Script Group members, you can propagate the updated Knowledge Script Group members to associated running jobs. For more information, see [“Propagating Changes to Ad Hoc Jobs”](#) on page 8.

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

1. In the Knowledge Script view, select the Knowledge Script Group for which you want to propagate changes.
2. On the KS menu, select **Properties propagation > Ad Hoc Jobs**.
3. *If you want to exclude a Knowledge Script member from properties propagation*, deselect that member from the list in the Properties Propagation dialog box.
4. Select the components of the Knowledge Script that you want to propagate to associated Knowledge Script Groups:

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

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



# Chapter 3

## NortelCC Knowledge Scripts

AppManager for Nortel CC provides the following Knowledge Scripts for monitoring Nortel Contact Center Manager Server. From within the Operator Console, you can select a Knowledge Script in the Knowledge Script pane and press **F1** for complete details.

<b>Knowledge Script</b>	<b>What It Does</b>
<a href="#">AgentTimes</a>	Monitors the total and percentage of time that agents spend in various states.
<a href="#">Alarms</a>	Monitors the Contact Center Manager Server for alarms (SNMP traps).
<a href="#">CallsAbandoned</a>	Monitors various metrics related to abandoned calls.
<a href="#">CallsAnswered</a>	Monitors various metrics related to answered calls.
<a href="#">CallsConfTrans</a>	Monitors calls that have been conferenced in and out, and transferred in and out.
<a href="#">CallsOffered</a>	Monitors the number of offered calls.
<a href="#">CallsTerminated</a>	Monitors the number and percentage of terminated calls.
<a href="#">CallTimes</a>	Monitors the amount of time calls spent in Contact Center Manager Server before being transferred or receiving a type of call treatment.
<a href="#">CallTreatments</a>	Monitors the number and percentage of calls that receive a type of call treatment.
<a href="#">Database</a>	Monitors free space and used space for the Master, Blue, and Call-by-Call databases.
<a href="#">HealthCheck</a>	Monitors the availability of services on the Contact Center Manager Server.
<a href="#">SkillsetTimes</a>	Monitors the amount of time skillsets spent in the following states: Active, All Agents Busy, and Staffed.
<a href="#">SystemUsage</a>	Monitors system resource usage: CPU, memory, disk space, and network interfaces.

# AgentTimes

Use this Knowledge Script to monitor the amount of time that Contact Center Manager Server agents spend in the following states:

- Logged In Time
- Not Ready Time
- Talk Time
- Waiting Time

This script raises events if a value exceeds the threshold that you set. In addition, this script generates data streams for the percentage and total time spent in each state.

Not every data stream is generated for each resource object for which this script is valid. The following table provides a matrix for determining whether a data stream is generated for the resource object you are using.

	DNIS Object	IVR Port Object
Talk Time	Yes	Yes
Logged In Time	No	Yes
Not Ready Time	No	Yes
Waiting Time	No	Yes

The first time you run this script, it marks the time and date (a starting point) in the database. With subsequent iterations, the script monitors and collects data based on changes in the database since the last time the script ran.

## Understanding How Datastreams Are Calculated

AppManager retrieves all of its call and agent statistics from the database on the Contact Center Manager Server. However, not all of the statistics that users find necessary (such as percentage statistics) are available in raw form directly from the databases. AppManager must calculate the statistics to provide the data streams that each Knowledge Script generates.

The following table illustrates how each data stream is calculated:

Datastream	Description and Calculation
%LoggedInTime	Calculated from the amount of time agents are logged in. $100 \times (\text{LoggedInTime}/900)$
%NotReadyTime	Calculated from the amount of time agents spend in Not Ready state and the amount of time agents are logged in. $100 \times (\text{NotReadyTime}/\text{LoggedInTime})$
%TalkTime	Calculated from the amount of time agents spend in Talk state and the amount of time agents are logged in. $100 \times (\text{TalkTime}/\text{LoggedInTime})$
%WaitingTime	Calculated from the amount of time agents spend in Waiting state and the amount of time agents are logged in. $100 \times (\text{waitingTime}/\text{LoggedInTime})$

## Resource Objects

- NT\_NORTELCC\_IVRPORT
- NT\_NORTELCC\_DNIS

## Default Schedule

By default, this script runs every 15 minutes. Because monitoring and data collection do not occur during the first iteration of this script, do not select the “Run Once” schedule.

## Setting Parameter Values

Set the following parameters as needed:

Parameter	How to Set It
<b>General Settings</b>	
<b>Job Failure Notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the AgentTimes job fails. The default is 5.
<b>Raise event if SQL query fails?</b>	Select <b>Yes</b> to raise an event if the SQL query fails. The default is Yes. AppManager uses a SQL query to retrieve Contact Center Manager Server database configuration information.
Event severity when SQL query fails	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the SQL query fails to retrieve database configuration information. The default is 15.
<b>Raise event if no new data is found?</b>	Select <b>Yes</b> to raise an event if the agent data has not changed since the last time the script ran. The default is Yes.
Event severity when no new data is found	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the agent data has not changed since the last time the script ran. The default is 15.
<b>Monitor Total Logged In Time</b>	
<b>Data Collection</b>	
Collect data for total Logged In time?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total amount of time agents were Logged In during the monitoring period. The default is unselected.
<b>Monitor Percentage of Time Logged In</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of time Logged In falls below threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of time that agents are Logged In falls below the threshold that you set. The default is Yes.
Threshold - Minimum percentage of time Logged In	Specify the minimum percentage of time that agents must be Logged In before an event is raised. The default is 100%.
Event severity when percentage of time Logged In exceeds threshold	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the percentage of time that agents are Logged In falls below the threshold you set. The default is 25.
<b>Data Collection</b>	

<b>Parameter</b>	<b>How to Set It</b>
Collect data for percentage of time Logged In?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of time agents were Logged In during the monitoring period. The default is unselected.
<b>Monitor Total Not Ready Time</b>	
<b>Data Collection</b>	
Collect data for total Not Ready time?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total amount of time agents were Not Ready during the monitoring period. The default is unselected.
<b>Monitor Percentage of Time Not Ready</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of time Not Ready exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of time that agents are Not Ready exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of time Not Ready	Specify the maximum percentage of time that agents must be Not Ready before an event is raised. The default is 70%.
Event severity when percentage of time Not Ready exceeds threshold	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the percentage of time that agents are Not Ready exceeds the threshold you set. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of time Not Ready?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of time agents were Not Ready during the monitoring period. The default is unselected.
<b>Monitor Total Talk Time</b>	
<b>Data Collection</b>	
Collect data for total Talk time?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total amount of time agents were in Talk Time during the monitoring period. The default is unselected.
<b>Monitor Percentage of Time Talking</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of time Talking exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of time that agents are in Talk Time exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of time Talking	Specify the maximum percentage of time that agents must be in Talk Time before an event is raised. The default is 70%.
Event severity when percentage of time Talking exceeds threshold	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the percentage of time that agents are in Talk Time exceeds the threshold you set. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of time Talking?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of time agents were in Talk Time during the monitoring period. The default is unselected.
<b>Monitor Total Time Waiting</b>	
<b>Data Collection</b>	

<b>Parameter</b>	<b>How to Set It</b>
Collect data for total Waiting time?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total amount of time agents were in Waiting Time during the monitoring period. The default is unselected.
<b>Monitor Percentage of Time Waiting</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of time Waiting exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of time that agents are in Waiting Time exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of time Waiting	Specify the maximum percentage of time that agents must be in Waiting Time before an event is raised. The default is 70%.
Event severity when percentage of time Waiting exceeds threshold	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the percentage of time that agents are in Waiting Time exceeds the threshold you set. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of time Waiting?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of time agents were in Waiting Time during the monitoring period. The default is unselected.

# Alarms

Use this Knowledge Script to monitor the Contact Center Manager Server for alarms (SNMP traps): critical, major, minor, and indeterminate. This script raises events if any alarm is detected.

When setting parameters for this script, you will be asked to provide a list of alarm identifiers (system messages) that you want to include in or exclude from monitoring. Their format consists of a multi-letter mnemonic followed by a multi-digit alarm number, such as AUD000 or SRPT194. If you want to enter more than one alarm identifier, separate them with a comma as in the following example:  
**AUD000, SRPT194.**

If you choose to “Include only” selected alarm identifiers in a category, AppManager will generate events only for those identifiers. AppManager will not generate events for the other identifiers included in the category.

If you choose to “Exclude” selected alarm identifiers from a category, AppManager will generate events for all alarm identifiers included in the category except those that you specifically excluded.

If you accept the default parameter settings, which are “Exclude” and blank (in the Alarm identifiers parameter), AppManager will generate events for all identifiers in the category, because you excluded nothing from the category.

## Prerequisite

To allow this Knowledge Script to receive alarms from Contact Center Manager Server, configure the server’s SNMP service.

**To configure the SNMP service:**

1. On the Contact Center Manager Server, navigate to the Control Panel, double-click **Administrative Tools**, and then double-click **Services**.
2. Double-click **SNMP Service** and then click the **Traps** tab.
3. In the **Community name** field, type the community string name for Contact Center Manager Server. The default community string name is “**public**.”
4. In the **Trap destinations** field, type the CLAN address of the Contact Center Manager Server.
5. Click **OK**.
6. Restart the SNMP service.

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### Note

If you change SNMP service configuration while the Alarms script is running, the script may terminate abnormally. To prevent abnormal termination, simply configure the SNMP service to send to the CLAN before you run the Alarms script.

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## Resource Object

NT\_NORTELCC\_SCCS

## Default Schedule

By default, this script runs on an asynchronous schedule.

## Setting Parameter Values

Set the following parameters as needed:

Parameter	How to Set It
<b>Monitor critical alarms?</b>	Select <b>Yes</b> to monitor Contact Center Manager Server for alarms in the critical category. The default is Yes.
Include or exclude alarms?	Select whether you want to <b>Include only</b> or <b>Exclude</b> the alarm identifiers that you specify in the following parameter. <ul style="list-style-type: none"> <li>Select <b>Exclude</b> to exclude the listed identifiers from the critical category.</li> <li>Select <b>Include only</b> to include <i>only</i> the listed identifiers in the critical category.</li> </ul> By default, the critical category includes all alarms with critical severity in the SNMP trap.
Alarm identifiers	Type a comma-separated list of the alarm identifiers that you want to include in or exclude from the critical category. The default is an empty list.
<b>Monitor major alarms?</b>	Select <b>Yes</b> to monitor Contact Center Manager Server for alarms in the major category. The default is Yes.
Include or exclude alarms?	Select whether you want to <b>Include only</b> or <b>Exclude</b> the alarm identifiers that you specify in the following parameter. <ul style="list-style-type: none"> <li>Select <b>Exclude</b> to exclude the listed identifiers from the major category.</li> <li>Select <b>Include only</b> to include <i>only</i> the listed identifiers in the major category.</li> </ul> By default, the critical category includes all alarms with major severity in the SNMP trap.
Alarm identifiers	Type a comma-separated list of the alarm identifiers that you want to include in or exclude from the major category. The default is an empty list.
<b>Monitor minor alarms?</b>	Select <b>Yes</b> to monitor Contact Center Manager Server for alarms in the minor category. The default is Yes.
Include or exclude alarms?	Select whether you want to <b>Include only</b> or <b>Exclude</b> the alarm identifiers that you specify in the following parameter. <ul style="list-style-type: none"> <li>Select <b>Exclude</b> to exclude the listed identifiers from the minor category.</li> <li>Select <b>Include only</b> to include <i>only</i> the listed identifiers in the minor category.</li> </ul> By default, the critical category includes all alarms with minor severity in the SNMP trap.
Alarm identifiers	Type a comma-separated list of the alarm identifiers that you want to include in or exclude from the minor category. The default is an empty list.
<b>Monitor indeterminate alarms?</b>	Select <b>Yes</b> to monitor Contact Center Manager Server for alarms in the indeterminate category. The default is Yes.
Include or exclude alarms?	Select whether you want to <b>Include only</b> or <b>Exclude</b> the alarm identifiers that you specify in the following parameter. <ul style="list-style-type: none"> <li>Select <b>Exclude</b> to exclude the listed identifiers from the indeterminate category.</li> <li>Select <b>Include only</b> to include <i>only</i> the listed identifiers in the indeterminate category.</li> </ul> By default, the critical category includes all alarms with indeterminate severity in the SNMP trap.
Alarm identifiers	Type a comma-separated list of the alarm identifiers that you want to include in or exclude from the indeterminate category. The default is an empty list.
<b>Event Severities</b>	

<b>Parameter</b>	<b>How to Set It</b>
Severity - Critical alarms	Set the severity level, between 1 and 40, to indicate the importance of an event in which a critical alarm is detected. The default is 10.
Severity - Major alarms	Set the severity level, between 1 and 40, to indicate the importance of an event in which a major alarm is detected. The default is 15.
Severity - Minor alarms	Set the severity level, between 1 and 40, to indicate the importance of an event in which a minor alarm is detected. The default is 20.
Severity - Indeterminate alarms	Set the severity level, between 1 and 40, to indicate the importance of an event in which an indeterminate alarm is detected. The default is 30.

# CallsAbandoned

Use this Knowledge Script to monitor various metrics related to abandoned calls:

- Number and percentage of abandoned calls
- Number and percentage of calls abandoned after meeting or exceeding the delay threshold
- Total delay of abandoned calls
- Average and maximum delay of abandoned calls

This script raises an event if a value exceeds the threshold you set. In addition, this script generates data streams for each metric. For more information, see [“Reviewing Call Metric Definitions”](#) on page 58.

Not every data stream is generated for each resource object for which this script is valid. The following table is a matrix for determining whether a data stream is generated for the resource object you are using.

	<b>CDN Object</b>	<b>DNIS Object</b>	<b>Application Object</b>	<b>AppSkillset Object</b>
<b>Calls Abandoned</b>	Yes	Yes	Yes	Yes
<b>% Calls Abandoned</b>	Yes	Yes	Yes	Yes
<b>Calls Abandoned After Threshold</b>	No	Yes	Yes	Yes
<b>% Calls Abandoned After Threshold</b>	No	Yes	Yes	Yes
<b>Calls Abandoned Delay</b>	No	Yes	Yes	Yes
<b>Maximum Abandoned Delay</b>	No	Yes	Yes	Yes
<b>Average Abandoned Delay</b>	No	Yes	Yes	No

The first time you run this script, it marks the time and date (a starting point) in the database. With subsequent iterations, the script monitors and collects data based on changes in the database since the last time the script ran.

## Understanding How Datastreams Are Calculated

AppManager retrieves all of its call and agent statistics from the database on the Contact Center Manager Server. However, not all of the statistics that users find necessary (such as percentage statistics) are available in raw form directly from the databases. AppManager must calculate the statistics to provide the data streams that each Knowledge Script generates.

The following table illustrates how each data stream is calculated:

<b>Datastream</b>	<b>Description and Calculation</b>
%CallsAbandoned	Calculated from the number of abandoned calls and the number of offered calls. $100 \times (\text{CallsAbandoned}/\text{CallsOffered})$
%SkillsetAbandoned	Calculated from the number of calls abandoned while in queue for a skillset and the number of calls offered to a skillset. $100 \times (\text{SkillsetAbandoned}/\text{CallsOffered})$
AvgCallsAbandonedDelay	Calculated from the amount of time calls spend in ContactCenter Manager Server before being abandoned (delay) and the number of abandoned calls. $\text{CallsAbandonedDelay}/\text{CallsAbandoned}$

Datastream	Description and Calculation
AvgSkillsetAbandonedDelay	Calculated from the amount of time calls spend in queue for a skillset before being abandoned and the number of calls abandoned while in queue for a skillset. $skillsetAbandonedDelay/SkillsetAbandoned$

## Resource Objects

- NT\_NORTELCC\_CDN
- NT\_NORTELCC\_DNIS
- NT\_NORTELCC\_APPLICATION
- NT\_NORTELCC\_APPSILLSET

The TreeView pane of the Operator Console contains Application and Skillset objects under the NortelCC object. Within the Application and Skillset object folders are Application/Skillset (AppSkillset) pairs. The same pairs are represented within the Application and Skillset object folders. Their placement within the Application and Skillset folders allows you to search for a particular pair by either Application or Skillset. You can drop this Knowledge Script on a pair in either location.

## Default Schedule

By default, this script runs every 15 minutes. Because monitoring and data collection do not occur during the first iteration of this script, do not select the “Run Once” schedule.

## Setting Parameter Values

Set the following parameters as needed:

Parameter	How to Set It
<b>General Settings</b>	
<b>Job Failure Notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the CallsAbandoned job fails. The default is 5.
<b>Raise event if SQL query fails?</b>	Select <b>Yes</b> to raise an event if the SQL query fails. The default is Yes. AppManager uses a SQL query to retrieve Contact Center Manager Server database configuration information.
Event severity when SQL query fails	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the SQL query fails to retrieve database configuration information. The default is 15.
<b>Raise event if no new data is found?</b>	Select <b>Yes</b> to raise an event if the agent data has not changed since the last time the script ran. The default is Yes.
Event severity when no new data is found	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the agent data has not changed since the last time the script ran. The default is 15.
<b>Monitor Calls Abandoned</b>	
<b>Data Collection</b>	
Collect data for calls abandoned?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of calls that were abandoned during the monitoring period. The default is unselected.

Parameter	How to Set It
<b>Monitor Percentage of Calls Abandoned</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls abandoned exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of abandoned calls exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls abandoned	Specify the maximum percentage of calls that must be abandoned before an event is raised. The default is 90%.
Event severity when percentage of calls abandoned exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of abandoned calls exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls abandoned?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that were abandoned during the monitoring period. The default is unselected.
<b>Monitor Calls Abandoned After Meeting or Exceeding Delay Ceiling</b>	
<b>Data Collection</b>	
Collect data for calls abandoned after meeting or exceeding delay ceiling?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of calls that were abandoned during the monitoring period after meeting or exceeding the delay ceiling. The default is unselected.
<b>Monitor Percentage of Calls Abandoned After Meeting or Exceeding Delay Ceiling</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls abandoned after meeting or exceeding delay ceiling exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls that were abandoned after meeting or exceeding the delay ceiling exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls abandoned after meeting or exceeding delay ceiling	Specify the maximum percentage of calls that can be abandoned after meeting or exceeding the delay ceiling before an event is raised. The default is 70%.
Event severity when percentage of calls abandoned after meeting or exceeding delay ceiling exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of calls that were abandoned after meeting or exceeding the delay ceiling exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls abandoned after meeting or exceeding delay ceiling?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that were abandoned during the monitoring period after meeting or exceeding the delay ceiling. The default is unselected.
<b>Monitor Total Delay of Calls Abandoned</b>	
<b>Data Collection</b>	
Collect data for total delay of calls abandoned?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total amount of delay experienced by abandoned calls during the monitoring period. The default is unselected.

Parameter	How to Set It
<b>Monitor Average Abandoned Delay</b>	
<b>Event Notification</b>	
<b>Raise event if average abandoned delay exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the average amount of delay experienced by abandoned calls exceeds the threshold that you set. The default is Yes.
Threshold - Maximum average abandoned delay	Specify the maximum average amount of delay that abandoned calls can experience before an event is raised. The default is 10 seconds.
Event severity when average abandoned delay exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the average amount of delay experienced by abandoned calls exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for average abandoned delay?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the average amount of delay that occurred during the monitoring period. The default is unselected.
<b>Monitor Maximum Abandoned Delay</b>	
<b>Event Notification</b>	
<b>Raise event if maximum abandoned delay exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the maximum amount of delay experienced by abandoned calls exceeds the threshold that you set. The default is Yes.
Threshold - Highest maximum abandoned delay	Specify the highest amount of maximum delay that abandoned calls can experience before an event is raised. The default is 10 seconds.
Event severity when maximum abandoned delay exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the average amount of delay experienced by abandoned calls exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for maximum abandoned delay?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the maximum amount of delay experienced by abandoned calls during the monitoring period. The default is unselected.

# Calls Answered

Use this Knowledge Script to monitor various metrics related to answered calls:

- Number and percentage of answered calls
- Number and percentage of calls answered after meeting or exceeding the delay threshold
- Total delay of answered calls
- Average and maximum delay of answered calls
- Total delay of calls answered at skillset
- Average and maximum delay of calls answered at skillset

This script raises an event if a value exceeds the threshold you set. In addition, this script generates data streams for each metric. For more information, see [“Reviewing Call Metric Definitions”](#) on page 58.

Not every data stream is generated for each resource object for which this script is valid. The following table is a matrix for determining whether a data stream is generated for the resource object you are using.

	<b>CDN Object</b>	<b>DNIS Object</b>	<b>IVRQueue Object</b>	<b>IVRPort Object</b>	<b>Application Object</b>	<b>AppSkillset Object</b>
<b>Calls Answered</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>% Calls Answered</b>	Yes	Yes	Yes	No	Yes	Yes
<b>Calls Answered After Threshold</b>	No	Yes	Yes	No	Yes	Yes
<b>% Calls Answered After Threshold</b>	No	Yes	Yes	No	Yes	Yes
<b>Calls Answered Delay</b>	No	Yes	Yes	No	Yes	Yes
<b>Maximum Answered Delay</b>	No	Yes	No	No	Yes	Yes
<b>Average Answered Delay</b>	No	Yes	Yes	No	Yes	Yes
<b>Calls Answered Delay at Skillset</b>	No	No	No	No	Yes	Yes
<b>Maximum Answered Delay at Skillset</b>	No	No	No	No	Yes	Yes
<b>Average Answered Delay at Skillset</b>	No	No	No	No	Yes	Yes

When dropped on a proper resource object, AppManager generates data streams as noted in the table.

The first time you run this script, it marks the time and date (a starting point) in the database. With subsequent iterations, the script monitors and collects data based on changes in the database since the last time the script ran.

## Understanding How Datastreams Are Calculated

AppManager retrieves all of its call and agent statistics from the database on the Contact Center Manager Server. However, not all of the statistics that users find necessary (such as percentage statistics) are available in raw form directly from the databases. AppManager must calculate the statistics to provide the data streams that each Knowledge Script generates.

The following table illustrates how each data stream is calculated:

<b>Datastream</b>	<b>Description and Calculation</b>
%CallsAnswered	Calculated from the number of answered calls and the number of offered calls. $100 \times (\text{CallsAnswered} / \text{CallsOffered})$
%CallsAnsweredAfterThreshold	Calculated from the number of calls answered after exceeding the delay threshold and the number of offered calls. $100 \times (\text{CallsAnsweredAfterThreshold} / \text{CallsOffered})$
AvgCallsAnsweredDelay	Calculated from the amount of time calls spend in Contact Center Manager Server before being answered (delay) and the number of answered calls. $\text{CallsAnsweredDelay} / \text{CallsAnswered}$
AvgCallsAnsweredDelayAtSkillset	Calculated from the amount of time calls spend in Contact Center Manager Server before being answered (delay) at a particular skillset and the number of answered calls. $\text{CallsAnsweredDelayAtSkillset} / \text{CallsAnswered}$

## Resource Objects

- NT\_NORTELCC\_CDN
- NT\_NORTELCC\_DNIS
- NT\_NORTELCC\_IVRQUEUE
- NT\_NORTELCC\_IVRPORT
- NT\_NORTELCC\_APPLICATION
- NT\_NORTELCC\_APPSILLSET

The TreeView pane of the Operator Console contains Application and Skillset objects under the NortelCC object. Within the Application and Skillset object folders are Application/Skillset (AppSkillset) pairs. The same pairs are represented within the Application and Skillset object folders. Their placement within the Application and Skillset folders allows you to search for a particular pair by either Application or Skillset. You can drop this Knowledge Script on a pair in either location.

## Default Schedule

By default, this script runs every 15 minutes. Because monitoring and data collection do not occur during the first iteration of this script, do not select the “Run Once” schedule.

## Setting Parameter Values

Set the following parameters as needed:

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

Parameter	How to Set It
<b>Raise event if SQL query fails?</b>	Select <b>Yes</b> to raise an event if the SQL query fails. The default is Yes. AppManager uses a SQL query to retrieve Contact Center Manager Server database configuration information.
Event severity when SQL query fails	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the SQL query fails to retrieve database configuration information. The default is 15.
<b>Raise event if no new data is found?</b>	Select <b>Yes</b> to raise an event if the agent data has not changed since the last time the script ran. The default is Yes.
Event severity when no new data is found	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the agent data has not changed since the last time the script ran. The default is 15.
<b>Monitor Calls Answered</b>	
<b>Data Collection</b>	
Collect data for calls answered?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of calls that were answered during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Answered</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls answered falls below threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of answered calls falls below the threshold that you set. The default is Yes. <b>Important</b> If you drop this script on a resource object that is not configured to answer calls, AppManager raises an event indicating that the percentage of answered calls for that object has indeed fallen below the threshold. The threshold is 90%. An object that is not configured to answer calls will have 0% answered calls — a value well below the threshold. To prevent this sort of invalid event, drop this script on a resource object that <i>is</i> configured to answer calls.
Threshold - Minimum percentage of calls answered	Specify the minimum percentage of calls that can be answered to prevent an event from being raised. The default is 90%.
Event severity when percentage of calls answered falls below threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of answered calls falls below the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls answered?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that were answered during the monitoring period. The default is unselected.
<b>Monitor Calls Answered After Meeting or Exceeding Delay Ceiling</b>	
<b>Data Collection</b>	
Collect data for calls answered after meeting or exceeding delay ceiling?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of calls that were answered during the monitoring period after meeting or exceeding the delay ceiling. The default is unselected.
<b>Monitor Percentage of Calls Answered After Meeting or Exceeding Delay Ceiling</b>	
<b>Event Notification</b>	

<b>Parameter</b>	<b>How to Set It</b>
<b>Raise event if percentage of calls answered after meeting or exceeding delay ceiling exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls that were answered after meeting or exceeding the delay ceiling exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls answered after meeting or exceeding delay ceiling	Specify the maximum percentage of calls that can be answered after meeting or exceeding the delay ceiling before an event is raised. The default is 70%.
Event severity when percentage of calls answered after meeting or exceeding delay ceiling exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of calls that were answered after meeting or exceeding the delay ceiling exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls answered after meeting or exceeding delay ceiling?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that were answered during the monitoring period after meeting or exceeding the delay ceiling. The default is unselected.
<b>Monitor Total Delay of Calls Answered</b>	
<b>Data Collection</b>	
Collect data for total delay of calls answered?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total amount of delay experienced by answered calls during the monitoring period. The default is unselected.
<b>Monitor Average Answered Delay</b>	
<b>Event Notification</b>	
<b>Raise event if average answered delay exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the average amount of delay experienced by answered calls exceeds the threshold that you set. The default is Yes.
Threshold - Maximum average answered delay	Specify the maximum average amount of delay that answered calls can experience before an event is raised. The default is 10 seconds.
Event severity when average answered delay exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the average amount of delay experienced by answered calls exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for average answered delay?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the average amount of delay that occurred during the monitoring period. The default is unselected.
<b>Monitor Maximum Answered Delay</b>	
<b>Event Notification</b>	
<b>Raise event if maximum answered delay exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the maximum amount of delay experienced by answered calls exceeds the threshold that you set. The default is Yes.
Threshold - Highest maximum answered delay	Specify the highest amount of maximum delay that answered calls can experience before an event is raised. The default is 10 seconds.
Event severity when maximum answered delay exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the average amount of delay experienced by answered calls exceeds the threshold. The default is 25.

<b>Parameter</b>	<b>How to Set It</b>
<b>Data Collection</b>	
Collect data for maximum answered delay?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the maximum amount of delay experienced by answered calls during the monitoring period. The default is unselected.
<b>Monitor Total Answered Delay at Skillset</b>	
<b>Data Collection</b>	
Collect data for total answered delay at skillset?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total amount of delay experienced by calls answered by a particular skillset during the monitoring period. The default is unselected.
<b>Monitor Average Answered Delay at Skillset</b>	
<b>Event Notification</b>	
<b>Raise event if average answered delay at skillset exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the average amount of delay experienced by calls answered by a particular skillset exceeds the threshold that you set. The default is Yes.
Threshold - Maximum average answered delay at skillset	Specify the maximum average amount of delay that answered calls can experience at a particular skillset before an event is raised. The default is 10 seconds.
Event severity when average answered delay at skillset exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the average amount of delay experienced by calls answered by a particular skillset exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for average answered delay at skillset?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the average amount of delay experienced by calls answered by a particular skillset during the monitoring period. The default is unselected.
<b>Monitor Maximum Answered Delay at Skillset</b>	
<b>Event Notification</b>	
<b>Raise event if maximum answered delay at skillset exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the maximum amount of delay experienced by calls answered by a particular skillset exceeds the threshold that you set. The default is Yes.
Threshold - Highest maximum answered delay at skillset	Specify the highest amount of maximum delay that answered calls can experience at a particular skillset before an event is raised. The default is 10 seconds.
Event severity when maximum answered delay at skillset exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the maximum amount of delay experienced by calls answered by a particular skillset exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for maximum answered delay at skillset?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the maximum amount of delay experienced by calls answered by a particular skillset during the monitoring period. The default is unselected.

# CallsConfTrans

Use this Knowledge Script to monitor calls that are transferred in and out of Contact Center Manager Server, and to monitor calls that have been conferenced in and out of Contact Center Manager Server. This script raises an event if a threshold is exceeded. In addition, this script generates data streams for each metric. For more information, see [“Reviewing Call Metric Definitions”](#) on page 58.

Not every data stream is generated for each resource object for which this script is valid. The following table is a matrix for determining whether a data stream is generated for the resource object you are using.

	IVRQueue Object	IVRPort Object	Application Object
<b>Calls Conferenced Out</b>	Yes	Yes	Yes
<b>Calls Conferenced In</b>	No	No	Yes
<b>% Calls Conferenced Out</b>	Yes	Yes	Yes
<b>% Calls Conferenced In</b>	No	No	Yes
<b>Calls Transferred Out</b>	Yes	Yes	Yes
<b>Calls Transferred In</b>	No	No	Yes
<b>% Calls Transferred Out</b>	Yes	Yes	Yes
<b>% Calls Transferred In</b>	No	No	Yes

The first time you run this script, it marks the time and date (a starting point) in the database. With subsequent iterations, the script monitors and collects data based on changes in the database since the last time the script ran.

## Understanding How Datastreams Are Calculated

AppManager retrieves all of its call and agent statistics from the database on the Contact Center Manager Server. However, not all of the statistics that users find necessary (such as percentage statistics) are available in raw form directly from the databases. AppManager must calculate the statistics to provide the data streams that each Knowledge Script generates.

The following table illustrates how each data stream is calculated:

Datastream	Description and Calculation
%CallsConferenced	Calculated from the number of conferenced calls and the number of answered calls. Applies to the IVR Port object. $100 \times (\text{CallsConferenced}/\text{CallsAnswered})$
%CallsConferenced	Calculated from the number of conferenced calls and the number of offered calls. Applies to the IVR Queue object. $100 \times (\text{CallsConferenced}/\text{CallsOffered})$
%CallsConferencedIn	Calculated from the number of calls conferenced in and the number of offered calls. $100 \times (\text{CallsConferencedIn}/\text{CallsOffered})$
%CallsConferencedOut	Calculated from the number of calls conferenced out and the number of offered calls. $100 \times (\text{CallsConferencedOut}/\text{CallsOffered})$

<b>Datastream</b>	<b>Description and Calculation</b>
%CallsTransferred	Calculated from the number of transferred calls and the number of answered calls. Applies to the IVR Port object. $100 \times (\text{CallsTransferred}/\text{CallsAnswered})$
%CallsTransferred	Calculated from the number of transferred calls and the number of offered calls. Applies to the IVR Queue object. $100 \times (\text{CallsTransferred}/\text{CallsOffered})$
%CallsTransferredIn	Calculated from the number of calls transferred in and the number of offered calls. $100 \times (\text{CallsTransferredIn}/\text{CallsOffered})$
%CallsTransferredOut	Calculated from the number of calls transferred out and the number of offered calls. $100 \times (\text{CallsTransferredOut}/\text{CallsOffered})$

## Resource Objects

- NT\_NORTELCC\_IVRQUEUE
- NT\_NORTELCC\_IVRPORT
- NT\_NORTELCC\_APPLICATION

## Default Schedule

By default, this script runs every 15 minutes. Because monitoring and data collection do not occur during the first iteration of this script, do not select the “Run Once” schedule.

## Setting Parameter Values

Set the following parameters as needed:

<b>Parameter</b>	<b>How to Set It</b>
<b>General Settings</b>	
<b>Job Failure Notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the CallsConfTrans job fails. The default is 5.
<b>Raise event if SQL query fails?</b>	Select <b>Yes</b> to raise an event if the SQL query fails. The default is Yes. AppManager uses a SQL query to retrieve Contact Center Manager Server database configuration information.
Event severity when SQL query fails	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the SQL query fails to retrieve database configuration information. The default is 15.
<b>Raise event if no new data is found?</b>	Select <b>Yes</b> to raise an event if the agent data has not changed since the last time the script ran. The default is Yes.
Event severity when no new data is found	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the agent data has not changed since the last time the script ran. The default is 15.
<b>Monitor Calls Conferenced In</b>	
<b>Data Collection</b>	

<b>Parameter</b>	<b>How to Set It</b>
Collect data for calls answered?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of calls that were conferenced in during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Conferenced In</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls conferenced in exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of conferenced-in calls exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls conferenced in	Specify the maximum percentage of calls that must be conferenced in before an event is raised. The default is 0%.
Event severity when percentage of calls conferenced in exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of conferenced-in calls exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls conferenced in?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that were conferenced in during the monitoring period. The default is unselected.
<b>Monitor Calls Conferenced Out</b>	
<b>Data Collection</b>	
Collect data for calls conferenced out?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of calls that were conferenced out during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Conferenced Out</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls conferenced out exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls that were conferenced out exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls conferenced out	Specify the maximum percentage of calls that can be conferenced out before an event is raised. The default is 0%.
Event severity when percentage of calls conferenced out exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of conferenced-out calls exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls conferenced out?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that were conferenced out during the monitoring period. The default is unselected.
<b>Monitor Calls Transferred In</b>	
<b>Data Collection</b>	
Collect data for calls transferred in?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of calls that were transferred in during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Transferred In</b>	

Parameter	How to Set It
<b>Event Notification</b>	
<b>Raise event if percentage of calls transferred in exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls that were transferred in exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls transferred in	Specify the maximum percentage of calls that must be transferred in before an event is raised. The default is 0%.
Event severity when percentage of calls transferred in exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of transferred-in calls exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls transferred in?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls transferred in during the monitoring period. The default is unselected.
<b>Monitor Calls Transferred Out</b>	
<b>Data Collection</b>	
Collect data for calls transferred out?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of calls transferred out during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Transferred Out</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls transferred out exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls transferred out exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls transferred out	Specify the maximum percentage of calls that must be transferred out before an event is raised. The default is 0 calls.
Event severity when percentage of calls transferred out exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of transferred-out calls exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls transferred out?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls transferred out during the monitoring period. The default is unselected.

# CallsOffered

Use this Knowledge Script to monitor the number of calls that have been offered to Contact Center Manager Server. This script generates data streams for the number of offered calls per resource object.

The first time you run this script, it marks the time and date (a starting point) in the database. With subsequent iterations, the script monitors and collects data based on changes in the database since the last time the script ran.

## Resource Objects

- NT\_NORTELCC\_CDN
- NT\_NORTELCC\_DNIS
- NT\_NORTELCC\_IVRQUEUE
- NT\_NORTELCC\_APPLICATION
- NT\_NORTELCC\_APPSKILLSET

## Default Schedule

By default, this script runs every 15 minutes. Because monitoring and data collection do not occur during the first iteration of this script, do not select the “Run Once” schedule.

## Setting Parameter Values

Set the following parameters as needed:

Parameter	How to Set It
<b>General Settings</b>	
<b>Job Failure Notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the CallsOffered job fails. The default is 5.
<b>Raise event if SQL query fails?</b>	Select <b>Yes</b> to raise an event if the SQL query fails. The default is Yes. AppManager uses a SQL query to retrieve Contact Center Manager Server database configuration information.
Event severity when SQL query fails	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the SQL query fails to retrieve database configuration information. The default is 15.
<b>Raise event if no new data is found?</b>	Select <b>Yes</b> to raise an event if the agent data has not changed since the last time the script ran. The default is Yes.
Event severity when no new data is found	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the agent data has not changed since the last time the script ran. The default is 15.
<b>Monitor Calls Offered</b>	
<b>Data Collection</b>	
Collect data for calls offered?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of calls that were offered to Contact Center Manager Server during the monitoring period. The default is unselected.

# CallsTerminated

Use this Knowledge Script to monitor the number and percentage of terminated calls. This script raises an event if the percentage of terminated calls falls below the threshold that you set. In addition, this script generates data streams for the number and percentage of terminated calls.

The first time you run this script, it marks the time and date (a starting point) in the database. With subsequent iterations, the script monitors and collects data based on changes in the database since the last time the script ran.

## Understanding How Datastreams Are Calculated

AppManager retrieves all of its call and agent statistics from the database on the Contact Center Manager Server. However, not all of the statistics that users find necessary (such as percentage statistics) are available in raw form directly from the databases. AppManager must calculate the statistics to provide the data streams that each Knowledge Script generates.

The following table illustrates how each data stream is calculated:

Datastream	Description and Calculation
%CallsTerminated	Calculated from the number of terminated calls and the number of offered calls. $100 \times (\text{CallsTerminated}/\text{CallsOffered})$

## Resource Object

NT\_NORTELCC\_CDN

## Default Schedule

By default, this script runs every 15 minutes. Because monitoring and data collection do not occur during the first iteration of this script, do not select the “Run Once” schedule.

## Setting Parameter Values

Set the following parameters as needed:

Parameter	How to Set It
<b>General Settings</b>	
<b>Job Failure Notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the CallsTerminated job fails. The default is 5.
<b>Raise event if SQL query fails?</b>	Select <b>Yes</b> to raise an event if the SQL query fails. The default is Yes. AppManager uses a SQL query to retrieve Contact Center Manager Server database configuration information.
Event severity when SQL query fails	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the SQL query fails to retrieve database configuration information. The default is 15.
<b>Raise event if no new data is found?</b>	Select <b>Yes</b> to raise an event if the agent data has not changed since the last time the script ran. The default is Yes.

<b>Parameter</b>	<b>How to Set It</b>
Event severity when no new data is found	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the agent data has not changed since the last time the script ran. The default is 15.
<b>Monitor Calls Terminated</b>	
<b>Data Collection</b>	
Collect data for calls terminated?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of calls that were terminated during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Terminated</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls terminated falls below threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of terminated calls falls below the threshold that you set. The default is Yes.
Threshold - Minimum percentage of calls terminated	Specify the minimum percentage of calls that must be terminated before an event is raised. The default is 90%.
Event severity when percentage of calls terminated falls below threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of terminated calls falls below the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls terminated?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that were terminated during the monitoring period. The default is unselected.

# CallTimes

Use this Knowledge Script to monitor the time that calls spend in Contact Center Manager Server before being transferred or receiving a type of call treatment. This script raises an event if a value exceeds a threshold that you set. In addition, this script generates the following data streams:

- TimeBeforeDefault
- TimeBeforeForceBusy
- TimeBeforeForceDisconnect
- TimeBeforeForceOverflow
- TimeBeforeInterflow
- TimeBeforeIVRTransfer
- TimeBeforeRouteTo
- AvgTimeBeforeDefault
- AvgTimeBeforeForceBusy
- AvgTimeBeforeForceDisconnect
- AvgTimeBeforeForceOverflow
- AvgTimeBeforeInterflow
- AvgTimeBeforeRouteTo

For more information, see [“Reviewing Call Metric Definitions”](#) on page 58.

The first time you run this script, it marks the time and date (a starting point) in the database. With subsequent iterations, the script monitors and collects data based on changes in the database since the last time the script ran.

## Understanding How Datastreams Are Calculated

AppManager retrieves all of its call and agent statistics from the database on the Contact Center Manager Server. However, not all of the statistics that users find necessary (such as percentage statistics) are available in raw form directly from the databases. AppManager must calculate the statistics to provide the data streams that each Knowledge Script generates.

The following table illustrates how each data stream is calculated:

<b>Datastream</b>	<b>Description and Calculation</b>
AvgTimeBeforeDefault	Calculated from the amount of time calls spend in Contact Center Manager Server before receiving the default treatment and the number of calls given the default treatment. $\text{TimeBeforeDefault}/\text{CallsGivenDefault}$
AvgTimeBeforeForceBusy	Calculated from the amount of time calls spend in Contact Center Manager Server before receiving the force busy treatment and the number of calls given the force busy treatment. $\text{TimeBeforeForceBusy}/\text{CallsGivenForceBusy}$
AvgTimeBeforeForceDisconnect	Calculated from the amount of time calls spend in Contact Center Manager Server before receiving the force disconnect treatment and the number of calls given the force disconnect treatment. $\text{TimeBeforeForceDisconnect}/\text{CallsGivenForceDisconnect}$

<b>Datastream</b>	<b>Description and Calculation</b>
AvgTimeBeforeForceOverflow	Calculated from the amount of time calls spend in Contact Center Manager Server before receiving the force overflow treatment and the number of calls given the force overflow treatment. $TimeBeforeForceOverflow/CallsGivenForceOverflow$
AvgTimeBeforeInterflow	Calculated from the amount of time calls spend in Master_Script and the number of offered calls. $TimeBeforeInterflow/CallsOffered$
AvgTimeBeforeRouteTo	Calculated from the amount of time calls spend in Contact Center Manager Server before receiving the route call treatment and the number of calls given the route call treatment. $TimeBeforeRouteTo/CallsGivenRouteTo$

## Resource Object

NT\_NORTELCC\_APPLICATION

## Default Schedule

By default, this script runs every 15 minutes. Because monitoring and data collection do not occur during the first iteration of this script, do not select the “Run Once” schedule.

## Setting Parameter Values

Set the following parameters as needed:

<b>Parameter</b>	<b>How to Set It</b>
<b>General Settings</b>	
<b>Job Failure Notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the CallTimes job fails. The default is 5.
<b>Raise event if SQL query fails?</b>	Select <b>Yes</b> to raise an event if the SQL query fails. The default is Yes. AppManager uses a SQL query to retrieve Contact Center Manager Server database configuration information.
Event severity when SQL query fails	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the SQL query fails to retrieve database configuration information. The default is 15.
<b>Raise event if no new data is found?</b>	Select <b>Yes</b> to raise an event if the agent data has not changed since the last time the script ran. The default is Yes.
Event severity when no new data is found	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the agent data has not changed since the last time the script ran. The default is 15.
<b>Monitor Total Time Calls Spent in System Before Default Treatment</b>	
<b>Data Collection</b>	
Collect data for total time calls spent in system before default treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of seconds that calls spent in Contact Center Manager Server before receiving the default treatment. The default is unselected.
<b>Monitor Average Time Calls Spent in System Before Default Treatment</b>	

Parameter	How to Set It
<b>Event Notification</b>	
<b>Raise event if average time calls spent in system before default treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the average time that calls spent in Contact Center Manager Server before receiving the default treatment exceeds the threshold that you set. The default is Yes.
Threshold - Maximum average time calls spent in system before default treatment	Specify the highest average time that calls can spend in Contact Center Manager Server (before receiving the default treatment) before an event is raised. The default is 10 seconds.
Event severity when average time calls spent in system before default treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the highest average time that calls spent in Contact Center Manager Server (before receiving the default treatment) exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for average time calls spent in system before default treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the highest average time that calls spent in Contact Center Manager Server during the monitoring period before receiving the default treatment. The default is unselected.
<b>Monitor Total Time Calls Spent in System Before Force Busy Treatment</b>	
<b>Data Collection</b>	
Collect data for total time calls spent in system before force busy treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of seconds that calls spent in Contact Center Manager Server before receiving the force busy treatment. The default is unselected.
<b>Monitor Average Time Calls Spent in System Before Force Busy Treatment</b>	
<b>Event Notification</b>	
<b>Raise event if average time calls spent in system before force busy treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the average time that calls spent in Contact Center Manager Server before receiving the force busy treatment exceeds the threshold that you set. The default is Yes.
Threshold - Maximum average time calls spent in system before force busy treatment	Specify the highest average time that calls can spend in Contact Center Manager Server (before receiving the force busy treatment) before an event is raised. The default is 10 seconds.
Event severity when average time calls spent in system before force busy treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the highest average time that calls spent in Contact Center Manager Server (before receiving the force busy treatment) exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for average time calls spent in system before force busy treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the highest average time that calls spent in Contact Center Manager Server during the monitoring period before receiving the force busy treatment. The default is unselected.
<b>Monitor Total Time Calls Spent in System Before Disconnect Treatment</b>	
<b>Data Collection</b>	
Collect data for total time calls spent in system before disconnect treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of seconds that calls spent in Contact Center Manager Server before receiving the disconnect treatment. The default is unselected.

Parameter	How to Set It
<b>Monitor Average Time Calls Spent in System Before Disconnect Treatment</b>	
<b>Event Notification</b>	
<b>Raise event if average time calls spent in system before disconnect treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the average time that calls spent in Contact Center Manager Server before receiving the disconnect treatment exceeds the threshold that you set. The default is Yes.
Threshold - Maximum average time calls spent in system before disconnect treatment	Specify the highest average time that calls can spend in Contact Center Manager Server (before receiving the disconnect treatment) before an event is raised. The default is 10 seconds.
Event severity when average time calls spent in system before disconnect treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the highest average time that calls spent in Contact Center Manager Server (before receiving the disconnect treatment) exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for average time calls spent in system before disconnect treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the highest average time that calls spent in Contact Center Manager Server during the monitoring period before receiving the disconnect treatment. The default is unselected.
<b>Monitor Total Time Calls Spent in System Before Force Overflow Treatment</b>	
<b>Data Collection</b>	
Collect data for total time calls spent in system before force overflow treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of seconds that calls spent in Contact Center Manager Server before receiving the force overflow treatment. The default is unselected.
<b>Monitor Average Time Calls Spent in System Before Force Overflow Treatment</b>	
<b>Event Notification</b>	
<b>Raise event if average time calls spent in system before force overflow treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the average time that calls spent in Contact Center Manager Server before receiving the force overflow treatment exceeds the threshold that you set. The default is Yes.
Threshold - Maximum average time calls spent in system before force overflow treatment	Specify the highest average time that calls can spend in Contact Center Manager Server (before receiving the force overflow treatment) before an event is raised. The default is 10 seconds.
Event severity when average time calls spent in system before force overflow treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the highest average time that calls spent in Contact Center Manager Server (before receiving the force overflow treatment) exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for average time calls spent in system before force overflow treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the highest average time that calls spent in Contact Center Manager Server during the monitoring period before receiving the force overflow treatment. The default is unselected.
<b>Monitor Total Time Calls Spent in Master_Script</b>	
<b>Data Collection</b>	

<b>Parameter</b>	<b>How to Set It</b>
Collect data for total time calls spent in Master_Script?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of seconds that calls spent in Master_Script. The default is unselected.
<b>Monitor Average Time Calls Spent in Master_Script</b>	
<b>Event Notification</b>	
<b>Raise event if average time calls spent in Master_Script exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the average time that calls spent in Master_Script exceeds the threshold that you set. The default is Yes.
Threshold - Maximum average time calls spent in Master_Script	Specify the highest average time that calls can spend in Master_Script before an event is raised. The default is 10 seconds.
Event severity when average time calls spent in Master_Script exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the highest average time that calls spent in Master_Script exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for average time calls spent in Master_Script?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the highest average time that calls spent in Master_Script. The default is unselected.
<b>Monitor Total Time Calls Spent in System Before Transfer to IVR</b>	
<b>Data Collection</b>	
Collect data for total time calls spent in system before transfer to IVR?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of seconds that calls spent in Contact Center Manager Server before being transferred to an Interactive Voice Response (IVR) system. The default is unselected.
<b>Monitor Total Time Calls Spent in System Before Route Call Treatment</b>	
<b>Data Collection</b>	
Collect data for total time calls spent in system before route call treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of seconds that calls spent in Contact Center Manager Server before receiving route call treatment. The default is unselected.
<b>Monitor Average Time Calls Spent in System Before Route Call Treatment</b>	
<b>Event Notification</b>	
<b>Raise event if average time calls spent in system before route call treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the average time that calls spent in Contact Center Manager Server before receiving route call treatment exceeds the threshold that you set. The default is Yes.
Threshold - Maximum average time calls spent in system before route call treatment	Specify the highest average time that calls can spend in Contact Center Manager Server (before receiving route call treatment) before an event is raised. The default is 10 seconds.
Event severity when average time calls spent in system before route call treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the highest average time that calls spent in Contact Center Manager Server (before receiving route call treatment) exceeds the threshold. The default is 25.
<b>Data Collection</b>	

Parameter	How to Set It
Collect data for average time calls spent in system before route call treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the highest average time that calls spent in Contact Center Manager Server before receiving route call treatment. The default is unselected.

# CallTreatments

Use this Knowledge Script to monitor the number and percentage of calls that receive several types of call treatments:

- Broadcast
- Default
- Force Busy
- Force Disconnect
- Force Overflow
- Host Lookup
- IVR
- Music
- RAN
- Route Call

This script raises an event if a threshold is exceeded. In addition, this script generates data streams for each metric. For more information, see [“Reviewing Call Metric Definitions”](#) on page 58.

Not every data stream is generated for each resource object for which this script is valid. The following table is a matrix for determining whether a data stream is generated for the resource object you are using.

	DNIS Object	Application Object
<b>Calls Given Broadcast</b>	No	Yes
<b>% Calls Given Broadcast</b>	No	Yes
<b>Calls Given Default</b>	Yes	Yes
<b>% Calls Given Default</b>	Yes	Yes
<b>Calls Given Force Busy</b>	Yes	Yes
<b>% Calls Given Force Busy</b>	Yes	Yes
<b>Calls Given Force Disconnect</b>	Yes	Yes
<b>% Calls Given Force Disconnect</b>	Yes	Yes
<b>Calls Given Force Overflow</b>	Yes	Yes
<b>% Calls Given Force Overflow</b>	Yes	Yes
<b>Calls Given Host Lookup</b>	No	Yes
<b>% Calls Given Host Lookup</b>	No	Yes
<b>Calls Given IVR</b>	No	Yes
<b>% Calls Given IVR</b>	No	Yes
<b>Calls Given Music</b>	No	Yes
<b>% Calls Given Music</b>	No	Yes
<b>Calls Given RAN</b>	No	Yes
<b>% Calls Given RAN</b>	No	Yes
<b>Calls Given Route Call</b>	Yes	Yes
<b>% Calls Given Route Call</b>	Yes	Yes

The first time you run this script, it marks the time and date (a starting point) in the database. With subsequent iterations, the script monitors and collects data based on changes in the database since the last time the script ran.

## Understanding How Datastreams Are Calculated

AppManager retrieves all of its call and agent statistics from the database on the Contact Center Manager Server. However, not all of the statistics that users find necessary (such as percentage statistics) are available in raw form directly from the databases. AppManager must calculate the statistics to provide the data streams that each Knowledge Script generates.

The following table illustrates how each data stream is calculated:

<b>Datastream</b>	<b>Description and Calculation</b>
%CallsGivenBroadcast	Calculated from the number of calls given the broadcast treatment and the number of offered calls. $100 \times (\text{CallsGivenBroadcast}/\text{CallsOffered})$
%CallsGivenDefault	Calculated from the number of calls given the default treatment and the number of offered calls. $100 \times (\text{CallsGivenDefault}/\text{CallsOffered})$
%CallsGivenForceBusy	Calculated from the number of calls given the force busy treatment and the number of offered calls. $100 \times (\text{CallsGivenForceBusy}/\text{CallsOffered})$
%CallsGivenForceDisconnect	Calculated from the number of calls given the force disconnect treatment and the number of offered calls. $100 \times (\text{CallsGivenForceDisconnect}/\text{CallsOffered})$
%CallsGivenForceOverflow	Calculated from the number of calls given the force overflow treatment and the number of offered calls. $100 \times (\text{CallsGivenForceOverflow}/\text{CallsOffered})$
%CallsGivenHostLookup	Calculated from the number of calls given the host lookup treatment and the number of offered calls. $100 \times (\text{CallsGivenHostLookup}/\text{CallsOffered})$
%CallsGivenIVR	Calculated from the number of calls given the IVR treatment and the number of offered calls. $100 \times (\text{CallsGivenIVR}/\text{CallsOffered})$
%CallsGivenMusic	Calculated from the number of calls given the music treatment and the number of offered calls. $100 \times (\text{CallsGivenMusic}/\text{CallsOffered})$
%CallsGivenRAN	Calculated from the number of calls given the recorded announcement treatment and the number of offered calls. $100 \times (\text{CallsGivenRAN}/\text{CallsOffered})$
%CallsGivenRouteTo	Calculated from the number of calls given the route call treatment and the number of offered calls. $100 \times (\text{CallsGivenRouteTo}/\text{CallsOffered})$

## Resource Objects

- NT\_NORTELCC\_DNIS
- NT\_NORTELCC\_APPLICATION

## Default Schedule

By default, this script runs every 15 minutes. Because monitoring and data collection do not occur during the first iteration of this script, do not select the “Run Once” schedule.

## Setting Parameter Values

Set the following parameters as needed:

Parameter	How to Set It
<b>General Settings</b>	
<b>Job Failure Notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the CallTreatments job fails. The default is 5.
<b>Raise event if SQL query fails?</b>	Select <b>Yes</b> to raise an event if the SQL query fails. The default is Yes. AppManager uses a SQL query to retrieve Contact Center Manager Server database configuration information.
Event severity when SQL query fails	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the SQL query fails to retrieve database configuration information. The default is 15.
<b>Raise event if no new data is found?</b>	Select <b>Yes</b> to raise an event if the agent data has not changed since the last time the script ran. The default is Yes.
Event severity when no new data is found	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the agent data has not changed since the last time the script ran. The default is 15.
<b>Monitor Calls Given Broadcast Treatment</b>	
<b>Data Collection</b>	
Collect data for calls given broadcast treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of calls that received broadcast treatment during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Given Broadcast Treatment</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls given broadcast treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls that received broadcast treatment exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls given broadcast treatment	Specify the maximum percentage of calls that must receive broadcast treatment before an event is raised. The default is 70%.
Event severity when percentage of calls given broadcast treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of calls that received broadcast treatment exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls given broadcast treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that received broadcast treatment during the monitoring period. The default is unselected.
<b>Monitor Calls Given Default Treatment</b>	

<b>Parameter</b>	<b>How to Set It</b>
<b>Data Collection</b>	
Collect data for calls given default treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of calls that received default treatment during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Given Default Treatment</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls given default treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls that received default treatment exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls given default treatment	Specify the maximum percentage of calls that can receive default treatment before an event is raised. The default is 70%.
Event severity when percentage of calls given default treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of calls that received default treatment exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls given default treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that received default treatment during the monitoring period. The default is unselected.
<b>Monitor Calls Given Force Busy Treatment</b>	
<b>Data Collection</b>	
Collect data for calls given force busy treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of calls that received force busy treatment during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Given Force Busy Treatment</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls given force busy treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls that received force busy treatment exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls given force busy treatment	Specify the maximum percentage of calls that can receive force busy treatment before an event is raised. The default is 70%.
Event severity when percentage of calls given force busy treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of calls that received force busy treatment exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls given force busy treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that received force busy treatment during the monitoring period. The default is unselected.
<b>Monitor Calls Given Force Disconnect Treatment</b>	
<b>Data Collection</b>	

<b>Parameter</b>	<b>How to Set It</b>
Collect data for calls given force disconnect treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of calls that received force disconnect treatment during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Given Force Disconnect Treatment</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls given force disconnect treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls that received force disconnect treatment exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls given force disconnect treatment	Specify the maximum percentage of calls that can receive force disconnect treatment before an event is raised. The default is 70%.
Event severity when percentage of calls given force disconnect treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of calls that received force disconnect treatment exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls given force disconnect treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that received force disconnect treatment during the monitoring period. The default is unselected.
<b>Monitor Calls Given Force Overflow Treatment</b>	
<b>Data Collection</b>	
Collect data for calls given force overflow treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of calls that received force overflow treatment during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Given Force Overflow Treatment</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls given force overflow treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls that received force overflow treatment exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls given force overflow treatment	Specify the maximum percentage of calls that can receive force overflow treatment before an event is raised. The default is 70%.
Event severity when percentage of calls given force overflow treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of calls that received force overflow treatment exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls given force overflow treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that received force overflow treatment during the monitoring period. The default is unselected.
<b>Monitor Calls Given Host Lookup Treatment</b>	
<b>Data Collection</b>	
Collect data for calls given host lookup treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of calls that received host lookup treatment during the monitoring period. The default is unselected.

Parameter	How to Set It
<b>Monitor Percentage of Calls Given Host Lookup Treatment</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls given host lookup treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls that received host lookup treatment exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls given host lookup treatment	Specify the maximum percentage of calls that can receive host lookup treatment before an event is raised. The default is 70%.
Event severity when percentage of calls given host lookup treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of calls that received host lookup treatment exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls given host lookup treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that received host lookup treatment during the monitoring period. The default is unselected.
<b>Monitor Calls Given IVR Treatment</b>	
<b>Data Collection</b>	
Collect data for calls given IVR treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of calls that received IVR treatment during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Given IVR Treatment</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls given IVR treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls that received IVR treatment exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls given IVR treatment	Specify the maximum percentage of calls that can receive IVR treatment before an event is raised. The default is 70%.
Event severity when percentage of calls given IVR treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of calls that received IVR treatment exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls given IVR treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that received IVR treatment during the monitoring period. The default is unselected.
<b>Monitor Calls Given Music Treatment</b>	
<b>Data Collection</b>	
Collect data for calls given music treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of calls that received music treatment during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Given Music Treatment</b>	
<b>Event Notification</b>	

<b>Parameter</b>	<b>How to Set It</b>
<b>Raise event if percentage of calls given music treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls that received music treatment exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls given music treatment	Specify the maximum percentage of calls that can receive music treatment before an event is raised. The default is 70%.
Event severity when percentage of calls given music treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of calls that received music treatment exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls given music treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that received music treatment during the monitoring period. The default is unselected.
<b>Monitor Calls Given RAN Treatment</b>	
<b>Data Collection</b>	
Collect data for calls given RAN treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of calls that received a recorded announcement during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Given RAN Treatment</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of calls given RAN treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls that received a recorded announcement exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls given RAN treatment	Specify the maximum percentage of calls that can receive a recorded announcement before an event is raised. The default is 70%.
Event severity when percentage of calls given RAN treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of calls that received a recorded announcement exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls given RAN treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that received a recorded announcement during the monitoring period. The default is unselected.
<b>Monitor Calls Given Route Call Treatment</b>	
<b>Data Collection</b>	
Collect data for calls given route call treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total number of calls that received route call treatment during the monitoring period. The default is unselected.
<b>Monitor Percentage of Calls Given Route Call Treatment</b>	
<b>Event Notification</b>	

<b>Parameter</b>	<b>How to Set It</b>
<b>Raise event if percentage of calls given route call treatment exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of calls that received route call treatment exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of calls given route call treatment	Specify the maximum percentage of calls that can receive route call treatment before an event is raised. The default is 70%.
Event severity when percentage of calls given route call treatment exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of calls that received route call treatment exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage of calls given route call treatment?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of calls that received route call treatment during the monitoring period. The default is unselected.

# Database

Use this Knowledge Script to monitor free and used space in the Master, Blue, and Call-by-Call databases. This script raises an event if a value exceeds or falls below a threshold. In addition, this script generates data streams for the following metrics:

- Total free space
- Percentage of used space

## Resource Object

NT\_NORTELCC\_DATABASE

## Default Schedule

By default, this script runs every 15 minutes.

## Setting Parameter Values

Set the following parameters as needed:

Parameter	How to Set It
<b>General Settings</b>	
<b>Job Failure Notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the Database job fails. The default is 5.
<b>Raise event if SQL query fails?</b>	Select <b>Yes</b> to raise an event if the SQL query fails. The default is Yes. AppManager uses a SQL query to retrieve Contact Center Manager Server database configuration information.
Event severity when SQL query fails	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the SQL query fails to retrieve database configuration information. The default is 15.
<b>Raise event if no new data is found?</b>	Select <b>Yes</b> to raise an event if database data has not changed since the last time the script ran. The default is Yes.
Event severity when no new data is found	Set the event severity level, from 1 to 40, to reflect the importance of an event in which database data has not changed since the last time the script ran. The default is 15.
<b>Monitor Free Space</b>	
<b>Data Collection</b>	
Collect data for free space?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the total amount of free disk space on the databases. The default is unselected.
<b>Monitor Percentage Used Space</b>	
<b>Event Notification</b>	
<b>Raise event if percentage used space exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of used disk space exceeds the threshold that you set. The default is Yes.

<b>Parameter</b>	<b>How to Set It</b>
Threshold - Maximum percentage used space	Specify the maximum percentage of disk space that can be used before an event is raised. The default is 90%.
Event severity when percentage used space exceeds threshold.	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of used disk space exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for percentage used space?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of used disk space for the databases. The default is unselected.

# HealthCheck

Use this Knowledge Script to monitor the availability of services on the Contact Center Manager Server server. This script raises an event if a service is unavailable. In addition, this script can generate data streams for service availability.

This script can monitor the services listed in the following table. All but two, Host Application Integration and TAO NT Naming Service, are monitored by default. Nortel does not consider these two services to be critical. Refer to your Nortel Symposium Call Center documentation (*Installation and Maintenance Guide for Windows 2000* and *Installation and Maintenance Guide for Windows 2003*) to determine the relevancy of the other monitored services in your Contact Center Manager Server environment.

Use the Services to monitor parameters to select and deselect services as appropriate for your installation of Contact Center Manager Server. If your initial selection does not suit your needs, simply rerun this script until you are monitoring an ideal combination of services.

AUDIT_Service	DBNotifier_Service	EB_Service
ES_Service	HDC_Service	HDM_Service
Host Application Integration	IceEmHlpService	IceRTDService
IS_Service	MAS Backup/Restore	MAS Configuration Manager
MAS Event Scheduler	MAS Fault Manager	MAS LinkHandler Port #2
MAS OM Server	MAS Security	MAS Service Daemon
MAS Service Manager	MAS Time Service	MLSM_Service
NBNM_Service	NBTSM_Service	NCCOAM_Service
NDLOAM_Service	NITSM_Service	OAM_Service
pcAnywhere Host Service	RDC_Service	RSM_Service
SDMCA_Service	SDP_Service	Sybase BCKServer
Sybase MONServer	Sybase SQLServer	Sybase XPServer
SymposiumWC	TAO NT Naming Service	TFA_Service
TFABridge_Service	TFE_Service	VSM_Service

## Resource Object

NortelCC\_SCCS

## Default Schedule

By default, this script runs every minute.

## Setting Parameter Values

Set the following parameters as needed:

Parameter	How to Set It
<b>General Settings</b>	
<b>Job Failure Notification</b>	

<b>Parameter</b>	<b>How to Set It</b>
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the HealthCheck job fails. The default is 5.
<b>Raise event if a service is not found?</b>	Select <b>Yes</b> to raise an event if a monitored service cannot be found on the Contact Center Manager Server. The default is Yes. Use the Services to Monitor parameters to select the services that you want to monitor.
Event severity when a service is not found	Set the severity level, from 1 to 40, to indicate the importance of an event in which a monitored service cannot be found on the Contact Center Manager Server. The default is 25.
<b>Monitor Service Availability</b>	
<b>Event Notification</b>	
<b>Raise event if a service is down?</b>	Select <b>Yes</b> to raise an event if a monitored service is unavailable. The default is Yes. Use the Services to Monitor parameters to select the services that you want to monitor.
Event severity when a service is unavailable	Set the severity level, from 1 to 40, to indicate the importance of an event in which a monitored service is unavailable. The default is 25.
<b>Data Collection</b>	
Collect data for service availability?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the availability of specified services. The default is unselected.
<b>Services to Monitor</b>	
Monitor ...	Select <b>Yes</b> to monitor any combination of the listed services. By default, all services are monitored except Host Application Integration and TAO NT Naming Service.

# SkillsetTimes

Use this Knowledge Script to monitor the amount of time that Contact Center Manager Server skillsets spent in the following states:

- Active Time
- All Agents Busy Time
- Staffed Time

This script raises an event if the amount of time in any state exceeds the threshold that you set. In addition, this script generates data streams for the percentage of time and total number of minutes that a skillset spent in a particular state.

A *skillset* is a component of skill-based routing, which matches contacts to the most qualified Contact Center Manager Server agent. The most qualified agent is the agent with the appropriate skillset or unique abilities for handling the type of call or contact.

## Resource Object

NT\_NORTELC\_C\_APPS\_KILLSET

The TreeView pane of the Operator Console contains Application and Skillset objects under the NortelCC object. Within the Application and Skillset object folders are Application/Skillset (AppSkillset) pairs. The same pairs are represented within the Application and Skillset object folders. Their placement within the Application and Skillset folders allows you to search for a particular pair by either Application or Skillset. You can drop this Knowledge Script on a pair in either location.

## Default Schedule

By default, this script runs every 15 minutes.

## Setting Parameter Values

Set the following parameters as needed:

Parameter	How to Set It
<b>General Settings</b>	
<b>Job Failure Notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the SkillsetTimes job fails. The default is 5.
<b>Raise event if SQL query fails?</b>	Select <b>Yes</b> to raise an event if the SQL query fails. The default is Yes. AppManager uses a SQL query to retrieve Contact Center Manager Server database configuration information.
Event severity when SQL query fails	Set the event severity level, from 1 to 40, to reflect the importance of an event in which the SQL query fails to retrieve database configuration information. The default is 15.
<b>Raise event if no new data found?</b>	Select <b>Yes</b> to raise an event if skillset data has not changed since the last time the script ran. The default is Yes.
Event severity when no new data found	Set the event severity level, from 1 to 40, to reflect the importance of an event in which skillset data has not changed since the last time the script ran. The default is 15.

Parameter	How to Set It
<b>Monitor Total Active Time</b>	
<b>Data Collection</b>	
Collect data for total Active time?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of minutes that skillsets spent in the Active state during the monitoring period. The default is unselected.
<b>Monitor Total All Agents Busy Time</b>	
<b>Data Collection</b>	
Collect data for total All Agents Busy time?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of minutes that skillsets spent in the All Agents Busy state during the monitoring period. The default is unselected.
<b>Monitor Percentage of Time All Agents Busy</b>	
<b>Event Notification</b>	
<b>Raise event if percentage of time All Agents Busy exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of time that skillsets spent in the All Agents Busy state exceeds the threshold that you set. The default is Yes.
Threshold - Maximum percentage of time All Agents Busy	Specify the maximum percentage of time that skillsets can spend in the All Agents Busy state before an event is raised. The default is 70%.
Event severity when percentage of time All Agents Busy exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of time that skillsets spent in the All Agents Busy state exceeds the threshold that you set. The default is 15.
<b>Data Collection</b>	
Collect data for percentage of time All Agents Busy?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of time that skillsets spent in the All Agents Busy state during the monitoring period. The default is unselected.
<b>Monitor Total Staffed Time</b>	
<b>Data Collection</b>	
Collect data for total Staffed time?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of minutes that skillsets spent in the Staffed state during the monitoring period. The default is unselected.

# SystemUsage

Use this Knowledge Script to monitor Contact Center Manager Server usage of system resources: CPU, interrupts, page faults, committed bytes, CLAN, and ELAN. This script raises an event if a value exceeds the threshold that you set.

This script generates data streams for the following metrics:

- CPU utilization: average and instantaneous (%)
- Interrupts per second (#)
- Committed bytes (%) as a percentage of the commit limit
- CLAN utilization (%). CLAN is the network used to communicate application information between the Contact Center Manager Server and customer applications.
- ELAN utilization (%). ELAN is the network used to communicate management information between the Contact Center Manager Server, the Call Pilot server, and the Nortel Communications Server switch.

## Resource Object

NT\_NortelCC\_SCCS

## Default Schedule

By default, this script runs every minute.

## Setting Parameter Values

Set the following parameters as needed:

Parameter	How to Set It
<b>General Settings</b>	
<b>Job Failure Notification</b>	
Event severity when job fails	Set the severity level, from 1 to 40, to indicate the importance of an event in which the SystemUsage job fails. The default is 5.
<b>Raise event if an error occurs reading a perfmon counter?</b>	Select <b>Yes</b> to raise an event if the script encounters a problem in reading the Performance Monitor counter for a particular metric. The default is Yes.
Event severity when an error occurs reading a perfmon counter	Set the severity level, from 1 to 40, to indicate the importance of an event in which the script encountered a problem in reading the Performance Monitor counter for a particular metric. The default is 40.
<b>Raise event if a perfmon counter is invalid or unusable?</b>	Select <b>Yes</b> to raise an event if the Performance Monitor counter for a particular metric is invalid or unusable. The default is Yes.
Event severity when a perfmon counter is invalid or unusable	Set the severity level, from 1 to 40, to indicate the importance of an event in which the Performance Monitor counter for a particular metric is invalid or unusable. The default is 40.
<b>Raise event if a WMI error occurs</b>	Select <b>Yes</b> to raise an event if the script encounters a WMI (Windows Management Instrumentation) error. The default is Yes. This script uses WMI to retrieve performance metrics from the Windows operating system.

Parameter	How to Set It
Event severity when a WMI error occurs	Set the severity level, from 1 to 40, to indicate the importance of an event in which the script encounters a WMI error. The default is 40.
<b>Monitor Instantaneous CPU Utilization</b>	
<b>Event Notification</b>	
<b>Raise event if instantaneous CPU utilization exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of instantaneous CPU utilization exceeds the threshold that you set. The default is Yes. Instantaneous CPU utilization is the value at the moment the data was collected.
Threshold - Maximum instantaneous CPU utilization	Specify the maximum percentage of instantaneous CPU utilization that can occur before an event is raised. The default is 99%.
Event severity when instantaneous CPU utilization exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of instantaneous CPU utilization exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for instantaneous CPU utilization?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of instantaneous CPU utilization for the monitoring period. The default is unselected.
<b>Monitor Average CPU Utilization</b>	
<b>Event Notification</b>	
<b>Raise event if average CPU utilization exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of average CPU utilization exceeds the threshold that you set. The default is Yes.
Threshold - Maximum average CPU utilization	Specify the maximum percentage of average CPU utilization that can occur before an event is raised. The default is 50%.
Event severity when average CPU utilization exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of average CPU utilization exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for average CPU utilization?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of average CPU utilization for the monitoring period. The default is unselected.
<b>Monitor Interrupts Per Second</b>	
<b>Event Notification</b>	
<b>Raise event if interrupts per second exceed threshold?</b>	Select <b>Yes</b> to raise an event if the number of interrupts that occur per second exceeds the threshold that you set. The default is Yes.
Threshold - Maximum interrupts per second	Specify the maximum number of interrupts that can occur per second before an event is raised. The default is 3000 interrupts.
Event severity when interrupts per second exceed threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the number of interrupts that occur per second exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for interrupts per second?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the number of interrupts that occurred per second during the monitoring period. The default is unselected.

Parameter	How to Set It
<b>Monitor Committed Bytes as Percentage of Commit Limit</b>	
<b>Event Notification</b>	
<b>Raise event if committed bytes as percentage of commit limit exceeds threshold?</b>	Select <b>Yes</b> to raise an event if committed bytes (represented as a percentage of the commit limit) exceed the threshold that you set. The default is Yes. Committed bytes are those that have been allocated by processes. They are a measure of the demand for virtual memory. The commit limit is the amount of virtual memory, in bytes, that can be committed without having to extend the paging files.
Threshold - Maximum committed bytes as percentage of commit limit	Specify the maximum percentage of committed bytes that can occur before an event is raised. The default is 90%.
Event severity when committed bytes as percentage of commit limit exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of committed bytes exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for committed bytes as percentage of commit limit?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of committed bytes for the monitoring period. The default is unselected.
<b>Monitor CLAN Utilization</b>	
<b>Event Notification</b>	
<b>Raise event if CLAN utilization exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of CLAN utilization exceeds the threshold that you set. The default is Yes.
Threshold - Maximum CLAN utilization	Specify the maximum percentage of CLAN utilization that can occur before an event is raised. The default is 30%.
Event severity when CLAN utilization exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of CLAN utilization exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for CLAN utilization?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of CLAN utilization for the monitoring period. The default is unselected.
<b>Monitor ELAN Utilization</b>	
<b>Event Notification</b>	
<b>Raise event if ELAN utilization exceeds threshold?</b>	Select <b>Yes</b> to raise an event if the percentage of ELAN utilization exceeds the threshold that you set. The default is Yes.
Threshold - Maximum ELAN utilization	Specify the maximum percentage of ELAN utilization that can occur before an event is raised. The default is 30%.
Event severity when ELAN utilization exceeds threshold	Set the severity level, from 1 to 40, to indicate the importance of an event in which the percentage of ELAN utilization exceeds the threshold. The default is 25.
<b>Data Collection</b>	
Collect data for ELAN utilization?	Select <b>Yes</b> to collect data for charts and reports. When enabled, data collection returns the percentage of ELAN utilization for the monitoring period. The default is unselected.

# Reviewing Call Metric Definitions

AppManager for Nortel CC collects the following call metrics from the Contact Center Manager Server database, the Control Directory Number (CDN), the Dialed Number Identification Service (DNIS), IVR ports, IVR queues, and application-skillset pairs.

<b>Metric</b>	<b>Description</b>
Abandoned call wait time	<p>The amount of time that a local or incoming network DNIS call waited before being abandoned.</p> <p>Or the total and average wait time experienced by all calls abandoned or pulled back from an IVR queue.</p> <p>Or the total wait time experienced by calls abandoned while in queue for a skillset.</p>
Abandoned calls	<p>The number and percentage of local and incoming network calls abandoned by the CDN, including local calls networked out and abandoned or terminated at the destination site. A call is considered abandoned when the caller hangs up before an agent answers.</p> <p>Or the number and percentage of abandoned local and incoming network DNIS calls.</p> <p>Or the number and percentage of calls abandoned or pulled back while waiting in an IVR queue.</p> <p>Or the number and percentage of calls abandoned while in queue for a skillset. This metric does not include calls abandoned while being presented to an agent.</p>
Active time	<p>The total time that a skillset is in service. A skillset is in service when it is not in Out of Service mode and at least one agent is logged in.</p>
Agent time	<p>The total time spent by all agents on local and incoming network DNIS calls, including hold time.</p>
All Agents Busy time	<p>The amount and percentage of time that all agents assigned to a skillset are busy with contacts (calls) or when no agents are logged in.</p>
Answered call wait time	<p>The amount of time that a local or incoming network call waited before being answered.</p> <p>Or the amount of time that all local calls or incoming NSBR calls waited before being answered by a skillset.</p>
Answered calls	<p>The number and percentage of local and incoming network calls answered by the CDN, including local calls that have been networked out and answered by an agent or IVR at the destination site.</p> <p>Or the number and percentage of answered local and incoming network DNIS calls.</p> <p>Or the number and percentage of calls answered by an IVR port.</p> <p>Or the number and percentage of calls answered by an IVR queue.</p> <p>Or the number and percentage of calls answered by agents in a skillset.</p>
Average abandoned delay	<p>The average wait time experienced by abandoned local and incoming network calls.</p>
Average answered delay	<p>The average wait time experienced by answered local and incoming network calls.</p>

<b>Metric</b>	<b>Description</b>
Calls abandoned after delay threshold	<p>The number and percentage of abandoned local and incoming network calls that experienced a delay greater than or equal to the service level threshold for the DNIS number. You use the DNIS Properties property sheet to define the service level threshold.</p> <p>Or the number and percentage of calls abandoned or pulled back that experienced a delay greater than or equal to the service level threshold for the threshold class to which the IVR ACD-DN belongs.</p> <p>Or the number and percentage of calls abandoned while in queue for a skillset that experienced a delay greater than or equal to the service level threshold for the threshold class to which the skillset belongs.</p>
Calls answered after delay threshold	<p>The number and percentage of answered local and incoming network calls that experienced a delay greater than or equal to the service level threshold for the DNIS number. You use the DNIS Properties property sheet to define the service level threshold.</p> <p>Or the number and percentage of answered calls that experienced a delay greater than or equal to the service level threshold for the threshold class to which the IVR ACD-DN belongs.</p> <p>Or the number and percentage of calls answered while in queue for a skillset that experienced a delay greater than or equal to the service level threshold for the threshold class to which the skillset belongs.</p>
Calls given broadcast treatment	The number and percentage of local and incoming network calls that were given broadcast treatment. Broadcast treatment occurs when the Give Controlled Broadcast Announcement script command is executed.
Calls given default treatment	The number and percentage of local and incoming network DNIS calls that were given default treatment. Default treatment occurs when a caller does not respond to any menu options. The phone call is then handled in whatever manner is configured as “default,” such as a transfer to an agent.
Calls given force busy treatment	The number and percentage of local and incoming network DNIS calls that were given force busy treatment. To subject a call to force busy treatment is to send the call a busy signal.
Calls given force disconnect treatment	The number and percentage of local and incoming network DNIS calls that were given force disconnect treatment. Force disconnect treatment is the disconnecting of a call from Contact Center Manager Server and returning it to a dial tone.
Calls given force overflow treatment	The number and percentage of local and incoming network DNIS calls that were given force overflow treatment. To subject a call to force overflow treatment is to send it a “fast busy” signal that indicates an error.
Calls given host lookup treatment	The number and percentage of local and incoming network calls for which data was obtained from a remote host.
Calls given IVR treatment	The number and percentage of local and incoming network calls transferred to an Interactive Voice Response (IVR) system.
Calls given music treatment	The number and percentage of local and incoming network calls given music treatment through a music route. Music treatment allows callers to hear music while they wait in queue.
Calls given RAN treatment	The number and percentage of local and incoming network calls that received a recorded announcement (RAN).
Calls given route call treatment	The number and percentage of local and incoming network DNIS calls that were given route call treatment. Route call treatment is the transferring of a call out of Contact Center Manager Server, such as to an extension or an outside number.

<b>Metric</b>	<b>Description</b>
Calls in Master_Script	The total and average time that calls spend in Master_Script, which is the first script executed for every call arriving at Contact Center Manager Server. A script is a set of instructions that relates to a particular type of call, caller, or set of calling conditions, such as time of day or day of week.
Calls networked out	The number and percentage of local calls that were routed to a remote site and then answered or abandoned.
Calls networked through an NACD queue	The number and percentage of local calls networked out through an NACD queue and answered at remote sites. An NACD queue can receive calls from another Contact Center Manager Server.
Calls routed over a non-ISDN trunk	The number and percentage of local calls that reached a non-ISDN trunk while being routed to a remote site.
Calls transferred from an IVR session	The number and percentage of local and incoming network DNIS calls that were transferred from an Interactive Voice Response system.
Committed bytes	Committed bytes are those that have been allocated by processes. They are a measure of the demand for virtual memory. AppManager reflects committed bytes as a percentage of the commit limit. The commit limit is the amount of virtual memory, in bytes, that can be committed without having to extend the paging files.
Conferenced calls	The number and percentage of calls conferenced out from an IVR port or an IVR queue.
CPU utilization	The instantaneous and average percentage of CPU utilization during the monitoring period. Instantaneous utilization is the value at the time the data was collected.
Digits collected	The number and percentage of calls that received IVR treatment and arrived at the CDN accompanied by data collected during the IVR session. Collected digits are those phone buttons pressed by the caller in response to IVR menu options.
Free space	The number of bytes of free space in the Contact Center Manager Server database. Or the percentage of database space that is free.
Idle time	The total amount of time that an IVR port is idle. An idle port is capable of accepting calls, but not actively doing so.
In use time	The amount and percentage of time that an IVR port is in use.
Offered calls	The number of local and incoming network calls offered to the CDN or a DNIS number. Or the number of calls offered to an IVR queue.
Logged on time	The total amount of time that an IVR port is logged on. This value is the sum of the Idle time and the In use time.
Maximum abandoned delay	The wait time experienced by the local or NSBR call that waited the longest before being abandoned while in queue for a skillset. This metric excludes DN, ACD, and NACD calls.
Maximum answered delay	The wait time experienced by the local or NSBR call that waited the longest before being answered or accepted. This metric excludes DN, ACD, and NACD calls.
Not Ready time	The amount and percentage of time that an IVR port is in the Not Ready state. An IVR port that is Not Ready is incapable of accepting calls.
Staffed time	The amount and percentage of time that all skillsets spent in the Staffed state.

<b>Metric</b>	<b>Description</b>
Terminated calls	<p>The number and percentage of local and incoming network calls that terminated under one of the following conditions:</p> <ul style="list-style-type: none"> <li>• The call was given a Force Busy, Force Overflow, Force Disconnect, Route Call, or Default treatment.</li> <li>• The call reached a non-ISDN trunk while being routed to a remote site.</li> <li>• The call was transferred to an IVR queue.</li> <li>• The call was networked out through an NACD queue.</li> </ul>
Transferred calls	<p>The number and percentage of calls transferred out from an IVR port. Or the number and percentage of calls transferred out during an IVR session.</p>
Used space	<p>The number of bytes of used space in the Contact Center Manager Server database. Or the percentage of database space that is used.</p>
Wait time	<p>Both the total and average wait time experienced by all answered calls for an IVR queue.</p>

