HP Operations Smart Plug-in for Microsoft® Exchange Server

For HP Operations Manager for $Windows \mathbb{R}$

Software Version: 12.10

PDF version of the online help

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Smart Plug-in for Microsoft Exchange Server

The Smart Plug-in for Microsoft Exchange Servers (**Microsoft Exchange SPI**) integrates with HP Operations Manager (HPOM) for Windows, enabling you to oversee your distributed Microsoft Exchange Server environment from a central, easy-to-use console. With the Microsoft Exchange SPI integrated into the HPOM console, you can:

- Increase Microsoft Exchange Server availability and performance
- Lower the support costs associated with your Microsoft Exchange Server
- Improve capacity management and planning for Microsoft Exchange Server

After deploying Microsoft Exchange SPI policies, you can easily see the Microsoft Exchange Server topology, receive Microsoft Exchange Server related **messages/alarms**, and configure **graphs** and **reports** that chart Microsoft Exchange Server performance, displaying data in a meaningful, management-ready form.

- How data collection occurs : In the event of data collection, the Microsoft Exchange SPI run the collector/agent program on the managed node and forwards metric values to the HPOM management server. HPOM checks threshold settings and triggers alarms when violations occur.
- How data is displayed : Messages appear in the HPOM message browser with details and instruction text to help diagnose and remedy problems. You can view a graphical representation of the flow of messages with the Topology Viewer Messaging View, and generate pre-configured graphs and reports of Microsoft Exchange metric values.
- How Microsoft Exchange SPI Maps and Views are generated: If Microsoft Exchange Server is discovered on the newly managed node by the Exchange Service Discovery policies, the Exchange topology is determined and stored in WMI on the management server. This topology is used to populate the Exchange Service Map and Microsoft Exchange SPI views, making it possible to easily see the Microsoft Exchange Server topology as well as the root causes and effects of problems at a glance.

Related Topics:

Microsoft Exchange SPI concepts

Microsoft Exchange SPI concepts

By selecting the SPI for Microsoft Exchange Server during the common install process, you add a number of components to the HPOM console:

- service maps
- Operations Topology Viewer for Exchange
- reports and graphs
- policy groups
- policy types
- tools

Visualizing your Exchange organization

The Microsoft Exchange SPI implements an LDAP-based Exchange topology discovery. This discovered topology information is maintained in the HP Operations Manager namespace on the management server/console and can be viewed graphically in Exchange Organization Service maps. In addition, the Exchange topology can be discovered with the Operations Topology Viewer.

The Exchange organization Services Map

Select Services — Applications — Microsoft Exchange (2007, 2003) in the console tree, and view graphical displays of the Services on your system. With any service map open, selecting a box in the map will move it to center focus. Clicking the "+" on the right side of any box will move that box to the center focus of the map, and open the hierarchical levels below for viewing. See Services map for more information on the Exchange service maps.

The Operations Topology Viewer for Microsoft Exchange Server

The Operations Topology Viewer for Microsoft Exchange Server offers messaging views of the Microsoft Exchange network, showing 3-dimensional maps of the Microsoft Exchange servers and connectors in an Exchange organization.

After you launch the Operations Topology Viewer and enter server access information, the tool gathers data. From this information, a map is created displaying sites, servers, and routing groups across the Exchange organization.

See Operations Topology Viewer for Exchange for more information.

Reports and Graphs

The Microsoft Exchange SPI reports are located under **Reports** — **SPI for Exchange**, and the relevant Microsoft Exchange Server version. To view the Microsoft Exchange SPI reports, you must install HP Reporter in your environment.

The Microsoft Exchange SPI graphs are located under **Graphs** -> **SPI for Exchange**, and the relevant Microsoft Exchange Server version. To view the Microsoft Exchange SPI graphs, you must install HP Performance Manager on the HPOM management server.

😲 NOTE:

If you use OVO for Windows 7.50, you can use the built-in reporting and graphing components of OVO to generate reports and graphs. In the OVO 7.50 console, reports are located under **Reports & Graphs** \rightarrow **SPI for Exchange**, and graphs are located under **Reports & Graphs** \rightarrow **SPI for Exchange**.

Reports and graphs are generated by the EXSPI Reporter Collection schedule task policies, which collect metric values and log metrics to the node repository. Most reports are generate on the day after the data is collected and gathered from the managed node to the Reporter server. Since some schedule tasks run on weekend nights, certain reports will not be generated until Monday morning. Trend reports require at least three days of data gathered from managed nodes.

Policy groups

The Exchange SPI policies are located under **Policy Management** -> **Policy Groups** -> **SPI for Exchange** -> **en** -> **Exchange** <*version number*> , in **Auto Deploy Groups** and **Manual Deploy Groups** . In these folders, policies are grouped according to monitoring responsibilities. For example, in **SPI for Exchange** -> **en** -> **Exchange 2003** -> **Auto Deploy Groups** -> **Client Accessibility** -> **OMA** , you can find the EXSPI-6.5 OMA Response time, EXSPI-6.5 Dc-OMA and EXSPI-6.5 OMA Application Event Errors policies.

Auto Deploy policies (specific to Microsoft Exchange Server version) deploy automatically based on discovered services on managed nodes. For example, when the Exchange discovery process determines that Outlook Mobil Access is installed, the OMA policy group is deployed. Manual Deploy policies require additional configuration or special circumstance for deployment. See Manual deployment of Exchange 2003 policies for more details.

Policy types

Service Auto-Discovery: Policies of this type are responsible for discovering the Exchange topology and configuring the agent for the Microsoft Exchange SPI instrumentation.

Scheduled Task : Policies of this type execute the Microsoft Exchange SPI collectors to capture and log performance data for alarming, graphing, and reporting.

Measurement Threshold : Policies of this type fall into two groups:

- 1. Use Real Time Performance Measurement to capture performance data and send alarms based on threshold settings.
- 2. Capture the measurement threshold values from the Microsoft Exchange SPI collector and send alarms based on threshold settings.

Windows Event Log: Policies of this type forward Microsoft Exchange Server related application and system event log messages to the message browser.

Windows Management Interface : Policies of this type query WMI to check for and restart Microsoft Exchange services. These policies also query the WMI provider for Microsoft Exchange Server 2003 to check server states, links, queues, and connectors. Messages are sent to the corresponding HPOM service as problems are found.

ConfigFile: The Microsoft Exchange SPI has one policy of this type for Exchange 2007 (**EXSPI-8X SPIMetaData Versioning**), which deploys the spimetadata.xml file on managed nodes. The collection manager process retrieves information from the spimetadata.xml file to create objects required to analyze and store data collected by collectors.

Open Message Interface: Policies of this type forward messages from **opemsg** to HPOM. The Microsoft Exchange SPI has one policy of this type for each Exchange version, they forward messages to HPOM from the Microsoft Exchange SPI collectors.

LogFile Entry: Policies of this type parse files matching text as configured. The Microsoft Exchange SPI has one policy of this type for Microsoft Exchange 2003. It parses the **javaagent.log** on the managed node and forwards any Exchange Discovery errors found.

Tools

Under the **Tools** folder on the console tree, are the **SPI for Exchange** groups: Exchange 2007 and Exchange 2003. Some of the functions Microsoft Exchange SPI tools can assist you with are:

- turn Microsoft Exchange SPI tracing capabilities on/off
- create mailboxes for use in End to End Message Ping operation

- enable message tracking
- create mailboxes and configure MAPI-based client probes
- monitor Microsoft Exchange Server clusters
- mount Exchange Information Stores
- create embedded performance component schema on managed nodes.

See Exchange 2007: Tools for Microsoft Exchange Server 2007, or Exchange 2003: using Microsoft Exchange SPI tools, for more details.

Related Topics:

• Services map

The Microsoft Exchange SPI services map

When a Windows node is placed under Operations Manager (a Microsoft Exchange Server node is added to the Nodes folder), policies to discover Exchange topology are automatically launched.

The discovered Exchange topology is maintained in HPOM and is used to populate the Exchange service views. Service map assists the administrator group Exchange related messages by service type. For example, Outlook Mobil Access messages are sent to the OMA node of the Service Map.

The Exchange auto discovery policies discover the hierarchical service structure of your Exchange organization. The servers appear under the console's **Services** folder, in the Microsoft Exchange folder. Expand the folder to see a list of Exchange services. In the details pane is the graphical display of the Exchange service hierarchy. When an organizational level is selected in the console tree or on the map itself, all the levels below it display in the services map. In addition, display the Services map by clicking the **Map** button on the HPOM toolbar.



Operations Topology Viewer for Exchange

The Operations Topology Viewer Exchange Topology view provides a quick means of seeing an Exchange organization graphically, offering 3-dimensional maps of routing groups and server connections.

After you launch the Operations Topology Viewer and enter server access information, the tool gathers data. From this information a map is created, displaying servers and routing groups across the Exchange organization.

- Using the Operations Topology Viewer
- Exchange Topology viewer toolbar
- Exchange Topology viewer menus

Manual deployment of Exchange 2003 policies

NOTE:

You must manually deploy all Exchange 2007 policies.

By default, groups of Microsoft Exchange SPI policies deploy automatically when relevant applications or services are discovered on managed nodes. The setting to automatically deploy policies when services are discovered can be turned off, and each group of policies deployed manually.

To deploy policies manually, use the Recommended Policy deployment table for Exchange 2003 to determine which policy groups to deploy to manage particular Exchange servers.

Deploying policies manually:

- 1. Select the desired policy/policies.
- 2. Right-click and select All Tasks --- Deploy on...
- 3. Select the nodes on which to deploy the policies.
- 4. Select Launch...

Manual Deploy policy groups

There is also a Manual Deploy Groups folder containing policies, located under **Policy Management** \rightarrow **Policy Groups** \rightarrow **SPI for Exchange** \rightarrow **en**, and the relevant Exchange version. These folders contain policies requiring additional configuration or special circumstances for deployment. See Exchange 2003 Manual Deploy policies for a list of all manual deploy policies.

Display Exchange server version information

The Microsoft Exchange SPI offers a way to view the version information for all Microsoft Exchange servers in any routing group or site in your Exchange environment.

Right-click any **Servers** folder on the console tree, and select $View \rightarrow List$.

🚰 HP Operations Manager - [Operations Manager : ¥M11	MSSPINT14\Services\Applic	ations\Microsoft Exchange\Organization: EXCH2003 ORG\Administrative	Group: First Adm] 📃 🛃 🗙
😭 Eile Action View Favorites Window Help			×
← → ► □ □ □ □ □ □ □ □ 0	😫 🌆 🐴 🖬 🖬 🔀	晶 🚼 🕄 🗋 🔳	
Operations Manager : VM1MSSPINT14	Name	Description	
E Services	EXSP18	Version 6.5 (Build 7638.2: Service Pack 2)	
E Applications	M4MSSPINT14-SP	Version 6.5 (Build 6944.4)	
Microsoft Exchange			
Administrative Group: Exchange Administr			
🖃 🝻 Administrative Group: First Administrative			
🖻 🧬 Routing Group: First Routing Group			
E M Connectors			
A Microsoft Windows			
🕀 🗬 Systems Infrastructure			
🗉 🧰 Nodes			
+ 100ls			
H Sector Reguests			
	IJ		

- HP Operations Topology Viewer Exchange messaging views
- Services map

Deploy policies based on server type

In order to determine if you want to deploy some of the optional policies to your Microsoft Exchange server, you must first determine if the Microsoft Exchange server is being used with this optional component of Microsoft Exchange.

To determine this:

- 1. Logon to the Exchange server.
- 2. Select **Run...** from the Start menu and type in *perfmon*. Select **OK**.
- 3. Select the "+ " icon above the graph. Look for the Performance object(s) on the left to determine if the components listed on the right are installed.

Some examples:

Perfmon Object(s)	Add-On HPOM Group
 MSExchangeCONF MSExchangeDcsMgr MSExchangeIpconf MSExchangeH323 MSExchangeT120 	EXSPIConferencing Service
Microsoft Exchange Chat Service	EXSPI Chat Service
MSExchangeIM Virtual ServersMSExchangeIM	EXSPI Instant Messaging
MSExchangeIS Mailbox	EXSPI Mailbox
MSExchangeIS Public	EXSPI Public Folder
MSExchangeCCMC	EXSPIcc:MailConnector
• Epoxy	EXSPI Exchange Interprocess Communication

MSExchangeIS	EXSPI IS Virus Scan
MSExchangeIS	EXSPI Transaction Log
MSExchangeSRS	EXSPI Site Replication Service

SLAs: End-to-End Message Ping

The EXSPI-End-to End Message Ping is used to determine Service Level Agreement/Objective (SLA) performance by sending and receiving messages. For procedures to configure the Microsoft Exchange SPI End-to-End Message Ping, see the following link:

Configure Exchange 2003 End-to-End Message Ping

What to expect during End-to-End Ping execution

It is normal that there is no End-to-End message received and no End-to-End data logged for the first run of End-to-End Message Ping. This is because during the first run End-to-End Ping only sends an email message.

From the second interval on, End-to-End Ping evaluates the ping messages sent previously and then sends new ping messages as needed. New ping messages are sent when a delivery notification of previously sent messages has been received or the ping has timed out. When either of these situations occurs, error messages are sent to the console.

The End-to-End Ping round trip time is logged for report generation. However, the report for End-to-End Ping Exchange Message Delivery SLA will not be available until the day after the End-to-End Message Ping was deployed.

Alarms are sent to the Messaging Service Node when SLA thresholds are exceeded.

In **Exchange 2003** the End-to-End Message Ping can send a ping message every run checking for any previously sent message during each run. If there is no ping message pending, End-to-End Ping checks whether there is a delivery receipt in the mailbox, if not it sends a ping message and exits, if there is, it calculates the End-to-End round trip time and sends a new ping message before it exits. So there can be one End-to-End ping time recorded at every schedule time point. If the End-to-End Message Ping policy executes more frequently than the Timeout period and the ping is timing out, then data will be logged less frequently than every interval.

For Example, where the End-to-End Message Ping is scheduled to run every ten minutes, the Reporter database will show data recorded every ten minutes.

The **Exchange 2003** End-to-End Message Ping uses the ADO protocol. Both the use of a Microsoft Exchange SPI service account or Local System account are supported by Microsoft Exchange SPI End-to-End Message Ping versions 2003.

Troubleshoot EXSPI End-to-End Message Ping

Link to the troubleshooting section for difficulties with the Microsoft Exchange SPI End -to-End Message Ping:

 $Trouble shoot\,Microsoft\,Exchange\,SPI\,End\mbox{-}to\mbox{-}End\,Message\,Ping$

Troubleshoot the Microsoft Exchange SPI

Exchange SPI error-related messages are defined in the EXSPI-Messages policy. Within the **Agent policies grouped by type**, you can find EXSPI-Messages in the **Open Message Interface** policy type. If an Exchange SPI error occurs, a message goes to the HPOM message browser. These type of messages are aggregated in the Operations/Agents service nodes. Double-click the message in the browser to view the Instruction Text. See Microsoft Exchange SPI Error Message Catalog.

Each policy captures text contained in the Exchange server logfile. The text goes to the HPOM message browser and Service map "Services" node.

- Microsoft Exchange SPI Error Message Catalog
- Preventing Policy Failures
- Troubleshoot Exchange 2000/2003 End-to-End Message Ping
- Troubleshoot Exchange 2003 Reports
- Using the Self Healing Info tool for troubleshooting

Microsoft Exchange SPI for Microsoft Exchange 2007 servers

The Smart Plug-in for Microsoft Exchange Servers (**the Microsoft Exchange SPI**) integrates with HP Operations Manager for Windows (HPOM), enabling you to oversee your distributed Exchange environment from a central, easy-to-use console. With the Microsoft Exchange SPI integrated into the HPOM console you can:

- Increase Microsoft Exchange availability and performance
- Lower the support costs associated with your Microsoft Exchange servers
- Improve capacity management and planning for Microsoft Exchange servers

- Tools
- Policies
- Reports

Tools for Microsoft Exchange Server 2007

The Microsoft Exchange SPI provides the following tools for Microsoft Exchange Server 2007:

- PowerShell Collection Configuration Utility : This tool helps you configure data collection mechanism of the Microsoft Exchange SPI for Microsoft Exchange Server 2007 nodes. You can create new Collection Configurations, MetricSets, OpCMsgs Calls, and OpCMons Calls by using the graphical user interface launched by this tool.
- Create Data Sources : The Create Data Sources tool helps you create databases on managed nodes. This tool creates databases into the configured data store for your HPOM environment. Without running this tool, you cannot log information on a managed node.
- Register DataCollector : The Register DataCollector tool registers necessary COM components on the nodes.
- Start ExData Collection Manager : Use this tool to start the Collection Manager process on a managed node.
- Start PowerShell Collector : Use this tool to start the PowerShell Collector process on a managed node.
- Stop PowerShell Collector : Use this tool to stop the PowerShell Collector process on a managed node.
- Stop ExData Collection Manager : Use this tool to stop the Collection Manager process on a managed node.
- Exchange Cluster Configuration : This tool helps you create the apminfo.xml file to enable monitoring of Microsoft Exchange Server 2007 cluster nodes.
- EXSPITrace : This tool sets the trace levels on managed nodes. Launch this tool if you need to collect troubleshooting information from nodes.
- Self-Healing Info: The Self-Healing Info tool gathers system information, configuration information, log files, and trace files. The information collected by this tool is helpful when you troubleshoot problems. Gathered information and files are placed in a pre-defined output directory. The data collector gathers real-time data, which reduces the probability of troubleshooting with stale data.
- Self-Healing Verification: Launch this tool to detect any version mismatch between the Microsoft Exchange SPI and the instrumentation files. If the tool detects any mismatch, it displays an error message in the tool status window.
- **Operations Topology Viewer:** This tool presents a 3-dimensional view for your Microsoft Exchange Server environment. Using the Operations Topology Viewer, you can quickly see sites, routing groups, Exchange servers and their roles within your Exchange environment. The Operations Topology Viewer

tool launches the Operations Topology Viewer window. To open the Operations Topology Viewer window:

- 1. In the console tree, expand Tools --> SPI for Exchange --> Exchange 2007, and then double-click Exchange Topology.
- 2. In the details pane, double-click **Operations Topology Viewer**. The Operations Topology Viewer window opens.

To run a tool for Microsoft Exchange Server 2007:

- 1. In the console tree, expand Tools SPI for Exchange , and then click Exchange 2007 .
- Right-click the tool that you want to run from the details pane, and then click All Tasks
 --> Launch
 Tool. Alternatively, double-click the tool in the details pane.
 The Select where to launch this tool dialog box opens.
- 3. Select the node(s) on which you want to run the tool, and then click Launch.

- Adding or modifying a metric
- Adding or modifying a metric set
- Adding and modifying a DataStore

Create Data Sources

The Create Data Sources tool creates databases either into the HP Operations agent's data store (embedded performance component—also known as CODA), or into the HP Performance Agent. If you do not have the HP Performance Agent installed in your environment, the tool creates databases into CODA. The data store can store the data collected by individual collectors.

To launch the Create Data Sources tool

- 1. In the console tree. expand Tools \rightarrow SPI for Exchange \rightarrow Exchange 2007.
- 2. Double-click the Create Data Sources tool in the details pane. The Create Data Sources window opens.
- 3. Select the nodes on which you want to run the tool, and then click **Launch**. The Tool Status window opens and displays if the tool is successfully launched on selected nodes.

Start ExData Collection Manager

The Start ExData Collection Manager tool starts the collection manager process (hp.ov.spi.CollectionManager.exe) on Microsoft Exchange Server nodes. The collection manager is a background process that runs on an Exchange Server 2007 node and creates objects necessary to analyze and publish the data collected by individual collectors.

To run the Start ExData Collection Manager tool on managed nodes

- 1. In the console tree, expand Tools \rightarrow SPI for Exchange \rightarrow Exchange 2007.
- 2. In the details pane, double-click **Start ExData Collection Manager**. The Select where to launch this tool dialog box opens.
- 3. Select the nodes on which you want to run the tool, and then click **Launch**. The Tool Status window opens and displays if the tool is successfully launched on selected nodes.

- Stop ExData Collection Manager
- Tools for Microsoft Exchange Server 2007

Start PowerShell Collector

The Start PowerShell Collector tool starts the PowerShell Collector process on the nodes. The PowerShell Collector process is a background process that works in conjunction with Collection Manager to facilitate data collection on managed nodes.

To run the Start PowerShell Collector tool on managed nodes

- 1. In the console tree, expand Tools \rightarrow SPI for Exchange \rightarrow Exchange 2007.
- 2. In the details pane, double-click **Start PowerShell Collector**. The Select where to launch this tool dialog box opens.
- 3. Select the nodes on which you want to run the tool, and then click **Launch**. The Tool Status window opens and displays if the tool is successfully launched on selected nodes.

NOTE:

When you run the Start PowerShell Collector tool for the first time, you must provide the tool with the access credentials of an Exchange user with Exchange View Only administrative privileges. You must enable the Allow Log on Locally security policy for the user.

- Stop ExData Collection Manager
- Tools for Microsoft Exchange Server 2007

Stop PowerShell Collector

The Stop PowerShell Collector tool stops the PowerShell Collector process on Microsoft Exchange Server nodes.

To run the Stop PowerShell Collector tool on managed nodes

- 1. In the console tree, expand Tools \rightarrow SPI for Exchange \rightarrow Exchange 2007.
- 2. In the details pane, double-click **Stop PowerShell Collector**. The Select where to launch this tool dialog box opens.
- 3. Select the nodes on which you want to run the tool, and then click **Launch**. The Tool Status window opens and displays if the tool is successfully launched on selected nodes.

- Start Collection Manager
- Tools for Microsoft Exchange Server 2007

Stop ExData Collection Manager

The Stop ExData Collection Manager tool stops the collection manager process on Microsoft Exchange Server nodes.

To run the Stop ExData Collection Manager tool on managed nodes

- 1. In the console tree, expand Tools \rightarrow SPI for Exchange \rightarrow Exchange 2007.
- 2. In the details pane, double-click **Stop ExData Collection Manager**. The Select where to launch this tool dialog box opens.
- 3. Select the nodes on which you want to run the tool, and then click **Launch**. The Tool Status window opens and displays if the tool is successfully launched on selected nodes.

- Start ExData Collection Manager
- Tools for Microsoft Exchange Server 2007

PowerShell Collection Configuration Utility

The PowerShell Collection Configuration Utility tool launches the graphical user interface of the PowerShell collection configuration utility. You can perform the following tasks with the PowerShell collection configuration utility:

- Add new MetricSets and metrics.
- Add new collections.
- Create a new OpCMsg Call or modify an existing OpCMsg Call.
- Create a new OpCMon Call or modify an existing OpCMon Call.

To launch the PowerShell collection configuration utility

- 1. In the console tree, expand Tools SPI for Exchange, and then double-click Exchange 2007.
- 2. In the details pane, double-click **PowerShell Collection Configuration Utility**. The Select Server dialog box opens.
- 3. Select the OVO for Windows Server option, and then click Load.

If you are using a Japanese OVO for Windows 7.50 server, select the **Load from Local File** option, and then click **Load**. Select the local path as *%OvShareDir%* \Instrumentation\Windows Server 2003\5.2\SPI for Exchange 2007\spimetadata.xml.The PowerShell collection configuration utility window opens.
Overview of the PowerShell collection configuration utility

The PowerShell collection configuration utility enables you to create or modify collection configurations and components of collection configurations. The PowerShell collection configuration utility helps you create a modified collection configuration, which you can associate with an existing policy through the HPOM console. In addition, the utility helps you add or modify OpCMsg Calls and OpCMon Calls through its graphical user interface.

The Microsoft Exchange SPI saves every change made through the PowerShell collection configuration utility in the SPI metadata file (an XML file on the managed node). The collection manager (a background process that runs on managed nodes) reads the SPI metadata file and creates necessary objects to analyze the collections.

About collection configuration

A collection describes the complete workflow of a collector. A collection configuration defines the mechanism to collect metric data. It also defines how to store the metric data. You must associate every collection configuration with a scheduled task policy. When you invoke the scheduled task policy on a managed node, the collector retrieves the following details from the collection configuration:

- The metric value to be collected
- The mechanism to send the collected data to the analyzer for data analysis
- The mechanism to receive the analyzed data
- The mechanism to send the analyzed data to a data store (if required)

 $\label{eq:acceleration} A \ collection \ configuration \ consists \ of \ the \ following \ building \ blocks:$

- MetricSets
- OpCMsgCalls
- OpCMonCalls
- Data Stores

About MetricSets

A metric is a measurement that defines a specific operational or performance characteristic of a system or an application. The Microsoft Exchange SPI monitors various metrics of Microsoft Exchange Server. Collectors collect metric data on managed Exchange nodes. Metric data indicates the health, availability, and performance of an Exchange Server node.

A MetricSet (a component of a collection configuration) is a group of related metrics. If you run a cmdlet (a command that works in the PowerShell environment) on an Exchange Server node, the Exchange Server returns a group of metrics with metric values. These metrics, returned by a particular cmdlet, form a MetricSet.

About OpCMsg Calls

An OpCMsg Call is an element of a collection configuration that generates an alert message when a metric value does not match a preset value or range of values. The OpCMsg Call enables the collection to compare the actual value with the preset value with the help of arithmetic comparators. You can set a severity level and associate a message text to an OpCMsg Call.

About OpCMon Call s

An OpCMon Call sets a limiting value for numeric metric data. You can associate an OpCMon Call to a measurement threshold policy and use it with a collection configuration.

About DataStores

A DataStore helps a collector store the collected data to a data store (for example, CODA). The DataStore defines the way in which the collected data can be stored into the data store. You must add a DataStore to a collection configuration if you want to log the data collected by the collection. A collector retrieves the data-formatting information from a DataStore before logging the data into a data store.

- Working with the PowerShell collection configuration utility
- Adding or modifying a Metric Set

Working with the PowerShell collection configuration utility

The PowerShell collection configuration utility enables you to create a new collection configuration with new DataStores, OpCMsg Calls, or OpCMon Calls. You can also view the default settings of existing collection configurations, DataStores, OpCMsg Calls, OpCMon Calls, and MetricSets that are provided with the SPI for Microsoft Exchange Server 2007. The PowerShell collection configuration utility provides you with a graphical user interface to perform necessary tasks to create new definitions. The PowerShell collection configuration utility's graphical user interface consists of the following elements:

- Menu bar
- Toolbar
- Left pane
- Right pane

PowerShell collection configuration utility menu bar

You can use the menu options in the menu bar to perform tasks like adding and removing an element of collection definition. You can also view a preview of every element (in the form of XML markups) by using the **Preview** menu option.

Menu	Options	Description	
File	Save	Saves any changes that you make.	
	Save as	Enables you to save the updated spimetadata.xml file on a different location and with a different name.	
	Reload/Cancel All Changes	Reloads the utility, cancels all unsaved changes.	
	Exit	Exits the PowerShell collection configuration utility.	
Edit	Deletes the selected collection configuration or component from this menu.		
	Add New MetricSet	Adds a new MetricSet to the list of available MetricSets.	
	Add New Metric	Adds a new Metric to the list of available metrics in a particular MetricSet. This option is enabled only when you select a MetricSet.	
Insert	Add New Collection	Adds a new collection to the list of available collections.	
	Add New DataStore	Adds a new DataStore to the list of available DataStores.	

	Add New OpCMon Call	Adds a new OpCMon Call to the list of available OpCMon Calls.
Add New OpCMsg Call	Adds a new OpCMsg Call to the list of available OpCMsg Calls.	

PowerShell collection configuration utility toolbar

You can use the toolbar to add collection elements, such as MetricSets, DataStores, OpCMsg Calls, and OpCMon Calls.

Icon	Tool Name	Description
2	Add MetricSet	Use this tool to add a new MetricSet.
	Add Collection	Use this tool to add a new collection.
-	Add DataStore	Use this tool to add a new DataStore.
Ø	Add OpCMsg Call	Use this tool to add a new OpCMsg Call.
	Add OpCMon Call	Use this tool to add a new OpCMon Call.

PowerShell collection configuration utility panes

The left pane lists all available metrics, MetricSets, collections, DataStores, OpCMsg Calls, and OpCMon Calls in a tree like structure. You can navigate to specific collection elements with the help of the left pane. The right pane provides you an interface to view and modify properties and settings for every collection element.

NOTE:

If you make changes with the PowerShell collection configuration utility, you must deploy the EXSPI-8X SPIMetaData Versioning policy on the nodes where you want the changed data collection mechanism to take effect.

- Overview of the PowerShell collection configuration utility
- Adding or modifying a Metric Set

Adding or modifying a metric

The metric values of Microsoft Exchange Server indicate its health condition, availability, and performance ability. The SPI collects these metric values to project the status of Microsoft Exchange Server in the HPOM console. In the PowerShell collection configuration utility, you can find a list of related metrics under every MetricSet. The PowerShell collection configuration utility enables you to add a new metric under a MetricSet.

To add a new metric

- 1. In the left pane, expand MetricSets .
- Right-click an available MetricSet, and then click Add New Metric .
 Alternatively, select an available MetricSet, and then click Insert → Add New Metric from the menu bar.

A new metric (with the name **New Metric**) appears in the list of metrics under the selected MetricSet.

3. Click New Metric .

Option	Description
Metric Name	Select a metric name from the list of available metrics.
Metric Description	Type a description of the metric.
Metric Data Type	After you choose the metric, suitable data type appears by default. Do not change the default setting.
Category	Select this option to specify the unit of measure of the metric.
Scale	To convert the metric value to a unit of your choice, specify the multiplying factor. For example, if the metric value is in the form of KB and you want to collect the metric in the form of bytes, specify 1024 in this field.
	Specify the element of the metric value that you want to eliminate. For example, if the

4. In the right pane, specify the following options:

	metric value is appended with the unit B (as in
	1200B), you can eliminate B by typing B in
Suffix	the Suffix text box.

- 5. Click Apply Changes .
- 6. Click File -- Save .

To modify an existing metric

CAUTION:

Do not modify the metric organization in the existing default MetricSets. You can modify the organization of metrics only in the MetricSets that you have added to the PowerShell collection configuration utility.

- 1. In the left pane, click the metric that you want to modify.
- 2. In the right pane, specify the following options:

Option	Description
Metric Name	Select a metric name from the list of available metrics.
Metric Description	Type a description of the metric.
Metric Data Type	After you choose the metric, suitable data type appears by default. Do not change the default setting.
Category	Select this option to specify the unit of measure of the metric.
Scale	To convert the metric value to a unit of your choice, specify the multiplying factor. For example, if the metric value is in the form of KB and you want to collect the metric in the form of bytes, specify 1024 in this field.
	Specify the element of the metric value that you want to eliminate. For example, if the metric value is appended with the unit B (as in 1200B), you can eliminate B by typing B in
Suffix	the Suffix text box.

- 3. Click Apply Changes .
- 4. Click File -- Save .

Do not delete a metric that is present in the PowerShell collection configuration utility by default. To delete a metric that you have added to the PowerShell collection configuration utility, right-click the metric in the left pane, and then click **Remove this**.

- Adding or modifying a Metric Set
- Adding and modifying a DataStore

Adding or modifying a MetricSet

A MetricSet is a group of related metrics. Microsoft Exchange Server 2007 returns a MetricSet when you run an Exchange Management Shell command (cmdlet). The Microsoft Exchange SPI collects these metrics to monitor the health, availability, and performance of Microsoft Exchange Server 2007. The PowerShell collection configuration utility enables you to add a new MetricSet to the list of existing MetricSets and link the new MetricSet with a PowerShell command (cmdlet) to start metric data collection.

To add a new MetricSet

- 1. Click the from the toolbar or click **Insert** -> Add New MetricSet from the menu bar. Alternatively, perform the following steps:
 - 1. In the left pane, right-click MetricSets.
 - 2. Click Add New MetricSet .

A new MetricSet (with the name New MetricSet) appears in the list of MetricSets.

2. In the right pane, specify the following options:

Option	Description
MetricSet Name	Type an appropriate name.
Command	Select a command from the list of available commands.

- 3. Click Apply Changes .
- 4. Click **File → Save** .

After you add a new MetricSet, the PowerShell collection configuration utility adds a new metric template to the MetricSet. You can create new metrics and add to the newly created MetricSet.

To modify an existing MetricSet

CAUTION:

Do not modify the existing default MetricSets. You can modify a MetricSet that you have added to the PowerShell collection configuration utility.

- 1. In the left pane, click the MetricSet that you want to modify.
- 2. In the right pane, specify the following options:

Option	Description
MetricSet Name	Type an appropriate name.
Command	Select a command from the list of available commands.

NOTE:

If you change the command, existing metrics associated with the MetricSet are deleted.

3. Click Apply Changes .

4. Click File → Save .

Do not delete a MetricSet that is present in the PowerShell collection configuration utility by default. To delete a MetricSet that you have added to the PowerShell collection configuration utility, right-click the MetricSet in the left pane, and then click **Delete this MetricSet**.

See Example 💽

- Adding or modifying a metric
- Adding and modifying a DataStore

Adding or modifying an OpCMsg Call

If some metric values cross a certain limiting value, you can receive alert messages in the HPOM message browser. The SPI retrieves the alert-message information from an OpCMsg Call. An OpCMsg Call is an element of a collection definition, which holds the following information:

- Limiting value (or range of values) for a metric
- Alert message if the metric does not match the above value or crosses the range of values
- Severity level of the event when the metric does not match the limiting value

The PowerShell collection configuration utility enables you to add a new OpCMsg Call or modify an existing one.

To add a new OpCMsg Call

- 1. In the left pane, expand Collection Components, and then right-click OpCMsg Calls.
- 2. Click Add New OpCMsg Call .
- 3. In the right pane, specify the following options:

Option	Description
OpCMsg Call Set Name	Type an appropriate name.
Application	Type an appropriate name of the application that will be affected. You can view this text in the HPOM message browser when you open the Message Properties dialog box. You can leave this field blank.
Object	Type an appropriate name of the object of the application that will be affected. You can view this text in the HPOM message browser when you open the Message Properties dialog box. You can leave this field blank.
Severity	Select the severity level of the event.
Message Text	Type the message that you want to generate.

MetricSet Ref	Select an available MetricSet from the list.
Metric Ref	Select an available metric from the list.
Select Arithmetic Operator	Select an available arithmetic operation from the list.
Select Logical Operator to combine with Previous Rule	This field is enabled only when you choose more than one limiting value or condition for the chosen metrics. Select AND or OR to combine the rules that you create based on the available arithmetic operators.
Value to compare	Select the limiting (threshold) value of the selected metric.

- 4. Click Apply Changes .
- 5. Click File -- Save .

To modify an existing OpCMsg Call

- 1. In the left pane, expand **Collection Components**, and then click the OpCMsg Call that you want to modify.
- 2. In the right pane, specify the following options:

Option	Description
OpCMsg Call Set Name	Type an appropriate name.
Application	If necessary, modify the name of the application that will be affected. You can view this text in the HPOM message browser when you open the Message Properties dialog box. You can leave this field blank.
Object	If necessary, modify the name of the object of the application that will be affected. You can view this text in the HPOM message browser when you open the Message Properties dialog box. You can leave this field blank.
Severity	Select the severity level of the event.

MessageText	Type the message that you want to generate.
MetricSet Ref	Select an available MetricSet from the list.
Metric Ref	Select an available metric from the list.
Select Arithmetic Operator	Select an available arithmetic operation from the list.
Select Logical Operator to combine with Previous Rule	This field is enabled only when you choose more than one limiting value or condition for the chosen metrics. Select AND or OR to combine the rules that you create based on the available arithmetic operators.
Value to compare	Select the limiting (threshold) value of the selected metric.

- 3. Click Apply Changes .
- 4. Click File --- Save .

To delete an existing OpCMsg Call, right-click the OpCMsg Call in the left pane, and then click ${\bf Remove}$ this .

See Example 💽

- Adding or modifying a metric
- Adding or modifying a Metric Set
- Adding and modifying a DataStore

Adding or modifying an OpCMon Call

The PowerShell collection configuration utility enables you to add a new OpCMon Call or modify an existing one. An OpCMon Call sets a limiting value for metric data through a measurement threshold policy. The SPI retrieves the details like message text and severity from the measurement threshold policy.

😲 NOTE:

You can use OpCMon Calls only for numeric metric values.

To add a new OpCMon Call

- 1. In the left pane, expand Collection Components, and then right-click OpCMon Calls.
- 2. Click Add New OpCMon Call.
- 3. In the right pane, specify the following options:

Option	Description
Name	Type an appropriate name for the OpCMon Call.
MetricSet Ref	Select an available MetricSet.
Metric Ref	Select the metric name for which you want to set the OpCMon Call.

- 4. In the Measurement Threshold Policy name text box, type the name of a measurement threshold policy to which you want to associate this OpCMon Call.
- 5. Click Apply Changes.
- 6. Click File -- Save .

To modify an existing OpCMon Call

- 1. In the left pane, click the OpCMon Call that you want to modify .
- 2. In the right pane, modify the following options, if necessary:

Option	Description
Name	Type an appropriate name for the OpCMon Call.
MetricSet Ref	Select an available MetricSet.
Metric Ref	Select the metric name for which you want to set the OpCMon Call.

- 3. In the Measurement Threshold Policy name text box, type the name of a measurement threshold policy to which you want to associate this OpCMon Call.
- 4. Click Apply Changes .
- 5. Click **File** → **Save** .

To delete an existing OpCMon Call, right-click the OpCMon Call in the left pane, and then click **Remove this** .

- Adding and modifying a DataStore
- Adding and modifying an OpCMsg Call
- Adding and modifying a collection configuration

Adding or modifying a DataStore

DataStores define the way in which you can store metric data. After the SPI collects metric data by using collectors, you can store the collected data either in the HP Operations agent's data store (CODA) or in the HP Performance Agent (if you have it installed in your HPOM environment). The PowerShell collection configuration utility enables you to add a new DataStore.

To add a new DataStore:

- 1. In the left pane, right-click **DataStores**.
- 2. Click Add New DataStore .
- 3. In the right pane, specify the following options:

Option	Description
Name	Type an appropriate name for the DataStore.
Capacity	Type the number of rows for the DataStore.
Data Source	Type EX2007_DATA.
Data Table	Type EX2007_< <i>table name</i> >, where < <i>table name</i> > is an appropriate name for the table.
Index By	TypeDAY.
Roll By	Type the interval at which the data should be flushed out of the data store. You can specify DAY, WEEK, or MONTH. You cannot store data for more than a month.

- 4. From the Select MetricSet reference drop-down list, select a MetricSet.
- 5. From the Select Metric reference drop-down list, select a metric.
- 6. In the Select Data column reference box, type a name for the data column in which the DataStore will store the metric selected above. Do not leave this field blank if you want to add more than one metric.
- 7. Click Add . You can add more than one MetricSet and metric.

- 8. Click Apply Changes .
- 9. Click **File** → **Save**.

After you create a new DataStore, you must add it to an existing collection configuration. After adding the newly created DataStore to an existing collection configuration, follow these steps:

- 1. Go to the newly created DataStore.
- 2. In the right pane, click Generate SPEC. The Spec File Generator dialog box opens.
- 3. In the Spec File Generator dialog box, type an appropriate label name in the Table Label text box, and then click **Create**. The details of the SPEC file appear in the Preview of the SPEC File section.
- 4. Click **Save**. A pop-up box opens to confirm the successful creation of the spec file.
- 5. Close the Spec File Generator dialog box.

😲 NOTE:

If you create a new DataStore and generate a spec file by using the PowerShell collection configuration utility, you must launch the Create Data Source tool on the nodes on which you want the new collection mechanism to take effect. Launch the Create Data Source tool on the nodes before you deploy the EXSPI-8X SPIMetaData Versioning policy.

To modify an existing DataStore:

CAUTION:

Do not modify the existing default DataStores. You can modify a DataStore that you have added to the PowerShell collection configuration utility.

- 1. In the left pane, click the DataStore that you want to modify .
- 2. In the right pane, specify the following options:

Option	Description
Name	Type an appropriate name for the DataStore.
Capacity	Type the number of rows for the DataStore.
Data Source	Type EX2007_DATA.
Data Table	Do not change the data table name.
Index By	Type DAY.
	Type the interval by which the data should be flushed out of the data store. You can specify DAY, WEEK, or MONTH. You cannot store
Roll By	data for more than a month.

- 3. From the Select MetricSet reference drop-down list, select a MetricSet.
- 4. From the Select Metric reference drop-down list, select a metric.
- 5. In the Select Data column reference box, type a name for the data column in which the DataStore will store the metric selected above. Do not leave this field blank if you want to add more than one metric.
- 6. Click **Add** . You can add more than one MetricSet and metric.
- 7. To add a new MetricSet and a new metric to this DataStore, in the Add Reference section, select new MetricSet and metric, and then click Add .
- 8. To delete existing MetricSets and metrics from this DataStore, select an entry from the Available Metric References list, and then click **Delete**.
- 9. Click Apply Changes .
- 10. Click File -- Save .

After you modify an existing DataStore, you must re-generate the spec file. To re-generate the spec file for the modified DataStore, follow these steps:

- 1. Go to the modified DataStore.
- 2. In the right pane, click Generate SPEC. The Spec File Generator dialog box opens.
- 3. In the Spec File Generator dialog box, type an appropriate label name in the Table Label text box, and then click **Create**. The details of the SPEC file appear in the Preview of the SPEC File section.
- 4. Click Save. A pop-up box opens to confirm the successful creation of the spec file.

5. Close the Spec File Generator dialog box.

🔍 NOTE:

If you modify a DataStore and re-generate the spec file by using the PowerShell collection configuration utility, you must launch the Create Data Source tool on the nodes on which you want the new collection mechanism to take effect. Launch the Create Data Source tool on the nodes before you run the EXSPI-8X SPIMetaData Versioning policy.

Do not delete a DataStore that is present in the PowerShell collection configuration utility by default. To delete a DataStore that you have added to the PowerShell collection configuration utility, right-click the DataStore in the left pane, and then click **Remove this**. If the DataStore is associated with an existing collection configuration, the utility removes the DataStore from the collection.

See Example 💽

- Adding or modifying a Metric Set
- Adding or modifying a metric

Adding or modifying a collection configuration

A collection defines the complete mechanism of metric data collection. A collector can collect metric data, log it to a data store, or send a message to the HPOM message browser for threshold violation. A collection configuration consists of all the elements that collectively describe the complete lifecycle of the collection mechanism for a MetricSet.

To add a new collection configuration

In the left pane, right-click Collection Configurations, and then click Add New Collection.
 Alternatively, click if from the tool bar, or click Insert -> Add New Collection from the menu bar.

A new collection appears in the left pane under Collections and the Add metrics to a Collection dialog box opens.

- 2. Select a MetricSet from the drop-down list.
- 3. To add an OpCMsg Call to this collection, click **Add OpCMsg** in the right pane. The Add OpCMsg Call to a Collection dialog box opens.
- 4. Select an OpCMsg Call from the drop-down list.
- 5. To add an OpCMon Call to this collection, click **Add OpCMon** in the right pane. The Add OpCMon Call to a Collection dialog box opens.
- 6. Select an OpCMon Call from the drop-down list.
- 7. To add a DataStore, click **Add DataStore** in the right pane. The Add DataStore to a Collection dialog box opens.
- 8. Select a DataStore from the drop-down list.
- 9. In the right pane, type an appropriate name in the Collection Configuration Name text box.
- 10. Click File -- Save .
- 11. Note the command displayed in the Schedule Task Policy Command text box.
- 12. After you add a new collection configuration, you must perform the following tasks:
 - 1. Create a new scheduled task policy.
 - 2. In the newly created scheduled task policy, specify the command that you have noted down.

NOTE:

You must deploy the newly created scheduled task policy (along with the EXSPI-8X SPIMetaData Versioning policy) on the nodes where you want the changed data collection mechanism to take effect.

If you use a Japanese OVO for Windows 7.50 as the management server, redeploy the SPI for Exchange 2007 instrumentation on the managed node instead of deploying the EXSPI-8X SPIMetaData Versioning policy.

To modify an existing collection configuration

CAUTION:

Do not modify the existing default collection configurations. You can modify a collection configuration that you have added.

- 1. In the left pane, click the collection configuration that you want to modify .
- 2. In the right pane, right-click the collection configuration block or any other component block to edit.
- 3. After making changes, click **File** → **Save**.

Do not delete a collection configuration that is present in the PowerShell collection configuration utility by default. To delete a collection configuration that you have added to the PowerShell collection configuration utility, right-click the collection in the left pane, and then click **Delete this Collection**.

- Adding and modifying a DataStore
- Adding and modifying an OpCMsg Call
- Adding and modifying an OpCMon Call

Exchange Cluster Configuration

The Exchange Cluster Configuration tool helps you generate the apminfo.xml file. The apminfo.xml file provides necessary information to enable the SPI to recognize and monitor cluster nodes of Microsoft Exchange Server 2007.

To run the Exchange Cluster Configuration

- 1. In the console tree, expand Tools \rightarrow SPI for Exchange \rightarrow Exchange 2007.
- 2. In the details pane, double-click **Exchange Cluster Configuration**. The Select where to launch this tool dialog box opens.
- 3. Click **Launch**. The Tool Status window opens and displays the output under the Tool Output section.
- 4. Select the text content under the Tool Output section, and then copy it to a text editor.
- 5. Save the text as apminfo.xml in the following locations on cluster nodes: For DCE-managed nodes—%OvAgentDir%\conf\OpC\ For HTTPS-managed nodes—%OvAgentDir%conf\conf\ (create this folder manually if it does not exist)
- Stop and start the agents on the cluster nodes with the following commands: opcagt -kill
 opcagt -start

- Stop ExData Collection Manager
- Tools for Microsoft Exchange Server 2007
- PowerShell Collection Configuration Utility

EXSPI Trace

With the help of the EXSPI Trace tool, you can obtain troubleshooting information from managed nodes. The Microsoft Exchange SPI stores the troubleshooting information in the following locations on managed nodes:

%OvAgentDir% \ Installed Packages \ {790C06B4-844E-11D2-972B-080009EF8C2A } \ bin \ exspi \ log on a managed node with DCE based agent,

or %OvDataDir%\bin\exspi\log on a managed node with HTTPS based agent.

This tool enables you to set the trace level from zero to nine. By default, the trace level is set to zero.

To launch the EXSPI Trace tool on a managed node, follow these steps:

- 1. In the console tree, expand **Tools** --> **SPI for Exchange**, and then double-click **SPI for Exchange**.
- 2. In the details pane, double-click **EXSPI Trace**. The Select where to launch this tool dialog box opens.
- 3. Select a node, and then click **Launch**. The Edit Parameters dialog box opens.
- 4. In the Parameter text box, type a value within the range 0–9. This value sets the trace level.
- 5. Click Launch.

- Adding or modifying a metric
- Adding or modifying a metric set
- Adding and modifying a DataStore

Microsoft Exchange SPI policies for Microsoft Exchange Server 2007

You can deploy and use Microsoft Exchange SPI policies to automate administering a Microsoft Exchange Server 2007 node. You must manually deploy the available policies for Microsoft Exchange Server 2007. All policies for Microsoft Exchange Server 2007 are grouped under the Manual Deploy Groups and are further classified into the following sub-groups:

- **Discovery:** This group contains the Exchange 2007 Discovery policy. The Exchange 2007 Discovery policy discovers the Exchange topology and services from the managed nodes.
- Collection Definition: This group contains the EXSPI8X SPIMetaData Versioning policy, which deploys the SPI metadata file on the managed nodes.
- Availability: This group captures the availability status of Exchange services and sends application errors to HPOM. This group contains the following policies—EXSPI-8X Application Errors, EXSPI-8X Exchange Application Info, EXSPI-8X Exchange Application Warning, and EXSPI-8X Get Exchange 2007 Availability.
- Client Access Server: This group contains policies that primarily monitor the connectivity and performance of the Client Access server role of Exchange Server 2007. The Client Access Server policy group is further classified into the following sub-groups:
 - IMAP4
 - MAPI
 - Outlook
 - POP3
- **ExBPA Integration:** This group contains the tools that monitor and collect information from the Microsoft Exchange Best Practice Analyzer and forward the collected information to the HPOM management server.
- **Hub Transport Server:** This group contains policies to monitor the Hub Transport server role of Exchange Server 2007.
- Edge Server: This group contains policies to monitor the Edge Transport server role of Exchange Server 2007.
- **Mailbox Server:** This group contains policies to monitor the Mailbox server role of Exchange Server 2007. The Mailbox Server policy group is further classified into the following sub-groups:

- \circ Availability
- High Availability
- Mailbox
- MAPI
- \circ Outlook Performance
- Performance
- \circ Public Folder
- Unified Messaging Server: This group contains policies that monitor the Unified Messaging server role of Exchange Server 2007.

Exchange 2007 Discovery

The Exchange 2007 Discovery policy discovers Exchange topology and Exchange services on the managed node. The policy can discover the following:

- Exchange servers available in your Exchange Organization
- Roles assigned to each Exchange server
- Services running on each Exchange server

If you want to monitor cluster nodes, you must provide this policy with the access credentials of an administrative user. Refer to the Deploy the Discovery Policy section in the *Configuring the Microsoft Exchange SPI* chapter of the *Configuration Guide*.

Policy Type: Service Auto-Discovery

Policy group: SPI for Exchange --> en --> Exchange 2007 --> Manual Deploy Group --> Discovery

- Microsoft Exchange SPI policies for Microsoft Exchange Server 2007
- EXSPI-8X SPIMetaData Versioning

EXSPI-8X SPIMetaData Versioning

The EXSPI-8X SPIMetaData Versioning policy deploys the spimetadata.xml file on managed nodes. The collection manager process retrieves information from the spimetadata.xml file to create objects required to analyze and store data collected by collectors.

Policy Type: ConfigFile

Policy group: SPI for Exchange --> en --> Exchange 2007 --> Manual Deploy Groups --> Collector Definition

- Microsoft Exchange SPI policies for Microsoft Exchange Server 2007
- PowerShell collection configuration utility

EXSPI-8X Check Collection Manager

The EXSPI-8X Check Collection Manager policy checks the status of the collection manager process on managed nodes. If the collection manager process stops, the EXSPI-8X Check Collection Manager policy starts the process.

Policy Type: Scheduled Task

Policy group: SPI for Exchange --> en --> Exchange 2007 --> Manual Deploy Groups --> Collector Definition

- Microsoft Exchange SPI policies for Microsoft Exchange Server 2007
- PowerShell collection configuration utility

EXSPI-8X Check Collector Server

The EXSPI-8X Check Collector Server policy checks the status of the PowerShell collector process on managed nodes. If the PowerShell collector process stops, the EXSPI-8X Check Collector Server policy starts the process. Before you deploy the policy, you must provide the policy with the access credentials of an Exchange user with Exchange View Only administrative privileges. You must enable the Allow Log on Locally security policy for the user. Use the same user that was used with the Start PowerShell Collector tool (see here).

Policy Type: Scheduled Task

Policy group: SPI for Exchange --> en --> Exchange 2007 --> Manual Deploy Groups --> Collector Definition

- Microsoft Exchange SPI policies for Microsoft Exchange Server 2007
- PowerShell collection configuration utility

EXSPI-8X Refresh Collection Server

The EXSPI-8X Refresh Collection Server policy periodically checks the changes in the spimetadata.xml file on managed nodes. If it finds changes in the spimetadata.xml file, it updates the collection manager and PowerShell collector processes with the changes.

Policy Type: Scheduled Task

Policy group: SPI for Exchange --> en --> Exchange 2007 --> Manual Deploy Groups --> Collector Definition

- Microsoft Exchange SPI policies for Microsoft Exchange Server 2007
- PowerShell collection configuration utility

Availability policy group

The Availability policy group contains the policies that forward the information collected from the Exchange Event Log to the HPOM message browser. The Availability group contains the following policies:

- EXSPI-8X Exchange Application Errors
- EXSPI-8X Exchange Application Warnings
- EXSPI-8X Exchange Application Info
- EXSPI-8X Get Exchange 2007 Availability

Related Topics:

• Microsoft Exchange SPI policies for Microsoft Exchange Server 2007

EXSPI-8X Get Exchange 2007 Availability

The policy monitors the availability of the services that are necessary for Microsoft Exchange Server 2007 to run smoothly. This policy logs data into the data store based on the availability of the necessary services and the Exchange 2007 Availability report is generated with the help of this data.

The following services are monitored by the policy:

- MSExchangeADTopology
- ADAM_MSExchange
- EdgeCredentialSvc
- MSExchangeEdgeSync
- MSExchangeFDS
- MSExchangeAntispamUpdate
- MSExchangeIMAP4
- MSExchangeIS
- MSExchangeMailSubmission
- MSExchangeMailboxAssistants
- MSExchangeMonitoring
- MSExchangePOP3
- MSExchangeRepl
- MSExchangeSearch
- MSExchangeServiceHost
- MSS
- MSExchangeSA
- MSExchangeTransport
- MSExchangeTransportLogSearch
- MSExchangeUM

• MSFTESQL-Exchange

Policy Type: Scheduled Task

Polling interval: Once in every 5 minutes

Policy group: SPI for Exchange --- en --- Exchange 2007 --- Manual Deploy Group --- Availability

Related Topics:

• Microsoft Exchange SPI policies for Microsoft Exchange Server 2007

EXSPI-8X Exchange Application Errors

The EXSPI-8X Exchange Application Errors policy collects Exchange Event Log errors from managed nodes and forwards the errors to the management server.

Policy Type: Windows Event Log

Policy group: SPI for Exchange --- en --- Exchange 2007 --- Manual Deploy Group --- Availability

Related Topics:

• Microsoft Exchange SPI policies for Microsoft Exchange Server 2007

EXSPI-8X Exchange Application Info

The EXSPI-8X Exchange Application Info policy collects Exchange Event Log information from managed nodes and forwards the collected information to the management server.

Policy Type: Windows Event Log

Policy group: SPI for Exchange --- en --- Exchange 2007 --- Manual Deploy Group --- Availability

- Microsoft Exchange SPI policies for Microsoft Exchange Server 2007
- EXSPI-8X Exchange Application Warning

EXSPI-8X Exchange Application Warnings

The EXSPI-8X Exchange Application Warnings policy collects Exchange Event Log warnings from managed nodes and forwards the collected warnings to the management server.

Policy Type: Windows Event Log

Policy group: SPI for Exchange --- en --- Exchange 2007 --- Manual Deploy Group --- Availability

- Microsoft Exchange SPI policies for Microsoft Exchange Server 2007
- EXSPI-8X Exchange Application Info

Monitoring Client Access Servers

The Client AccessServer group includes the policies that help you monitor and manage the Exchange 2007 nodes with the Client Access Server role. The policies in this group help you monitor the details related to the POP3 performance, active synchronization, and so on.

The group consists of the following subgroups:

- Availability This group includes the EXSPI-8X Monitor Client Access Server Services policy, which monitors states of the services that are necessary for a smooth functioning of the Client Access Server.
- ActiveSync With the help of the Microsoft Exchange SPI, you can monitor the state of Exchange ActiveSync. The policies included in the ActiveSync group help you monitor the state of exchange ActiveSync by monitoring the MSExchange ActiveSync event log. Policies that are included in this group are:
 - EXSPI-8X-ActiveSync-Errs
 - EXSPI-8X-ActiveSync-Warn
 - EXSPI-8X-ActiveSync-Info
- AutoDiscover This group contains the policies that monitor the MSExchange Autodiscover event log. This group includes:
 - EXSPI-8X Autodiscover-Err
 - EXSPI-8X Autodiscover-Warn
- File Distribution Service This group contains policies that monitor the performance of the file distribution service on a Client Access Server. This group includes:
 - EXSPI-8X CAS Collect FDS Metrics
 - EXSPI-8X-DownloadTasksCompleted-OAB-All
 - EXSPI-8X-DownloadTaskQueued-OAB-All
 - EXSPI-8X-DownloadTaskQueued-OAB-Total
- **IMAP4** This group contains policies to monitor several conditions and settings of the IMAP4 communication. This group includes:
 - EXSPI-8X Get-IMAP4 Settings
 - \circ EXSPI-8X IMAP4 Failed Connection Rate
- EXSPI-8X IMAP4 Rejected Connection Rate
- EXSPI-8XDc-IMAP4Performance
- EXSPI-8X_Monitor_Check_IMAP4_MaxCnn_Single_IP
- o EXSPI-8X_Monitor_Check_IMAP4_Max_Cnn_User
- EXSPI-8X_Monitor_Check_IMAP4_Max_Connections
- EXSPI-8X IMAP4 Connections
- EXSPI-8X-IMAP4
- **POP3:** This group contains the policies that monitor the performance, availability, and settings of POP3-based communications on a Client Access server. This group includes:
 - EXSPI-8X Get POP3 Settings
 - EXSPI-8X Dc-POP3 Performance
 - EXSPI-8X-POP3
 - EXSPI-8X POP3 Connections
 - EXSPI-8X_Monitor_Check_POP3_Max_Cnn_User
 - o EXSPI-8X_Monitor_Check_POP3_Max_Cnn_Single_IP
 - EXSPI-8X_Monitor_Check_POP3_Max_Connections
 - EXSPI-8X POP3 Failed Connection Rate
 - EXSPI-8X POP3 Rejected Connection Rate
- Information Worker: This group includes the EXSPI-8X-InformationWorker policy.
- **Outlook WebAccess:** This group includes the EXSPI-8X CAS-Evt-MSExchange OWA policy.
- Outlook Anywhere: This group includes the following policies:
 - $\circ ~~ EXSPI-8X \, Check \, Outlook \, Anywhere \, Enabled$
 - EXSPI-8X Check Outlook Anywhere Not Enabled

To monitor the Client Access Servers, follow these steps:

- 1. Identify the Exchange 2007 nodes with the Client Access server role that you want to monitor.
- 2. Verify the schedules of the scheduled-task policies. If required, modify the schedule.
- 3. Deploy the scheduled-task policies on the identified nodes.

- 4. Review the polling intervals of the measurement-threshold policies in this group. Change the polling interval settings if required.
- 5. Deploy the measurement-threshold policies on the identified nodes.
- 6. Similarly, deploy the Windows Event Log policies.

NOTE:

Deploy the policies under the Client Access Server group only on the nodes with the Client Access Server role.

EXSPI-8X Monitor Client Access Server Services

The EXSPI-8X Monitor Client Access Server Services policy collects the states of the services necessary to run a Client Access server.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > Availability

Default schedule: Every 5 minutes

Monitoring details

The EXSPI-8X Monitor Client Access Server Services policy monitors the states of the following services on the Client Access node:

- MSExchangeADTopology
- MSExchangeFDS
- MSExchangeServiceHost
- MSExchangeServiceHost
- MSExchangeImap4
- MSExchangePOP3

The policy generates appropriate alert messages if one of these services are stopped or disabled.

EXSPI-8X-ActiveSync-Errs

The EXSPI-8X-ActiveSync-Errs policy monitors the event source MSExchange ActiveSync on the Client Access Server. If an error is logged into the MSExchange ActiveSync source, the EXSPI-8X-ActiveSync-Errs policy sends a notification to the HPOM message browser.

The policy looks for the following errors:

Event ID	Event Type
1027	Exchange ActiveSync has run out of available connections.
1016	ActiveSync has encountered repeated failures while accessing data on the Mailbox server.
1038	The account does not have correct permissions to modify Exchange ActiveSync.
1015	Exchange ActiveSync encountered a transient error when it tried to access Active Directory information.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > ActiveSync

EXSPI-8X-ActiveSync-Warn

The EXSPI-8X-ActiveSync-Warn policy monitors event source MSExchange ActiveSync on the Client Access Server. If a warning event is logged into the MSExchange ActiveSync source, the EXSPI-8X-ActiveSync-Warn policy sends a warning notification to the HPOM message browser.

The policy looks for the following warnings:

Event ID	Event Type
1012	The configuration value for the maximum number of folders to monitor for changes is invalid.
1032	The connection to mailbox on Mailbox Server failed.
1023	The mailbox server is offline.
1018	Context Indexing is enabled on the Mailbox server.
1008	An exception was caused by an outdated or corrupt Exchange ActiveSync device partnership.
1033	The setting in the Web.Config file is invalid.
1011	The configuration value for minimum heartbeat interval is too low.
1036	The Client Access server can proxy the Exchange ActiveSync Client request to Exchange Server.
1034	The Access server that issued a proxy request to another Client Access server timed out.
1009	The configuration value for the minimum heartbeat interval is set higher than the maximum heartbeat.
1035	The proxy request has failed due to an invalid SSL certificate.
1022	The connection between the Client Access server and Mailbox server has failed.
1010	The configuration value for the maximum heartbeat interval is set higher than the maximum allowed value.

Policy type: Windows Event Log

EXSPI-8X-ActiveSync-Info

The EXSPI-8X-ActiveSync-Info policy monitors event source MSExchange ActiveSync on the Client Access Server. If the event **1014** is logged into the MSExchange ActiveSync source, the EXSPI-8X-ActiveSync-Info policy sends a notification to the HPOM message browser. this policy checks if Exchange ActiveSync has been unloaded.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > ActiveSync

EXSPI-8X Autodiscover-Err

The EXSPI-8X Autodiscover-Err policy monitors the MSExchange Autodiscover event source on the Client Access Server. If an error is logged into the MSExchange Autodiscover source, the EXSPI-8X Autodiscover-Err policy sends a notification to the HPOM message browser.

The policy looks for the following errors:

Event ID	Event Type
2	The Exchange AutoDiscover service was unable to process anonymous requests from an Autodiscover client.
101	The Autodiscover service is unable to process any valid requests.
1	An unhandled exception occurred in Exchange Autodiscover.
1106	Providers could not be loaded for the Microsoft Exchange Autodiscover service.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > AutoDiscover

EXSPI-8X Autodiscover-Warn

The EXSPI-8X Autodiscover-Warn policy monitors the MSExchange Autodiscover event source on the Client Access Server. If a warning event is logged into the MSExchange Autodiscover source, the EXSPI-8X Autodiscover-Warn policy sends a warning notification to the HPOM message browser.

The policy looks for the following events:

Event ID	Event Type
1201	Client request is successfully processed by the Exchange Autodiscover service.
1108	The Exchange Autodiscover service failed to load the assembly.
1109	The loader that Autodiscover is using may not be valid.
1110	The Autodiscover provider is unable to load the assembly because the assembly or DLL could be in an invalid format.
1111	Autodiscover is unable to load an assembly because it does not have appropriate access permissions.
1112	Autodiscover is unable to find an assembly or DLL that it is trying to reference.
1105	The provider specified in the client request and response schema could not be found.
1113	An invalid attribute was registered by the provider DLL with the Autodiscover service on the Client Access server.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > AutoDiscover

EXSPI-8X CAS Collect FDS Metrics

The policy collects data from the following counters of the MSExchangeFDS:OAB performance monitor object:

- Download Tasks Completed
- Download Task Queued

Collection details

The EXSPI-8X CAS Collect FDS Metrics policy stores the values of these counters into the EX2007_FDSOAB table into the data store. The counter values are mapped into the following columns:

Metric Name	Column Name
Download Tasks Completed	TASKS_COMPLETED
Download Task Queued	TASK_QUEUED

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > File Distribution Service

Polling interval: Every 15 minutes

EXSPI-8X-DownloadTasksCompleted-OAB-All

The EXSPI-8X-DownloadTasksCompleted-OAB-All policy monitors the Download Tasks Completed counter of the MSExchangeFDS: OAB performance monitor object policy. If the value of the counter falls below one (which means no offline address books were downloaded), the Microsoft Exchange SPI sends an alert message of severity Critical to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > File Distribution Service

Default threshold: 0

Polling interval: Every hour

EXSPI-8X-DownloadTasksQueued-OAB-All

The EXSPI-8X-Download Tasks Queued-OAB-All policy monitors the Download Tasks Queued counter of the MSExchangeFDS: OAB performance monitor object. If the value of the counter exceeds one (which means at least one offline address book is queued), the Microsoft Exchange SPI sends an alert message of severity Critical to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Group > Client Access Server > File Distribution ServicePolling interval: Every 10 hours

EXSPI-8X-DownloadTaskQueued-OAB-Total

The EXSPI-8X-DownloadTaskQueued-OAB-Total policy monitors the _Total instance of the Download Task Queued counter of the MSExchangeFDS:OAB performance monitor object. If the value of the counter exceeds five (which means at least five offline address books are queued), the Microsoft Exchange SPI sends an alert message of severity Warning to the message browser.

When the value exceeds 10, the SPI sends an alert message of severity Critical to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > File Distribution Service

Polling interval: Every hour

EXSPI-8X Get-IMAP4 Settings

This policy monitors the following IMAP4 settings of a Client Access server with the help of the Get-ImapSettings cmdlet:

- Maximum IMAP4 connections
- Maximum IMAP4 connections per user
- Maximum IMAP4 connections from single IP

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > IMAP4

Schedule: Every hour

EXSPI-8X IMAP4 Failed Connection Rate

The EXSPI-8X IMAP4Failed Connection Rate policy monitors the Connections Failed and Total Connections counters of the MSExchangeIMAP4 performance monitor object and policy. The policy calculates the rate of failed IMAP4 connections. If the rate exceeds the threshold value, the Microsoft Exchange SPI sends an alert message to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > IMAP4

Default Threshold:

- Critical: 10
- Warning: 5

Polling interval: Every 15 minutes

EXSPI-8X IMAP4 Rejected Connection Rate

The EXSPI-8X IMAP4Rejected Connection Rate policy monitors the Connections Rejected and Total Connections counters of the MSExchangeIMAP4 performance monitor objectpolicy. The policy calculates the rate of rejected IMAP4 connections. If the rate exceeds the threshold value, the Microsoft Exchange SPI sends an alert message to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > IMAP4

Default Threshold:

- Critical: 10
- Warning: 5

Polling interval: Every 15 minutes

EXSPI-8X Dc- IMAP4 Performance

The EXSPI-8X Dc-IMAP4 Performance policy collects the values of the following counters of the MSExchangeIMAP4 performance monitor object:

Counter	Data Type
Total Connections	System.Int32
Connections Failed	System.Int32
Connections Rejected	System.Int32

Collection details

The Microsoft Exchange SPI stores the metric values collected by the EXSPI-8X Dc- IMAP4 Performance policy in the Ex2007_IMAP4PERF table into the data store. The EXSPI-8X Dc- IMAP4 Performance policy logs the metric values into the following columns of the table:

Metric Name	Column Name
Total Connections	IMAP4CON
Connections Failed	IMAP4FAILEDCON
Connections Rejected	IMAP4REJECTEDCON

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > IMAP4

Schedule: Every hour

EXSPI-8X_Monitor_Check_IMAP4_Max Cnn_Single_IP

The EXSPI-8X_Monitor_Check_IMAP4_Max Cnn_Single_IP policy monitors the number of IMAP4 connections used by a single IP.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > IMAP4

Default threshold: 10

Polling interval: Once every hour

EXSPI-8X_Monitor_Check_IMAP4_Max_Cnn_User

 $The EXSPI-8X_Monitor_Check_IMAP4_Max_Cnn_User policy monitors the number of IMAP4 connections used for every user.$

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > IMAP4

Default threshold: 10

Polling interval: Once every hour

EXSPI-8X Monitor Check IMAP4 Max Connections per User

The EXSPI-8X Monitor Check IMAP4 Max Connections per User policy monitors the number of IMAP4 connections used by a single user.

Policy Type: Measurement Threshold

Policy group: SPI for Exchange → Exchange 2007 → Manual Deploy Group → Client Access Server → IMAP4

Related Topics:

- Microsoft Exchange SPI policies for Microsoft Exchange Server 2007
- EXSPI-8X Get IMAP4 Max Settings
- EXSPI-8X IMAP4 Failed Connection Rate
- EXSPI-8X IMAP4 Connections

EXSPI-8X IMAP4 Connections

The EXSPI-8XIMAP4 Connections policy monitors the Current Connections counter of the MSExchangeIMAP4 performance monitor object. If the value of the counter (which is the IMAP4 connection count) exceeds the threshold value, the SPI sends an alert to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > IMAP4

Default threshold: 200

Polling interval: 15 minutes

EXSPI-8X-IMAP4

The EXSPI-8X-IMAP4 monitors the MSExchangeIMAP4 event log. If the following events are logged into the source MSExchangeIMAP4, the SPI sends alert messages to the message browser:

Event ID	Event Type
2004	An unexpected exception occurred when a command was processed in the user's mailbox.
2101	The folders that have the same name have been found in a mailbox.
2006	An exception occurred while converting message from MAPI to MIME format.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > IMAP4

EXSPI-8X Get POP3 Settings

The EXSPI-8X Get POP3 Settings policy runs the Get-PopSettings cmdlet on a Client Access server to collect the POP3 settings for the Client Access server. It collects the following settings of a Client Access server:

- Maximum POP3 connections
- Maximum POP3 connections per user
- Maximum POP3 connections from single IP

Policy type: ScheduledTask

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > POP3

Schedule: Every hour on weekdays

EXSPI-8X Dc-POP3 Performance

The EXSPI-8X Dc-POP3 Performance policy collects the following counters of the MSExchangePOP3 performance monitor object:

Counter	Data Type
RETR Total	System.Int32
Connections Total	System.Int32
Connections Failed	System.Int32
Connections Rejected	System.Int32
DELE Total	System.Int32

Collection details

The EXSPI-8X Dc-POP3 Performance policy stores the collected data into the following columns of the EX2007_POP3PERF table:

Metric	Column Name
RETR Total	POP3RETR
Connections Total	POP3CONN
Connections Failed	POP3FAILEDCON
Connections Rejected	POP3REJECTEDCON
DELE Total	POP3DELE

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > POP3

Polling interval: Every hour

EXSPI-8X-POP3

The EXSPI-8X-POP3 policy monitors the MSExchangePOP3 event log on the Client Access Server. If specific events are logged into the MSExchangePOP3 log, the EXSPI-8X-POP3 policy sends a notification to the HPOM message browser.

The policy looks for the following errors:

Event ID	Event Type
2004	An unexpected exception occurred when a command was processed in the user's mailbox.
2012	The POP3 service has disabled protocol logging on the Client Access server where the MSExchangePOP3 service runs.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > POP3

EXSPI-8X_Monitor_Check_POP3_Max_Cnn_User

The EXSPI-8X_Monitor_Check_POP3_Max_Cnn_User policy monitors the number of POP3 connection used by a single user. The policy sends a Warning message to the message browser when the number exceeds the threshold value.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > POP3

Default threshold: 10

EXSPI-8X_Monitor_Check_POP3_Max_Cnn_Single_IP

The EXSPI-8X_Monitor_Check_POP3_Max_Cnn_Single_IP policy monitors the number of POP3 connection used by a single IP. The policy sends a Warning message to the message browser when the number exceeds the threshold value.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > POP3

Default threshold: 10

EXSPI-8X_Monitor_Check_POP3_Max_Connections

The EXSPI-8X_Monitor_Check_POP3_Max_Connections policy monitors the maximum number of POP3 connection. The policy sends a Critical message to the message browser when the number exceeds the threshold value.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > POP3

Default threshold: 2000

EXSPI-8X POP3 Failed Connection Rate

The EXSPI-8X POP3 Failed Connection Rate policy monitors the percentage rate of the number of failed POP3 connections policy. The policy monitors the following counters of the MSExchangePOP3 performance monitor object:

- Connections Failed
- Total Connections

The policy sends alert messages to the message browser when the rate exceeds the threshold values.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > POP3

Default threshold:

- Critical: 10
- Warning: 5

Polling Interval: Every 15 minutes

EXSPI-8X POP3 Connections

The EXSPI-8X POP3 Connections policy monitors the number of users connected to a Client Access server through the POP3 protocol. It monitors the Connections Current counter of the MSExchangePOP3 performance monitor object. The policy sends a Warning message to the message browser when the value of the counter (which is the POP3 connection count) exceeds the threshold value.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > POP3

Default threshold: 200

Polling interval: Every 15 minutes

EXSPI-8X POP3 Rejected Connection Rate

The EXSPI-8X POP3 Rejected Connection Rate policy monitors the percentage rate of the number of rejected POP3 connectionspolicy. The policy monitors the following counters of the MSExchangePOP3 performance monitor object:

- Connections Rejected
- Total Connections

The policy sends alert messages to the message browser when the rate exceeds the threshold values.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > POP3

Default threshold:

- Critical: 10
- Warning: 5

Polling Interval: Every 15 minutes

EXSPI-8X-InformationWorker

The EXSPI-8X-InformationWorker policy monitors the MSExchange Availability event source on the Client Access Server. If specific events are logged into the MSExchange Availability source, the EXSPI-8X-InformationWorker policy sends a notification to the HPOM message browser.

The policy looks for the following events:

Event ID	Event Type
4016	The Exchange Availability service did not log on as a network service.
4014	The Availability service could not contact the AD Directory Service to obtain the local server object.
4010	A proxy Web request failed one or more security checks at the Web service layer.
4001	The Autodiscover service could not discover Availability service running on a remote AD Directory Service forest.
4005	The configuration information for the current forest could not be found in Active Directory.
4006	One of the global services did not start.
4012	A cross-forest proxy request could not be initiated due to invalid credentials.
4011	The configuration for forest was not found in Active Directory.
4018	An exception occurred while attempting to locate a Client Access server to handle a request for e-mail address.
4015	The Availability service could not find the local security descriptor.
4017	No Client Access server was found to handle a request for e-mail address.
4003	The availability service could not successfully retrieve Schedule+ Free Busy data for one or more legacy Exchange mailboxes.
4002	The availability service could not successfully send a proxy Web request.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > Information Worker

EXSPI-8X Check Outlook Anywhere Enabled

The EXSPI-8X Check Outlook Anywhere Enabled policy checks if Outlook Anywhere is enabled.

Policy type: ScheduledTask

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > Outlook Anywhere

Schedule: Every hour

EXSPI-8X Check Outlook Anywhere Not Enabled

The EXSPI-8X Check Outlook Anywhere Not Enabled policy checks if Outlook Anywhere is not enabled.

Policy type: ScheduledTask

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > Outlook Anywhere

Schedule: Every hour on weekdays

EXSPI-8X CAS-Evt-MSExchange OWA

The EXSPI-8X CAS-Evt-MSExchange OWA policy monitors the MSExchange OWA event source on the Client Access Server. If specific events are logged into the MSExchange OWA source, the EXSPI-8X CAS-Evt-MSExchange OWA policy sends a notification to the HPOM message browser.

The policy looks for the following events:

- Event ID 1
- Event ID 30

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > Outlook WebAccess
Monitoring Edge Transport Servers

The Edge Server group includes the policies that help you monitor and manage the Exchange 2007 nodes with the edge transport role. The policies in this group help you monitor the details related to the message tracking settings, states of the services running on the edge transport server, and so on.

The group consists of the following subgroups and policies:

• Policy subgroups

- Availability-This group includes the EXSPI-8X Monitor Edge Server Services policy, which monitors states of the services that are necessary for a smooth functioning of the Edge Transport Server. Additionally, this group includes three policies that monitor several event log sources on the Edge Transport node: EXSPI-8X MSExchange Messaging Policies, EXSPI-8X Ed-MSExchange EdgeSync-Errors and Warnings, and EXSPI-8X Ed-MSExchange Message Security.
- Edge Transport Agent-This group includes the following policies that help you collect metric data for several agents on the Edge Transport Servers, such as protocol analysis, Sender ID, Content Filter, Sender Filter, and so on:
 - EXSPI-8X Edge DC-MSExchange Attachment Filtering
 - EXSPI-8X Edge DC-MSExchange Protocol Analysis Agent
 - EXSPI-8X Edge DC-MSExchange Sender ID Agent
 - EXSPI-8X Edge DC-MSExchange Sender Filter Agent
 - EXSPI-8X Edge DC-MSExchange Connection Filtering Agent
 - EXSPI-8X Edge DC-MSExchange Content Filter Agent
 - EXSPI-8X Edge DC-MSExchange Recipient Filter Agent
- SMTP-This group includes the following policies to collect metric data for several counters of the performance monitor objects MSExchangeTransport SmtpReceive and MSExchangeTransport SmtpSend:
 - EXSPI-8X Edge Dc-SMTP Perf Outbound Cnn
 - EXSPI-8X Edge Dc-SMTP Perf Inbound Cnn
- Policies
 - $\circ ~ {\it EXSPI-8X} \, {\it Check} \, {\it Tracking} \, {\it Log} \, {\it Settings} \\$
 - EXSPI-8X Edge Get Configuration of the Transport Agent

- EXSPI-8X Get Queue Data
- EXSPI-8X Dc Transport Queues
- EXSPI-8X Edge Th-Active Mailbox Delivery Queue Length
- EXSPI-8X Edge Th-Active Remote Delivery Queue Length
- EXSPI-8X Edge Th-AggDelivery QLength-All_Queues
- EXSPI-8X Edge Th-Delay DSNs
- EXSPI-8X Edge Th-Failure DSNs Total
- EXSPI-8X Edge Th-Largest Delivery Queue Length
- EXSPI-8X Edge Th-Poison Queue Length
- EXSPI-8X Edge Th-Retry Non-SMTP Delivery Queue Length
- EXSPI-8X Edge Th-Submission Queue Length
- EXSPI-8X Edge Th-Unreachable Queue Length

To monitor the Edge Transport Servers, follow these steps:

- 1. Identify the Exchange 2007 nodes with the edge server role that you want to monitor.
- 2. Verify the schedules of the scheduled-task policies. If required, modify the schedule.
- 3. Deploy the scheduled-task policies on the identified nodes.
- 4. Review the polling intervals and thresholds of the measurement-threshold policies in this group. Change these settings if required.
- 5. Deploy the measurement-threshold policies on the identified nodes.
- 6. Similarly, deploy the Windows event log policies on the identified nodes.

🗘 NOTE:

Deploy the policies under the Edge Server group only on the nodes with the Edge Transport Server role.

EXSPI-8X Monitor Edge Server Services

The EXSPI-8X Monitor Edge Server Services policy collects the states of the services necessary to run an edge transport server.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > Availability

Default schedule: Every 5 minutes

Monitoring details

The EXSPI-8X Monitor Edge Server Services policy monitors the states of the following services on the Edge Transport node:

- ADAM_MSExchange
- EdgeCredentialSvc
- MSExchangeTransport
- MSExchangeAntispamUpdate
- MSExchangeTransportLogSearch

The policy generates appropriate alert messages if one of these services stops running.

EXSPI-8X MSExchange Messaging Policies

The EXSPI-8X MSExchange Messaging policy monitors the source MSExchange Messaging Policies on the edge transport server. If an event is logged into the MSExchange Messaging Policies source, the EXSPI-8X MSExchange Messaging policy sends a notification to the HPOM message browser with the event ID and description.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > Availability

EXSPI-8X Ed-MSExchange Message Security

The EXSPI-8X Ed-MSExchange Message Security policy monitors source MSExchange Message Security on the edge transport server. If an event is logged into the MSExchange Message Security source, the EXSPI-8X Ed-MSExchange Message Security policy sends a notification to the HPOM message browser with the event ID and description.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > Availability

EXSPI-8X Edge DC-MSExchange Attachment Filtering

The EXSPI-8X Edge DC-MSExchange Attachment Filtering policy collects data from different counters of the MSExchange Attachment Filtering performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI Edge Transport Agent

Polling interval: Every 15 minutes

Collection details

The EXSPI-8X Edge DC-MSExchange Attachment Filtering policy collects the values of the following counters of the MSExchange Attachment Filtering performance monitor object:

Counter Name	Data Type
Messages Attachment Filtered	System.Int32
Messages Filtered/sec	System.Int32

The Microsoft Exchange SPI creates the EX2007_ATTACHFILTER table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Name	INSTANCE_NAME
Server Name	SERVER_NAME
Messages Filtered/sec	MSGFILTERPERSEC
Messages Attachment Filtered	MSGATT_FILTERED

EXSPI-8X Edge DC-MSExchange Protocol Analysis Agent

The EXSPI-8X Edge DC-MSExchange Protocol Analysis Agent policy collects data from several counters of the MSExchange Protocol Analysis Agent performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI Edge Transport Agent

Polling interval: Every 15 minutes

Collection details

The EXSPI-8X Edge DC-MSExchange Protocol Analysis Agent policy collects the values of the following counters of the MSExchange Protocol Analysis Agent performance monitor object:

Counter Name	Data Type
Senders Blocked Because of Remote Open Proxy	System.Int32
Senders Blocked Because of Remote SRL	System.Int32
Senders Processed	System.Int32
Senders Blocked Because of Local Open Proxy	System.Int32
Senders Bypass Local SRL calculation	System.Int32
Senders Blocked Because of Local SRL	System.Int32

The Microsoft Exchange SPI creates the EX2007_PRTAGT table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Instance Name	INSTANCE_NAME
Server Name	SERVER_NAME
Senders Blocked Because of Local Open Proxy	SENDBCK_LOPNPXY
Senders Blocked Because of Local SRL	SENDBCK_LCKEDLSRL
Senders Blocked Because of Remote SRL	SENDBCK_LCKEDRSRL
Senders Blocked Because of Remote Open Proxy	SENDBCK_ROPENPXY
Senders Bypass Local SRL calculation	SENDBYPASS_LSRLCALC
Senders Processed	SENDPROCESSED

EXSPI-8X Ed-MSExchange EdgeSync-Errors and Warnings

The EXSPI-8X Ed-MSExchange EdgeSync-Errors and Warnings policy monitors source MSExchange EdgeSync on the edge transport server. If an event is logged into the MSExchange EdgeSync source, the EXSPI-8X Ed-MSExchange EdgeSync-Errors and Warnings policy sends a notification to the HPOM message browser with the event ID and description.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > Availability

EXSPI-8X Edge DC-MSExchange Sender ID Agent

The EXSPI-8X Edge DC-MSExchange Sender ID Agent policy collects data from several counters of the MSExchange Sender Id Agent performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI Edge Transport Agent

Polling interval: Every 15 minutes

Collection details

The EXSPI-8X Edge DC-MSExchange Sender ID Agent policy collects the following counters of the MSExchange Sender Id Agent performance monitor object:

Counter Name	Data Type
Messages Validated with a TempError Result	System.Int32
Messages Validated	System.Int32
Messages Validated with a Fail - Non-existent Domain Result	System.Int32
Messages Validated with a Pass Result	System.Int32
Messages Validated with a PermError Result	System.Int32
Messages Validated with a Fail - Not Permitted Result	System.Int32
Messages Validated with a Fail - Malformed Domain Result	System.Int32
Messages Missing Originating IP	System.Int32
Messages Validated with a Neutral Result	System.Int32
Messages Validated with a SoftFail Result	System.Int32
Messages With No PRA	System.Int32

Messages That Bypassed Validation	System.Int32
Messages Validated with a None Result	System.Int32

The Microsoft Exchange SPI creates the EX2007_SENDERID table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Messages Validated with a TempError Result	MSGTEMPERROR
Messages Validated	MSGVALIDATED
Messages Validated with a Fail - Non-existent Domain Result	MSGFAIL_NONEXISTDMN
Messages Validated with a Pass Result	MSGPASSRESULT
Messages Validated with a PermError Result	MSGPERMERROR
Messages Validated with a Fail - Not Permitted Result	MSGFAIL_NOTPERMIT
Messages Validated with a Fail - Malformed Domain Result	MSGFAILMALDOMAIN
Messages Missing Originating IP	MSGMISSORGIP
Messages Validated with a Neutral Result	MSGNEUTRALRESULT
Messages Validated with a SoftFail Result	MSGSOFTFAILED
Messages With No PRA	MSGWITHNOPRA
Messages That Bypassed Validation	MSGBYPASSED
Messages Validated with a None Result	MSGNONERESULT

EXSPI-8X Edge DC-MSExchange Sender Filter Agent

The EXSPI-8X Edge DC-MSExchange Sender Filter Agent policy collects data from different counters of the MSExchange Sender Filter Agent performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI Edge Transport Agent

Polling interval: Every 15 minutes

Collection details

The EXSPI-8X Edge DC-MSExchange Sender Filter Agent policy collects the following counters of the MSExchange Sender Filter Agent performance monitor object:

Counter Name	Data Type
Messages Evaluated by Sender Filter	System.Int32
Messages Filtered by Sender Filter	System.Int32

The Microsoft Exchange SPI creates the EX2007_SENDERFILTER table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Messages Evaluated by Sender Filter	MSGEVALUATED
Messages Filtered by Sender Filter	MSGFILTERED

EXSPI-8X Edge DC-MSExchange Connection Filtering Agent

The EXSPI-8X Edge DC-MSExchange Connection Filtering Agent policy collects data from different counters of the MSExchange Connection Filtering Agent performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI Edge Transport Agent

Polling interval: Every 15 minutes

Collection details

The EXSPI-8X Edge DC-MSExchange Connection Filtering Agent policy collects the following counters of the MSExchange Connection Filtering Agent performance monitor object:

Counter Name	Data Type
Connections on IP Block List	System.Int32
Connections on IP Allow List	System.Int32
Connections on IP Block List Providers	System.Int32
Connections on IP Allow List Providers	System.Int32

The Microsoft Exchange SPI creates the EX2007_CONNFILTER table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Connections on IP Block List	CONNIPBCKLIST
Connections on IP Allow List	CONNIPALLOWLIST
Connections on IP Block List Providers	CONNIPBCKLISTPVD
Connections on IP Allow List Providers	CONNIPALLOWLISTPVD

EXSPI-8X Edge DC-MSExchange Content Filter Agent

The EXSPI-8X Edge DC-MSExchange Content Filter Agent policy collects data from several counters of the MSExchange Content Filter Agent performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI Edge Transport Agent

Polling interval: Every 15 minutes

Collection details

The EXSPI-8X Edge DC-MSExchange Content Filter Agent policy collects the following counters of the MSExchange Content Filter Agent performance monitor object:

Counter Name	Data Type
Messages Scanned	System.Int32
Messages with SCL 0	System.Int32
Messages with SCL 9	System.Int32
Messages with SCL 6	System.Int32
Messages with SCL 3	System.Int32
Messages Quarantined	System.Int32
Messages with SCL 2	System.Int32
Messages Deleted	System.Int32
Messages that Bypassed Scanning	System.Int32
Messages with SCL 1	System.Int32
Messages with SCL 5	System.Int32

Messages with SCL 7	System.Int32
Messages with SCL 4	System.Int32
Messages Rejected	System.Int32
Messages with SCL 8	System.Int32

The Microsoft Exchange SPI creates the EX2007_CONTFILTER table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Messages Scanned	MSGSCANNED
Messages with SCL 0	MSGWITHSCL0
Messages with SCL 9	MSGWITHSCL9
Messages with SCL 6	MSGWITHSCL6
Messages with SCL 3	MSGWITHSCL3
Messages Quarantined	MSGQUARANTINED
Messages with SCL 2	MSGWITHSCL2
Messages Deleted	MSGDELETED
Messages that Bypassed Scanning	MSGBYPASSSCAN
Messages with SCL 1	MSGWITHSCL1
Messages with SCL 5	MSGWITHSCL5
Messages with SCL 7	MSGWITHSCL7
Messages with SCL 4	MSGWITHSCL4
Messages Rejected	MSGREJECTED
Messages with SCL 8	MSGWITHSCL8

EXSPI-8X Edge DC-MSExchange Recipient Filter Agent

The EXSPI-8X Edge DC-MSExchange Recipient Filter Agent policy collects data from different counters of the MSExchange Recipient Filter Agent performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI Edge Transport Agent

Polling interval: Every 15 minutes

Collection details

The EXSPI-8X Edge DC-MSExchange Recipient Filter Agent policy collects the following counters of the MSExchange Recipient Filter Agent performance monitor object:

Counter Name	Data Type
Recipients Rejected by Block List	System.Int32
Recipients Rejected by Recipient Validation	System.Int32

The Microsoft Exchange SPI creates the EX2007_RECPFILTER table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Recipients Rejected by Block List	RECPREJ_BCKLIST
Recipients Rejected by Recipient Validation	RECPREJ_RECPVLDATION

EXSPI-8X Edge Dc-SMTP Perf Outbound Cnn

The policy collects data from different counters of the MSExchangeTransport SmtpSend performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > SMTP

Polling interval: Every hour

Collection details

The policy collects the following counters of the MSExchangeTransport SmtpSend performance monitor object:

Counter Name	Data Type
Messages Sent Total	System.Int32
Message Bytes Sent Total	System.Int32
Connections Current	System.Int32
Connections Total	System.Int32
Bytes Sent Total	System.Int32

The Microsoft Exchange SPI creates the EX2007_SMTPSEND table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Message Bytes Sent Total	SMTPMSGBYTESEND
Messages Sent Total	SMTPMSGSEND
Connections Current	SMTPCONNCURR
Connections Total	SMTPCONNTOT
Bytes Sent Total	SMTPBYTESEND

EXSPI-8X Edge Dc-SMTP Perf Inbound Cnn

The policy collects data from different counters of the MSExchangeTransport SmtpReceive performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > SMTP

Polling interval: Every hour

Collection details

The policy collects the following counters of the MSExchangeTransport SmtpReceive performance monitor object:

Counter Name	Data Type
Messages Sent Total	System.Int32
Message Bytes Sent Total	System.Int32
Connections Current	System.Int32
Connections Total	System.Int32
Bytes Sent Total	System.Int32

The Microsoft Exchange SPI creates the EX2007_SMTPRECV table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Messages Received Total	SMTPMSGBYTERECV
Message Bytes Received Total	SMTPMSGRECV
Connections Current	SMTPCONNCURR
Connections Total	SMTPCONNTOT
Bytes Received Total	SMTPBYTERECV

EXSPI-8X Check Tracking Log Settings

The EXSPI-8X Edge Check Tracking Log Settings policy collects the details related to the names and states of Edge Transport servers on which message tracking logs and message subject tracking logs are enabled and displays those details in the message browser.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server

Polling interval: Every hour

EXSPI-8X Edge Get Configuration of the Transport Agent

The EXSPI-8X Edge Get Configuration of the Transport Agent policy collects and stores the details of the transport agent on the Edge Transport Server.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server

Polling interval: Every 15 minutes

Collection details

The EXSPI-8X Edge Get Configuration of the Transport Agent policy collects the following metrics of the transport agent:

Metric Name	Data Type
Priority	System.String
Enabled	System.Boolean
Identity	System.String

The Microsoft Exchange SPI creates the EX2007_AGCFG table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Priority	AGCFG_PRI
Enabled	AGCFG_EN
Identity	AGCFG_ID

EXSPI-8X Get Queue Data

The policy collects and stores the details of the queue on the Edge Transport Server.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server

Polling interval: Every 15 minutes

Collection details

The policy collects the following metrics of the transport agent:

Metric Name	Data Type
DeliveryType	System.String
NextHopConnector	System.String
NextHopDomain	System.String
MessageCount	System.Int32
LastError	System.String
Identity	System.String

The Microsoft Exchange SPI creates the EX2007_QINFO table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
DeliveryType	QINFO_DLVTYPE
NextHopConnector	QINFO_NHDOMAIN
NextHopDomain	QINFO_NHCNNT
MessageCount	QINFO_MSGCNT
LastError	QINFO_LSTERR
Identity	QINFO_ID

EXSPI-8X Dc Transport Queues

The policy collects and stores the values of different counters of all instances of the MSExchangeTransport Queues performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server

Polling interval: Every 5 minutes

Collection details

The policy collects the following counters of the MSExchangeTransport Queues performance monitor object (for all the instances):

Counter Name	Data Type
Active Non-SMTP Delivery Queue Length	System.Int32
Retry Non-SMTP Delivery Queue Length	System.String
Active Mailbox Delivery Queue Length	System.String
Submission Queue Length	System.Boolean
Aggregate Delivery Queue Length (All Queues)	System.Int32
Unreachable Queue Length	System.Int32
Retry Remote Delivery Queue Length	System.Int32
Poison Queue Length	System.Int32
Largest Delivery Queue Length	System.Int32
Retry Mailbox Delivery Queue Length	System.Int32
Active Remote Delivery Queue Length	System.Int32

The Microsoft Exchange SPI creates the EX2007_TRANSQ table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Active Non-SMTP Delivery Queue Length	ACT_NONSMTP_DQLENG
Retry Non-SMTP Delivery Queue Length	RETRY_NONSMTP_QLEN
Active Mailbox Delivery Queue Length	ACT_MDQ_LENGTH
Submission Queue Length	SUB_Q_LENGTH
Aggregate Delivery Queue Length (All Queues)	AGGDEL_ALLQ_LEN
Unreachable Queue Length	UNREACH_Q_LENGTH
Retry Remote Delivery Queue Length	RETRY_REM_DQ_LEN
Poison Queue Length	POISON_Q_LENGTH
Largest Delivery Queue Length	LARG_DQ_LEN
Retry Mailbox Delivery Queue Length	RET_MD_Q_LEN
Active Remote Delivery Queue Length	ACT_REM_DQ_LEN

EXSPI-8X Edge Th-Active Mailbox Delivery Queue Length

The policy monitors the Active Mailbox Delivery Queue Length counter of the _Total instance of the MSExchangeTransport Queues performance monitor object. If the Active Mailbox Delivery Queue Length exceeds the threshold, the policy sends alerts to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server

Polling interval: Every 5 minutes

- **250:** The Microsoft Exchange SPI sends an alert message with the Critical severity to the message browser when this threshold is violated.
- 200: The Microsoft Exchange SPI sends an alert message with the Warning severity to the message browser when this threshold is violated.

EXSPI-8X Edge Th-Active Remote Delivery Queue Length

The policy monitors the Active Remote Delivery Queue Length counter of the _Total instance of the MSExchangeTransport Queues performance monitor object. If the Active Remote Delivery Queue Length exceeds the threshold, the policy sends an alert to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server

Polling interval: Every 5 minutes

- **250:** The Microsoft Exchange SPI sends an alert message with the Critical severity to the message browser when this threshold is violated.
- 200: The Microsoft Exchange SPI sends an alert message with the Warning severity to the message browser when this threshold is violated.

EXSPI-8X Edge Th-AggDelivery QLength-All_Queues

The policy monitors the Aggregate Delivery Queue Length (All Queues) counter of the _Total instance of the MSExchangeTransport Queues performance monitor object. When the count of Aggregate Delivery Queue Length (All Queues) exceeds the threshold, the policy sends an alert to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server

Polling interval: Every 5 minutes

- **5000:** The Microsoft Exchange SPI sends an alert message with the Critical severity to the message browser when this threshold is violated.
- **3000:** The Microsoft Exchange SPI sends an alert message with the Warning severity to the message browser when this threshold is violated.

EXSPI-8X Edge Th-Delay DSNs

The policy monitors the value of the Delay DSNs counter of the Internal instance of the MSExchangeTransport DSN performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server

Polling interval: Every 5 minutes

- 20: The Microsoft Exchange SPI sends an alert message with the Critical severity to the message browser when this threshold is violated.
- 10: The Microsoft Exchange SPI sends an alert message with the Warning severity to the message browser when this threshold is violated.

EXSPI-8X Edge Th-Failure DSNs Total

The EXSPI-8X Edge Th-Failure DSNs Total policy monitors the Failure DSNs Total counter of the Internal instance of the MSExchangeTransport DSN performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server

Polling interval: Every 5 minutes

- **40:** The Microsoft Exchange SPI sends an alert message with the Critical severity to the message browser when this threshold is violated.
- **30:** The Microsoft Exchange SPI sends an alert message with the Warning severity to the message browser when this threshold is violated.

EXSPI-8X Edge Th-Largest Delivery Queue Length

The EXSPI-8X Edge Th-Largest Delivery Queue Length policy monitors the Largest Delivery Queue Length counter of the Total_ instance of the MSExchangeTransport DSN performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > Exchange 2007 > Manual Deploy Group > en > Edge Server > SMTP

Polling interval: Every 5 minutes

- **250:** The Microsoft Exchange SPI sends an alert message with the Critical severity to the message browser when this threshold is violated.
- 200: The Microsoft Exchange SPI sends an alert message with the Warning severity to the message browser when this threshold is violated.

EXSPI-8X Edge Th-Poison Queue Length

The policy monitors the Poison Queue Length counter of the _Total instance of the MSExchangeTransport Queues performance monitor object. When the Poison Message queue-length count exceeds the threshold, the policy sends an alert to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server

Polling interval: Every 5 minutes

- 5: The Microsoft Exchange SPI sends an alert message with the Critical severity to the message browser when this threshold is violated.
- 1: The Microsoft Exchange SPI sends an alert message with the Warning severity to the message browser when this threshold is violated.

EXSPI-8X Edge Th-Retry Non-SMTP Delivery Queue Length

The policy monitors the Retry Non-SMTP Delivery Queue Length counter of the _Total instance of the MSExchangeTransport Queues performance monitor object. When the Retry Non-SMTP Delivery-Queue length exceeds the threshold, the policy sends an alert to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server

Polling interval: Every 5 minutes

- **250:** The Microsoft Exchange SPI sends an alert message with the Critical severity to the message browser when this threshold is violated.
- 200: The Microsoft Exchange SPI sends an alert message with the Warning severity to the message browser when this threshold is violated.

EXSPI-8X Edge Th-Submission Queue Length

The policy monitors the Submission Queue Length counter of the _Total instance of the MSExchangeTransport Queues performance monitor object. When the submission queue-length count exceeds the threshold, the policy sends an alert to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server

Polling interval: Every 5 minutes

- **150:** The Microsoft Exchange SPI sends an alert message with the Critical severity to the message browser when this threshold is violated.
- **50:** The Microsoft Exchange SPI sends an alert message with the Warning severity to the message browser when this threshold is violated.
EXSPI-8X Edge Th-Unreachable Queue Length

The policy monitors the Unreachable Queue Length counter of the _Total instance of the MSExchangeTransport Queues performance monitor object. It monitors the count of the available messages in the unreachable queue.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server

Polling interval: Every 5 minutes

Default threshold:

- **250:** The Microsoft Exchange SPI sends an alert message with the Critical severity to the message browser when this threshold is violated.
- **150:** The Microsoft Exchange SPI sends an alert message with the Warning severity to the message browser when this threshold is violated.

Monitoring Hub Transport Servers

The Hub TransportServer group includes the policies that help you monitor and manage the Exchange 2007 nodes with the Hub Transport Server role. The policies in this group help you monitor the details related to the tracking log settings, SMTP performance, submission queue length, poison queue length, and so on.

The group consists of the following subgroups:

- Availability This group includes the EXSPI-8X Monitor Hub Transport Server Services policy, which monitors states of the services that are necessary for a smooth functioning of the Hub Transport Server. This group also includes the following policies to monitor several event logs on the Hub Transport Server:
 - EXSPI-8X MSExchange Store Driver Events
 - EXSPI-8X MSExchange Messaging Policies Events
 - \circ EXSPI-8X MSExchange EdgeSync Events
- **SMTP** -With the help of the Microsoft Exchange SPI, you can monitor the performance of the SMTP communication. Policies that are included in this group are:
 - EXSPI-8X Dc-SMTP Performance for Inbound Connections
 - \circ EXSPI-8X Dc-SMTP Performance for Outbound Connections

In addition, this group offers the following policies:

- EXSPI-8X Get Queue Data
- EXSPI-8X Get Configuration of the Transport Agent
- EXSPI-8X Check Tracking Log Settings
- EXSPI-8X Dc-Get Top Destination Details
- EXSPI-8X Dc-Get Top Recipient Details
- EXSPI-8X Dc-Get Top Sender Details
- EXSPI-8X Dc-Get Top Source Details
- EXSPI-8X DC Transport Queues
- EXSPI-8X HUB Transport DSN

- EXSPI-8X Hub Th-ActiveMailboxDelivery_QLength
- EXSPI-8X Hub Th-ActiveNon-SmtpDelivery_QLength
- EXSPI-8X Hub Th-ActiveRemoteDelivery_QLength
- EXSPI-8X Hub Th-AggDel_QLength-All_Queues
- EXSPI-8X Hub Th-Delay DSNs
- EXSPI-8X Hub Th-FailureDSNsTotal
- EXSPI-8X Hub Th-Poison_QLength
- EXSPI-8X Hub Th-Largest Delivery_QLength
- EXSPI-8X Hub Th-RetryMailboxDelivery_QLength
- EXSPI-8X Hub Th-RetryNon-SmtpDelivery_QLength
- EXSPI-8X Hub Th-RetryRemoteDelivery_QLength
- EXSPI-8X Hub Th-Submission_QLength
- EXSPI-8X Hub Th-Unreachable_QLength

To monitor the Hub Transport Servers, follow these steps:

- 1. Identify the Exchange 2007 nodes with the hub transport server role that you want to monitor.
- 2. Verify the schedules of the scheduled-task policies. If required, modify the schedule.
- 3. Deploy the scheduled-task policies on the identified nodes.
- 4. Review the polling intervals of the measurement-threshold policies in this group. Change the polling interval settings if required.
- 5. Deploy the measurement-threshold policies on the identified nodes.
- 6. Deploy the Windows event log policies on the identified nodes.

🖓 NOTE:

Deploy the policies under the Hub Transport Server group only on the nodes with the Hub Transport Server role.

EXSPI-8X Monitor Hub Transport Server Services

The EXSPI-8X Monitor Hub Transport Server Services policy collects the states of the services necessary to run a Hub Transport server.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server > Availability

Default schedule: Every 5

Monitoring details

The EXSPI-8X Monitor Hub Transport Server Services policy monitors the states of the following services on the Hub Transport node:

- MSExchangeTransport
- MSExchangeEdgeSync
- MSExchangeADTopology
- MSExchangeTransportLogSearch
- MSExchangeAntispamUpdate

The policy generates appropriate alert messages if one of these services are stopped or disabled.

EXSPI-8X MSExchange Store Driver Events

The EXSPI-8X MSExchange Store Driver Events policy monitors the event log MSExchange Store Driver on the Hub Transport Server. If any events are logged into the MSExchange Store Driver log, the EXSPI-8X MSExchange Store Driver Events policy sends a notification to the HPOM message browser.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server > Availability

EXSPI-8X MSExchange Messaging Policies Events

The EXSPI-8X MSExchange Messaging Policies Events policy monitors the event log MSExchange Messaging Policies on the Hub Transport Server. If any events are logged into the MSExchange Messaging Policies log, the EXSPI-8X MSExchange Messaging Policies Events policy sends a notification to the HPOM message browser.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server > Availability

EXSPI-8X MSExchange EdgeSync Events

The EXSPI-8X MSExchange EdgeSync Events policy monitors the event log MSExchange EdgeSync on the Hub Transport Server. If any events are logged into the MSExchange EdgeSync log, the EXSPI-8X MSExchange EdgeSync Events policy sends a notification to the HPOM message browser.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server > Availability

EXSPI-8X Dc-SMTP Performance for Inbound Connections

The policy collects the following counters of the MSExchangeTransport SmtpReceive performance monitor object:

Counter Name	Data Type
MessagesReceivedTotal	System.Int32
MessageBytesReceivedTotal	System.Int32
ConnectionsCurrent	System.Int32
ConnectionsTotal	System.Int32
BytesReceivedTotal	System.Int32

Collection details

The EXSPI-8X Dc-SMTP Performance for Inbound Connections policy stores the values of these counters into the Ex2007_SMTPRECV table into the data store. The counter values are mapped into the following columns:

Metric Name	Column Name
MessagesReceivedTotal	SMTPMSGRECV
MessageBytesReceivedTotal	SMTPMSGBYTERECV
ConnectionsCurrent	SMTPCONNCURR
ConnectionsTotal	SMTPCONNTOT
BytesReceivedTotal	SMTPBYTESRECV

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server > SMTP

Polling interval: Every hour

EXSPI-8X Dc-SMTP Performance for Outbound Connections

The policy collects the following counters of the MSExchangeTransport SmtpSend performance monitor object:

Counter Name	Data Type
MessagesSentTotal	System.Int32
MessageBytesSentTotal	System.Int32
ConnectionsCurrent	System.Int32
ConnectionsTotal	System.Int32
BytesSentTotal	System.Int32

Collection details

The EXSPI-8X Dc-SMTP Performance for Outbound Connections policy stores the values of these counters into the EX2007_SMTPSEND table into the data store. The counter values are mapped into the following columns:

Metric Name	Column Name
MessagesSentTotal	SMTPMSGSEND
MessageBytesSentTotal	SMTPMSGBYTESEND
ConnectionsCurrent	SMTPCONNCURR
ConnectionsTotal	SMTPCONNTOT
BytesSentTotal	SMTPBYTESSEND

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server > SMTP

Polling interval: Every hour

EXSPI-8X Get Queue Data

The EXSPI-8X Get Queue Data policy collects information related to the queue from the Hub Transport servers.

Collection details

The EXSPI-8X Get Queue Data policy stores the collected data into the EX2007_QINFO table into the data store. The details are mapped into the following columns:

Metric Name	Column Name
MessagesCount	QINFO_MSGCNT
NextHopDomain	QINFO_NHCNNT
Identity	QINFO_ID
NextHopConnector	QINFO_NHDOMAIN
DeliveryType	QINFO_DLVTYPE
LastError	QINFO_LSTERR

Policy type: Scheduled task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Schedule: Every hour

EXSPI-8X Get Configuration of the Transport Agent

The EXSPI-8X Get Configuration of the Transport Agent policy collects information related to transport agents from the Hub Transport servers.

Collection details

The EXSPI-8X Get Configuration of the Transport Agent policy stores the collected data into the Ex2007_AGCFG table into the data store. The details are mapped into the following columns:

Metric Name	Column Name
Priority	AGCFG_PRI
Enabled	AGCFG_EN
Identity	AGCFG_ID

Policy type: Scheduled task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Schedule: Every hour

EXSPI-8X Check Tracking Log Settings

The EXSPI-8X Check Tracking Log Settings policy collects the names of Hub Transport servers where message tracking logs and message subject tracking logs are enabled and displays those names in the message browser.

Policy type: Scheduled task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Schedule: Every hour

EXSPI-8X Dc-Get Top Destination Details

The EXSPI-8X Dc-Get Top Destination Details policy collects the information related to the message destinations from the Hub Transport servers.

Collection details

The EXSPI-8X Dc-Get Top Destination Details policy stores the collected data into the EX2007_DEST table into the data store. The details are mapped into the following columns:

Metric Name	Column Name
DestinationKey	DEST_KEY
isInternal	IS_INTERNAL
nMsgCount	NUM_MSGS_DR
ServerName	SERVER_NAME
DestinationDomainName	DOMAIN_NAME
AdSiteName	ADSITE_NAME
TotalBytes	NUM_BYTES_DR
DestinationAddr	DEST_ADDR

Policy type: Scheduled task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Schedule: Once every week

NOTE:

EXSPI-8X Dc-Get Top Recipient Details

The EXSPI-8X Dc-Get Top Recipient Details policy collects the information related to the message recipients from the Hub Transport servers.

Collection details

The EXSPI-8X Dc-Get Top Recipient Details policy stores the collected data into the Ex2007_RECP table into the data store. The details are mapped into the following columns:

Metric Name	Column Name
RecipientEmailAddr	EMAIL_ADDR
RecipientStorageGroup	SG_NAME
nMsgCount	NUM_MSGS_RR
RecipientServerName	SERVER_NAME
RecipientStoreName	STORE_NAME
RecipientAdSite	ADSITE_NAME
TotalBytes	NUM_BYTES_RR
RecipientMbox	MBOX_NAME

Policy type: Scheduled task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Schedule: Once every week

NOTE:

EXSPI-8X Dc-Get Top Sender Details

The EXSPI-8X Dc-Get Top Sender Details policy collects the information related to the message senders from the Hub Transport servers.

Collection details

The EXSPI-8X Dc-Get Top Sender Details policy stores the collected data into the EX2007_SENDER table into the data store. The details are mapped into the following columns:

Metric Name	ColumnName
SenderEmailAddr	EMAIL_ADDR
ServerName	SERVER_NAME
SenderStorageGroup	SG_NAME
nMsgCount	NUM_MSGS_SR
SenderStoreName	STORE_NAME
SenderAdSite	ADSITE_NAME
TotalBytes	NUM_BYTES_SR
SenderMbox	MBOX_NAME

Policy type: Scheduled task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Schedule: Once every week

NOTE:

EXSPI-8X Dc-Get Top Source Details

The EXSPI-8X Dc-Get Top Source Details policy collects the information related to the message sources from the Hub Transport servers.

Collection details

The EXSPI-8X Dc-Get Top Source Details policy stores the collected data into the EX2007_SOURCE table into the data store. The details are mapped into the following columns:

Metric Name	Column Name
SourceAddr	SOURCE_ADDR
isInternal	IS_INTERNAL
ServerName	SERVER_NAME
SourceKey	SOURCE_KEY
SourceDomainName	DOMAIN_NAME
nMsgCount	NUM_MSGS_SRC
AdSiteName	ADSITE_NAME
TotalBytes	NUM_BYTES_SRC

Policy type: Scheduled task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Schedule: Once every week

NOTE:

EXSPI-8X DC Transport Queues

The policy collects the following counters of the MSExchangeTransport Queues performance monitor object:

Counter Name	Data Type
Poison Queue Length	System.Int32
Active Non-Smtp Delivery Queue Length	System.Int32
Largest Delivery Queue Length	System.Int32
Active Remote Delivery Queue Length	System.Int32
Retry Mailbox Delivery Queue Length	System.Int32
Submission Queue Length	System.Int32
Aggregate Delivery Queue Length (All Queues)	System.Int32
Active Mailbox Delivery Queue Length	System.Int32
Unreachable Queue Length	System.Int32
Retry Non-Smtp Delivery Queue Length	System.Int32
Retry Remote Delivery Queue Length	System.Int32

Collection details

The policy stores the values of these counters into the EX2007_TRANSQ table into the data store. The counter values are mapped into the following columns:

Metric Name	Column Name
Poison Queue Length	POISON_Q_LENGTH
Active Non-Smtp Delivery Queue Length	ACTIVE_NonSMTP_DQLEN
Largest Delivery Queue Length	LARGEST_DQ_LEN
Active Remote Delivery Queue Length	ACTIVE_REM_DQ_LEN
Retry Mailbox Delivery Queue Length	RETRY_MD_Q_LEN
Submission Queue Length	SUB_Q_LENGTH
Aggregate Delivery Queue Length (All Queues)	AGGDEL_ALLQ_LEN
Active Mailbox Delivery Queue Length	ACTIVE_MDQ_LENGTH
Unreachable Queue Length	UNREACH_Q_LENGTH
Retry Non-Smtp Delivery Queue Length	RETRY_NONSMTP_QLEN
Retry Remote Delivery Queue Length	RETRY_REM_DQ_LEN

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

EXSPI-8X HUB Transport DSN

The policy collects the following counters of the MSExchangeTransport DSN performance monitor object:

Counter Name	Data Type
Failure DSNs Total	System.Int32
Delay DSNs	System.Int32

Collection details

The policy stores the values of these counters into the EX2007_HUBTRANSDSN table into the data store. The counter values are mapped into the following columns:

Metric Name	Column Name
Failure DSNs Total	FAIL_DSNs_TOTAL
Delay DSNs	DELAY_DSNs

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

EXSPI-8X Hub Th-ActiveMailboxDelivery_QLength

The policy monitors the value of the Active Mailbox Delivery Queue Length counter of the MSExchangeTransport Queues performance monitor object.

The policy sends a notifications to the message browser when the counter value exceeds the threshold.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Default threshold:

- Critical: 250
- Warning: 200

EXSPI-8X Hub Th-ActiveNon-SmtpDelivery_QLength

The policy monitors the value of the Active Non-Smtp Delivery Queue Length counter of the MSExchangeTransport Queues performance monitor object.

The policy sends a notifications to the message browser when the counter value exceeds the threshold.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Default threshold:

- Critical: 250
- Warning: 200

EXSPI-8X Hub Th-ActiveRemoteDelivery_QLength

The policy monitors the value of the Active Remote Delivery Queue Length counter of the MSExchangeTransport Queues performance monitor object policy.

The policy sends a notifications to the message browser when the counter value exceeds the threshold.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Default threshold:

- Critical: 250
- Warning: 200

EXSPI-8X Hub Th-AggDel_QLength-All_Queues

The policy monitors the value of the Aggregate Delivery Queue Length (All Queues) counter of the MSExchangeTransport Queues performance monitor object policy.

The policy sends a notifications to the message browser when the counter value exceeds the threshold.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Default threshold:

- Critical: 5000
- Warning: 3000

EXSPI-8X Hub Th-Delay DSNs

The policy monitors the value of the Delay DSNs counter of the MSExchangeTransport DSNs performance monitor objectpolicy.

The policy sends a notifications to the message browser when the counter value exceeds the threshold.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Default threshold:

- Critical: 20
- Warning: 10

EXSPI-8X Hub Th-FailureDSNsTotal

The policy monitors the value of the Failure DSNs Total counter of the MSExchangeTransport DSNs performance monitor object policy.

The policy sends a notifications to the message browser when the counter value exceeds the threshold.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Default threshold:

- Critical: 40
- Warning: 30

EXSPI-8X Hub Th-Poison_QLength

The policy monitors the value of the Poison Queue Length counter of the MSExchangeTransport Queues performance monitor object policy.

The policy sends a notifications to the message browser when the counter value exceeds the threshold.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Default threshold:

- Critical: 5
- Warning: 1

EXSPI-8X Hub Th-LargestDelivery_QLength

The policy monitors the value of the Largest Delivery Queue Length counter of the MSExchangeTransport Queues performance monitor object policy.

The policy sends a notifications to the message browser when the counter value exceeds the threshold.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Default threshold:

- Critical: 250
- Warning: 200

EXSPI-8X Hub Th-RetryMailboxDelivery_QLength

The policy monitors the value of the Retry Mailbox Delivery Queue Length counter of the MSExchangeTransport Queues performance monitor object policy.

The policy sends a notifications to the message browser when the counter value exceeds the threshold.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Default threshold:

- Critical: 250
- Warning: 200

EXSPI-8X Hub Th-RetryNon-SmtpDelivery_QLength

The policy monitors the value of the Retry Non-Smtp Delivery Queue Length counter of the MSExchangeTransport Queues performance monitor objectpolicy.

The policy sends a notifications to the message browser when the counter value exceeds the threshold.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Default threshold:

- Critical: 250
- Warning: 200

EXSPI-8X Hub Th-RetryRemoteDelivery_QLength

The policy monitors the value of the Retry Remote Delivery Queue Length counter of the MSExchangeTransport Queues performance monitor object policy.

The policy sends a notifications to the message browser when the counter value exceeds the threshold.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Default threshold:

- Critical: 250
- Warning: 200

EXSPI-8X Hub Th-Submission_QLength

The policy monitors the value of the Submission Queue Length counter of the MSExchangeTransport Queues performance monitor object policy.

The policy sends a notifications to the message browser when the counter value exceeds the threshold.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Default threshold:

- Critical: 250
- Warning: 200

EXSPI-8X Hub Th-Unreachable_QLength

The policy monitors the value of the Unreachable Queue Length counter of the MSExchangeTransport Queues performance monitor objectpolicy.

The policy sends a notifications to the message browser when the counter value exceeds the threshold.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server

Default threshold:

- Critical: 250
- Warning: 200

Monitoring Mailbox Servers

The Mailbox Server group includes the policies that help you monitor and manage the Exchange 2007 nodes with the mailbox server role. The policies in this group help you monitor the details related to the mailbox performance, replication activity, MAPI connectivity, Information Store and Outlook client latency, and so on.

The group consists of the following subgroups:

- Availability -This group includes the EXSPI-8X Monitor Mailbox Server Services policy, which monitors states of the services that are necessary for a smooth functioning of the Mailbox Server. Additionally, this group includes three policies that monitor several event log sources on the Mailbox node: EXSPI-8X Forward MSExchangeSA Errors, EXSPI-8X Forward MSExchangeAL Errors, and EXSPI-8X MSExchange MailSubmission Events.
- **High Availability** -With the help of the Microsoft Exchange SPI, you can monitor the state of high availability of mailbox servers. The policies included in the High Availability group help you monitor the performance of the following high availability features of Microsoft Exchange Server 2007:
 - Local Continuous Replication (LCR)
 - Cluster Continuous Replication (CCR)
 - Standby Continuous Replication (SCR)

You must deploy all the policies that belong to the High Availability group on the nodes that host the Storage Groups for the replication activity. Policies that are included in this group are:

- EXSPI-8X Dc Replication Summary
- EXSPI-8X_ReplicationReplayQueueLength
- EXSPI-8X_ReplicationCopyQueueLength
- EXSPI-8X Replication Warnings in Application Event Log
- \circ EXSPI-8X Replication Errors in Application Event Log
- EXSPI-8X Check Replication Service
- Assistants This group includes the EXSPI-8X-MailboxServer-Assistants policy.
- Mail Submission This group includes the EXSPI-8X-Mailbox-MailSubmission policy.
- Mailbox This group contains the policies that monitor performance related to message delivery and

special settings of the Mailbox servers. This group includes:

- EXSPI-8X Get Mailbox Details
- EXSPI-8X Get Mailbox IS Sum Data
- EXSPI-8X Dc-IS Mailbox Performance
- EXSPI-8X IS Mailbox Receive Queue Length
- EXSPI-8X Check Circular Logging Enabled
- EXSPI-8X Check If Circular Logging Disabled
- EXSPI-8X MailBoxItemCount
- EXSPI-8X IS Mailbox Average Delivery Time
- **MAPI** This group contains policies that monitor the performance of MAPI-based communications on a Mailbox server. This group includes:
 - EXSPI-8X Test Mapi Connectivity
 - \circ EXSPI-8X Information Store RPC Requests
 - EXSPI-8X Information Store RPC Operations
 - EXSPI-8X Information Store RPC Average Latency
- **Outlook Performance** This group contains policies to monitor Outlook performance on a Mailbox server. This group includes:
 - EXSPI-8X Outlook Client RPC Failure Rate
 - EXSPI-8X Outlook Client Latency
 - o EXSPI-8X Dc-Outlook Client
- **Performance** This group contains policies that monitor the health and performance of the Information Store. This group includes:
 - \circ EXSPI-8X Dc-Information Store Performance
 - EXSPI-8X Information Store Db Cache Size
 - EXSPI-8X Information Store Db Log Record Stall per sec
 - EXSPI-8X Information Store VM 16MB Blocks
 - $\circ ~~ EXSPI-8X \, Information \, Store \, VM \, Largest \, Block$
 - o EXSPI-8X Information Store VM Large Block Bytes
- EXSPI-8X Information Store Additional Heaps
- EXSPI-8X Information Store Heap Memory Errors
- EXSPI-8X Information Store Db Log Threads Waiting
- \circ EXSPI-8X Information Store Memory Errors
- EXSPI-8X Information Store Db Log Writes per sec
- EXSPI-8X Information Store User Count
- **Public Folder** This group contains policies that monitor the performance of public folders. This group includes:
 - EXSPI-8X Get Public Folder Details
 - EXSPI-8X Get Public IS Sum Data
 - EXSPI-8X Dc-IS Public Folder Performance
 - EXSPI-8X Public Folder Average Delivery Time
 - \circ EXSPI-8X PublicFolderItemCount
 - EXSPI-8X IS Public Receive Queue Length
 - EXSPI-8X IS Public Replication Queue Length

To monitor the Mailbox Servers, follow these steps:

- 1. Identify the Exchange 2007 nodes with the Mailbox server role that you want to monitor.
- 2. Verify the schedules of the scheduled-task policies. If required, modify the schedule.
- 3. Deploy the scheduled-task policies on the identified nodes.
- 4. Review the polling intervals and thresholds of the measurement-threshold policies in this group. Change these settings if required.
- 5. Deploy the measurement-threshold policies on the identified nodes.
- 6. Similarly, deploy the Windows event log policies.

🗘 NOTE:

Deploy the policies under the Mailbox Server group only on the nodes with the Mailbox Server role.

EXSPI-8X Monitor Mailbox Server Services

The EXSPI-8X Monitor Mailbox Server Services policy collects the states of the services necessary to run a mailbox server.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Availability

Default schedule: Every 5 minutes

Monitoring details

The EXSPI-8X Monitor Mailbox Server Services policy monitors the states of the following services on the mailbox node:

- MSExchangeADTopology
- MSExchangeIS
- MSExchangeMailboxAssistants
- MSExchangeServiceHost
- MSExchangeSA
- MSExchangeTransportLogSearch
- MSExchangeMailSubmission
- MSExchangeRepl
- MSExchangeSearch
- MSFTESQL-Exchange

The policy generates appropriate alert messages if one of these services stops running.

EXSPI-8X Forward MSExchangeSA Errors

The EXSPI-8X Forward MSExchangeSA Errors policy monitors the event source MSExchangeSA on the mailbox server. If an error is logged into the MSExchangeSA source, the EXSPI-8X Forward MSExchangeSA Errors policy sends a notification to the HPOM message browser.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Availability

EXSPI-8X Forward MSExchangeAL Errors

The EXSPI-8X Forward MSExchangeAL Errors policy monitors the event source MSExchangeAL on the mailbox server. If an event is logged into the MSExchangeAL source, the EXSPI-8X Forward MSExchangeAL Errors policy sends a notification to the HPOM message browser.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Availability

EXSPI-8X MSExchange MailSubmission Events

The EXSPI-8X MSExchange MailSubmission Events policy monitors the source MSExchangeMailSubmission on the mailbox server. If an event is logged into the MSExchangeMailSubmission source, the EXSPI-8X MSExchange MailSubmission Events policy sends a notification to the HPOM message browser with the event ID.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Availability

EXSPI-8X Dc Replication Summary

The EXSPI-8X Dc Replication Summary policy collects the status of replication in the monitored Exchange 2007 environment and stores the collected data into the data store.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > High Availability > Replication Monitoring

Schedule: Every hour

Collection details

The EXSPI-8X Dc Replication Summary policy monitors the values of the following metrics (metrics collected from the Get-Replicationage cmdlet) from the Mailbox servers that participate in Exchange data replication:

Metric Name	Data Type	Description
SummaryCopyStatus	System.String	• The Microsoft Exchange SPI sends an alert of the severity Major when this metric value is Disabled.
		• The Microsoft Exchange SPI sends an alert of the severity Critical when this metric value is Failed or stopped.
Failed	System.Boolean	The Microsoft Exchange SPI sends an alert of the severity Critical when this metric value is $True$.
Suspend	System.Boolean	The Microsoft Exchange SPI sends an alert of the severity Critical when this metric value is $True$.
Seeding	System.Boolean	The Microsoft Exchange SPI sends an alert of the severity Normal when this metric value is True.
ReplicatedInspectedAge	System.Int32	The Microsoft Exchange SPI sends an alert of the severity Normal when this metric value is greater than one.
ReplicatedAvailableAge	System.Int32	The Microsoft Exchange SPI sends an alert of the severity Normal when this metric value is greater than one.

The Microsoft Exchange SPI stores the metric values collected by the EXSPI-8X Dc Replication Summary policy in the Ex2007_REPLSUMM table into the data store. The Microsoft Exchange SPI logs the following metrics that are collected by the EXSPI-8X Dc Replication Summary policy in the following columns of the Ex2007_REPLSUMM table:

Metric Name	Column Name
LastLogInspected	REPL_LSTLOGINS
LatestIncrementalBackupTime	REPL_LSTIBSKPTIME
CopyQueueLength	REPL_CPQLEN
LastInspectedLogTime	REPL_LSTINSLOGTIME
CCRTargetNode	REPL_TARGET
Identity	REPL_IDENTITY
LastLogCopied	REPL_LSTLOGCP
LastReplayedLogTime	REPL_LSTRPLLOGTIME
LatestFullBackupTime	REPL_LSTBCKPTIME
LastLogGenerated	REPL_LSTLOGGEN
LastLogReplayed	REPL_LSTLOGRPL
StorageGroupName	REPL_SGNAME
SummaryCopyStatus	REPL_STATUS
Replay QueueLength	REPL_QLEN

EXSPI-8X ReplicationReplayQueueLength

The EXSPI-8X ReplicationReplayQueueLength policy checks the queue length of replication replay. If the length exceeds 20KB, the policy sends a message alert to the message browser.

Policy Type: Measurement Threshold

Policy group: SPI for Exchange → Exchange 2007 → Manual Deploy Group → Mailbox Server → High Availability → Replication Monitoring

- Microsoft Exchange SPI policies for Microsoft Exchange Server 2007
- EXSPI-8X Monitor Mailbox Server Services
- EXSPI-8X ReplicationCopyQueueLength

EXSPI-8X ReplicationCopyQueueLength

The EXSPI-8X ReplicationCopyQueueLength policy checks the queue length of replication copy. If the length exceeds 5KB, the policy sends a message alert to the message browser.

Policy Type: Measurement Threshold

Policy group: SPI for Exchange → Exchange 2007 → Manual Deploy Group → Mailbox Server → High Availability → Replication Monitoring

- Microsoft Exchange SPI policies for Microsoft Exchange Server 2007
- EXSPI-8X Monitor Mailbox Server Services
- EXSPI-8X ReplicationReplayQueueLength

EXSPI-8X Replication Warnings in Application Event Log

The EXSPI-8X Replication Warnings in Application Event Log policy collects replication errors from the event log.

Policy Type: Windows Event Log

Policy group: SPI for Exchange → Exchange 2007 → Manual Deploy Group → Mailbox Server → High Availability → Replication Monitoring

- Microsoft Exchange SPI policies for Microsoft Exchange Server 2007
- EXSPI-8X Monitor Mailbox Server Services
- EXSPI-8X Get Replication Summary

EXSPI-8X Replication Errors in Application Event Log

The EXSPI-8X Replication Errors in Application Event Log policy collects replication errors from the event log.

Policy Type: Windows Event Log

Policy group: SPI for Exchange → Exchange 2007 → Manual Deploy Group → Mailbox Server → High Availability → Replication Monitoring

- Microsoft Exchange SPI policies for Microsoft Exchange Server 2007
- EXSPI-8X Monitor Mailbox Server Services
- EXSPI-8X Get Replication Summary

EXSPI-8X Check Replication Service

The EXSPI-8X Check Replication Service policy checks the availability of replication service on cluster nodes. If the service is stopped, the policy sends a critical message alert to the message browser.

Policy Type: Windows Management Interface

Policy group: SPI for Exchange → Exchange 2007 → Manual Deploy Group → Mailbox Server → High Availability → Replication Monitoring

- Microsoft Exchange SPI policies for Microsoft Exchange Server 2007
- EXSPI-8X Monitor Mailbox Server Services
- EXSPI-8X Get Replication Summary

EXSPI-8X-Mailbox-MailSubmission

The EXSPI-8X-Mailbox-MailSubmission policy monitors the MSExchangeMailSubmission event source on the mailbox server. The EXSPI-8X-Mailbox-MailSubmission policy sends a notification to the HPOM message browser if an event with the ID 1002, 1003, 1004, 1005, 1007, 1008, 1009, or 1010 is logged into the MSExchangeMailSubmission event source.

Policy type: Windows Event Log

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Mail Submission

EXSPI-8X Test Mapi Connectivity

The EXSPI-8X Test Mapi Connectivity policy collects metrics with the help of the Test-MAPIConnectivity cmdlet. You can test the MAPI connectivity latency and error by deploying this policy. The default MAPI connectivity latency is set to 10. If the MAPI connectivity latency exceeds this threshold or if an error occurs during this test, the policy sends an alert message to the HPOM message browser. You can change this MAPI connectivity latency threshold with the PowerShell collection configuration utility.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > MAPI

Schedule: Every 15 minutes

To set a new threshold for MAPI connectivity latency, perform the following tasks:

Change the threshold value

- 1. Go to the PowerShell collection configuration utility.
- 2. In the left pane, expand **Collection Components > OpCMsg Calls** .
- 3. In the left pane, click **TestMapiLatency**.
- 4. In the right pane, click **Delete** to delete the existing rule to compare the actual latency with the threshold 10.
- 5. Select **TestMapiConnectivity** from the MetricSetRef drop-down box.
- 6. Select **Latency** from the MetricRef drop-down box.
- 7. Select **GreaterThanOrEQ** from the Select Arithmetic Operator drop-down box.
- 8. Set the threshold value in the Value to compare box.
- 9. Click Add .
- 10. Click Apply Changes .
- 11. Click File > Save .

Identify nodes

- 1. Identify the nodes on which you want to run the test.
- 2. Deploy the EXSPI-8X SPIMetaDataVersioning Policy on the selected nodes.

Deploy the policy

Deploy the EXSPI-8X Test Mapi Connectivity policy on the identified nodes and check if the latency is within the set threshold.

EXSPI-8X Information Store RPC Requests

The EXSPI-8X Information Store RPC Requests policy monitors the RPC Requests counter of the MSExchangeIS performance object. If the number of Information Store RPC requests exceeds the threshold value, the policy sends alert messages to the HPOM message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > MAPI

Default threshold:

- **30:** The policy sends a Critical message to the message browser when this threshold is exceeded.
- 20: The policy sends a Warning message to the message browser when this threshold is exceeded

EXSPI-8X Information Store RPC Operations

The EXSPI-8X Information Store RPC Operations policy monitors the RPC Operations/sec counter of the MSExchangeIS performance object. If the number of Information Store RPC operations per second exceeds the threshold value, the policy sends alert messages to the HPOM message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > MAPI

Default threshold:

- 3: The policy sends a Critical message to the message browser when this threshold is exceeded.
- 1: The policy sends a Warning message to the message browser when this threshold is exceeded

EXSPI-8X Information Store RPC Average Latency

The EXSPI-8X Information Store RPC Average Latency policy monitors the RPC Average Latency counter of the MSExchangeIS performance object. If the number of Information Store RPC average latency exceeds the threshold value, the policy sends alert messages to the HPOM message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > MAPI

Default threshold:

- 50: The policy sends a Critical message to the message browser when this threshold is exceeded.
- 40: The policy sends a Warning message to the message browser when this threshold is exceeded

EXSPI-8X Get Mailbox Details

The EXSPI-8X Get Mailbox Details policy monitors the total item size of the mailbox and sends appropriate alert messages in the event of threshold violation. Along with monitoring the total item size of the mailbox, the EXSPI-8X Get Mailbox Details policy collects the values of several metrics returned by the GetMailboxStatistics cmdlet and stores the values into the data store.

Collection details

The Microsoft Exchange SPI stores the metric values collected by the EXSPI-8X Get Mailbox Details policy in the EX2007_MBDETAIL table into the data store. The EXSPI-8X Get Mailbox Details policy logs the metric values into the following columns in the EX2007_MBDETAIL table:

Metric Name	Column Name
DisplayName	MB_NAME
StorageLimitStatus	MB_STGLIMIT
TotalDeletedItemSize	MB_DELSIZE
ItemCount	MB_MSGCOUNT
DatabaseName	MB_DBNAME
StorageGroupName	MB_SGNAME
LastLogonTime	MB_LASTACCESS
TotalItemSize	MB_MBSIZE
DisconnectedDate	MB_DISCONNECT
DeletedItemCount	MB_DELCOUNT
Identity	MB_IDENTITY
ServerName	MB_SVRNAME

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Mailbox

Schedule: Once every week

EXSPI-8X Get Mailbox IS Sum Data

The EXSPI-8X Get Mailbox IS Sum Data policy collects the values of several metrics returned by the GetMailboxStoreSummary cmdlet and stores the values into the data store.

Collection details

The Microsoft Exchange SPI stores the metric values collected by the EXSPI-8X Get Mailbox IS Sum Data policy in the Ex2007_MBSUMMARY table into the data store. The EXSPI-8X Get Mailbox IS Sum Data policy logs the metric values into the following columns in the Ex2007_MBSUMMARY table:

Metric Name	Column Name
EDBFileSize	EDBSIZE
Identity	INSTANCEKEY
MessageCount	MAILBOX_MSGCNT
ServerName	SERVER_NAME
EDBDriveFree	EDBFREE
UserCount	MAILBOX_USRCNT
EDBDriveTotal	EDBTOTAL
DatabaseName	DATABASE_NAME
EDBPath	EDBPATH
StorageGroupName	STORAGEGROUP_NAME

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Mailbox

Schedule: Once every week

EXSPI-8X Check Circular Logging Enabled

The EXSPI-8X Check Circular Logging Enabled policy monitors if the circular logging not enabled on the Mailbox servers. When the circular logging is enabled, the Microsoft Exchange SPI sends an alert message to the message browser.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Mailbox

Schedule: Once every hour

EXSPI-8X Check If Circular Logging Disabled

The EXSPI-8X Check If Circular Logging Disabled policy monitors if the circular logging not enabled on the Mailbox servers. When the circular logging is disabled, the Microsoft Exchange SPI sends an alert message to the message browser.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Mailbox

Schedule: Once every hour

EXSPI-8X Dc-IS Mailbox Performance

The EXSPI-8X Dc-IS Mailbox Performance policy monitors the counters of the MSExchangeIS Mailbox performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Mailbox

Polling interval: Every 15 minutes

Collection details

The policy collects the following counters of the MSExchangeIS Mailbox performance monitor object:

Counter Name	Data Type
Receive Queue Size	System.Int32
Average Delivery Time	System.Int32
Local deliveries	System.Int32
Messages Delivered	System.Int32
Messages Sent	System.Int32
Messages Submitted	System.Int32
Message Recipients Delivered	System.Int32
Active Client Logons	System.Int32
ClientLogons	System.Int32
Peak Client Logons	System.Int32
Single Instance Ratio	System.Int32
Total Count of Recoverable Items	System.Int32
Total Size of Recoverable Items	System.Int32

The Microsoft Exchange SPI creates the EX2007_MBPERF table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Receive Queue Size	MBRECEIVEQ
Average Delivery Time	MBDELIVERYTIME
Local deliveries	MBLOCALDELIVER
Messages Delivered	MBDELIVER
Messages Sent	MBSENT
Messages Submitted	MBSUBMITTED
Message Recipients Delivered	MBRECIPIENT
Active Client Logons	MBACTIVELOGON
Client Logons	MBLOGON
Peak Client Logons	MBLOGONPEAK
Single Instance Ratio	MBSIRATIO
Total Count of Recoverable Items	MBRECOVERITEMS
Total Size of Recoverable Items	MBRECOVERSIZE

EXSPI-8X IS Mailbox Receive Queue Length

The EXSPI-8X IS Mailbox Receive Queue Length policy monitors the value of the Receive Queue Size counter of the MSExchangeIS Mailbox performance monitor object.

If the receive queue length exceeds the threshold, it sends alert messages to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Mailbox

Default Threshold:

- 200: Sends a Critical message.
- 100: Sends a Warning message.

EXSPI-8X MailBoxItemCount

The EXSPI-8X MailBoxItemCount policy monitors item counts of Mailbox servers. If the count exceeds the threshold, the policy sends an alert message to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Mailbox

Default Threshold: 100

EXSPI-8X IS Mailbox Average Delivery Time

The EXSPI-8X IS Mailbox Average Delivery Time policy collects information from the Average Delivery Time performance counter of the MSExchangeIS Mailbox performance object. If the average delivery time exceeds 5000 milliseconds, it sends a warning to the message browser. If the average delivery time exceeds 10000 milliseconds, it sends a critical alert message to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Mailbox

Default Threshold: 10000

EXSPI-8X Outlook Client RPC Failure Rate

If the percentage rate of RPC failure exceeds the threshold, the policy sends alert messages to the message browser. It monitors the following performance counters of the MSExchangeIS performance monitor object:

- Client: RPCs attempted
- Client: RPCs Failed

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Outlook Performance

Default Threshold:

- 10: Critical
- 5: Warning

EXSPI-8X Outlook Client Latency

The EXSPI-8X Outlook Client Latency policy monitors the number of successful RPCs with the latency value greater than 10, 5, or 2 seconds. It monitors the following performance counters of the MSExchangeIS performance monitor object:

- Client: Latency > 10 sec RPCs
- Client: Latency > 5 sec RPCs
- Client: Latency > 2 sec RPCs

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Outlook Performance

Default Threshold:

- For Client: Latency > 10 sec RPCs-10 (Major)
- For Client: Latency > 5 sec RPCs-100 (Minor)
- For Client: Latency > 2 sec RPCs-250 (Warning)

EXSPI-8X Dc-Outlook Client

The EXSPI-8X Dc-Outlook Client policy collects different counters of the MSExchangeIS Mailbox performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Outlook Performance

Polling interval: Every 5 minutes

Collection details

The policy collects the following counters of the MSExchangeIS performance monitor object:

Counter Name	Data Type
Client: Latency > 10 sec RPCs	System.Int32
Client: Latency > 5 sec RPCs	System.Int32
Client: Latency > 2 sec RPCs	System.Int32
Client: RPCs attempted	System.Int32
Client: RPCs succeeded	System.Int32
Client: RPCs Failed	System.Int32
Client: RPCs Failed: Server Unavailable	System.Int32
Client: RPCs Failed: Server Too Busy	System.Int32
Client: RPCs Failed: Call Cancelled	System.Int32
Client: RPCs Failed: Call Failed	System.Int32
Client: RPCs Failed: Access Denied	System.Int32
Client: RPCs Failed: All other errors	System.Int32

The Microsoft Exchange SPI creates the EX2007_ISCLIENT table into the data store on the node to store

these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Client: Latency > 10 sec RPCs	ISCLATENCY10
Client: Latency > 5 sec RPCs	ISCLATENCY5
Client: Latency > 2 sec RPCs	ISCLATENCY2
Client: RPCs attempted	ISCRPCATTEMPT
Client: RPCs succeeded	ISCRPCSUCCEED
Client: RPCs Failed	ISCRPCFAIL
Client: RPCs Failed: Server Unavailable	ISCRPCFUNAV
Client: RPCs Failed: Server Too Busy	ISCRPCFBUSY
Client: RPCs Failed: Call Cancelled	ISCRPCFCANCEL
Client: RPCs Failed: Call Failed	ISCRPCFCALLFAIL
Client: RPCs Failed: Access Denied	ISCRPCFACCESSDENY
Client: RPCs Failed: All other errors	ISCRPCFOTHER

EXSPI-8X Dc-Information Store Performance

The EXSPI-8X Dc-Information Store Performance policy collects the values of the counters of the MSExchangels performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Performance

Polling interval: Every 15 minutes

Collection details

The policy collects the following counters of the MSExchangeIS performance monitor object:

Counter Name	Data Type
User Count	System.Int32
Active User Count	System.Int32
Anonymous User Count	System.Int32
Active Anonymous User Count	System.Int32
Connection Count	System.Int32
Active Connection Count	System.Int32
VM Total Large Free Block Bytes	System.Int32
VM Largest Block Size	System.Int32
VM Total 16MB Free Blocks	System.Int32
RPC Requests	System.Int32
RPC Operations/sec	System.Int32

The Microsoft Exchange SPI creates the Ex2007_ISPERF table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
UserCount	ISUSERCNT
Active User Count	ISACTIVEUSERCNT
Anonymous User Count	ISANONUSERCNT
Active Anonymous User Count	ISACTIVEANONUSERCNT
Connection Count	ISCONNECTCNT
Active Connection Count	ISACTIVECONNECTCNT
VM Total Large Free Block Bytes	ISVMLARGEFREEBB
VM Largest Block Size	ISVMLARGESTBLOCK
VM Total 16MB Free Blocks	ISVM16MBFREE
RPC Requests	RPCREQUESTS
RPC Operations/sec	RPCOPERATIONSPERSEC

EXSPI-8X Information Store Db Cache Size

The EXSPI-8X Information Store Db Cache Size policy generates alarm when the database cache size exceeds the threshold value. It monitors the Database Cache Size counter of the Database performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Performance

Default Threshold: 1.2e+009
EXSPI-8X Information Store Db Log Record Stall per sec

The EXSPI-8X Information Store Db Log Record Stall per sec policy generates alarm when the database log record stalls per second exceeds the threshold value. It monitors the Log Record Stalls/sec counter of the MSExchange Database ==> Instances performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Performance

Default Threshold:

- 20: The policy sends an alert message of severity Critical.
- 15: The policy sends an alert message of severity Warning.

Polling interval: Every 2 minutes

EXSPI-8X Information Store VM 16MB Blocks

The EXSPI-8X Information Store VM 16MB Blocks policy generates alert messages when the number of available 16 MB or larger VM blocks in the Information Store process falls below the threshold value. It monitors the VM Total 16MB Free Blocks counter of the MSExchangeIS performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Performance

Default Threshold:

- 1: The policy sends an alert message of severity Critical.
- 3: The policy sends an alert message of severity Warning.

Polling interval: Every 5 minutes

EXSPI-8X Information Store VM Largest Block

The EXSPI-8X Information Store VM Largest Block policy generates alarm when the size of the largest VM block falls below the threshold. It monitors the VM Largest Block Size counter of the MSExchangeIS performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Performance

Default Threshold:

- **1.6e+007:** The policy sends an alert message of severity Critical.
- **3.2e+007:** The policy sends an alert message of severity Major.
- 6.4e+007: The policy sends an alert message of severity Warning.

Polling interval: Every 10 minutes

EXSPI-8X Information Store VM Large Block Bytes

The EXSPI-8X Information Store VM Large Block Bytes policy generates alarm when the total size of free large VM blocks falls below the threshold. It monitors the VM Total Large Free Block Bytes counter of the MSExchangeIS performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Performance

Default Threshold:

- **5.2e+007:** The policy sends an alert message of severity Critical.
- 6.2e+007: The policy sends an alert message of severity Warning.

Polling interval: Every 10 minutes

EXSPI-8X Information Store Additional Heaps

The EXSPI-8X Information Store Additional Heaps policy generates alarm when the number of additional heaps of Exchange memory exceeds the threshold value. It monitors the Exchmem: Number of Additional Heaps counter of the MSExchangeIS performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Performance

Default Threshold:

3: The policy sends an alert message of severity Critical.

Polling interval: Every 15 minutes

EXSPI-8X Information Store Heap Memory Errors

The EXSPI-8X Information Store Heap Memory Errors policy generates alarm when the number of Information Store heap memory errors exceeds the threshold. It monitors the Exchmem: Number of heaps with memory errors performance of the MSExchangeIS performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Performance

Default Threshold:

3: Critical

Polling interval: Every 15 minutes

EXSPI-8X Information Store Db Log Threads Waiting

The EXSPI-8X Information Store Db Log Threads Waiting policy generates alarm when the Information Store threads waiting to write to log exceeds the threshold value. It monitors the Log Threads Waiting counter of the MSExchange Database ==> Instances performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Performance

Default Threshold:

3: The policy sends an alert message of severity Critical.

Polling interval: Every 2 minutes

EXSPI-8X Information Store Memory Errors

The EXSPI-8X Information Store Memory Errors policy generates alarm when the number of memory errors exceeds the threshold value. It monitors the Exchmem: Number of Memory errors counter of the MSExchangeIS performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Performance

Default Threshold:

3: The policy sends an alert message of severity Critical.

Polling interval: Every 15 minutes

EXSPI-8X Information Store Db Log Writes per sec

The EXSPI-8X Information Store Db Log Writes per sec policy generates alarm when the number of times the transaction log buffers are written exceeds the threshold. It monitors the Log Writes/sec counter of the MSExchange Database ==> Instances performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Performance

Default Threshold:

500: The policy sends an alert message of severity Warning.

Polling interval: Every 5 minutes

EXSPI-8X Information Store User Count

The EXSPI-8X Information Store User Count policy generates alarm when the Information Store user count exceeds the threshold value. It monitors the User Count counter of the MSExchangeIS performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Performance

Default Threshold:

3500: The policy sends an alert message of severity Warning.

Polling interval: Every 15 minutes

EXSPI-8X Get Public Folder Details

The EXSPI-8X Get Public Folder Details policy obtains the details of the Public Folder with the help of the Get-PublicFolderStatistics cmdlet. The EXSPI-8X Get Public Folder Details policy sends an alert message to the message browser when the total item size of the Public Folder exceeds the threshold of 50 bytes.

Collection details

The Microsoft Exchange SPI stores the metric values collected by the EXSPI-8X Get Public Folder Details policy in the EX2007_PFDETAIL table into the data store. The EXSPI-8X Get Public Folder Details policy logs the metric values into the following columns in the EX2007_PFDETAIL table:

Metric Name	Column Name
DatabaseName	PF_DBNAME
StorageGroupName	PF_SGNAME
LastAccessTime	PF_LASTACCESS
ItemCount	PF_POSTCOUNT
ServerName	PF_SVRNAME
Name	PF_NAME
TotalItemSize	PF_SIZE

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Public Folder

Schedule: Every hour

EXSPI-8X Get Public IS Sum Data

The EXSPI-8X Get Public IS Sum Data policy obtains the details of the Public Folder with the help of the Get-PublicStoreSummary cmdlet and stores the details into the data store.

Collection details

The Microsoft Exchange SPI stores the metric values collected by the EXSPI-8X Get Public IS Sum Data policy in the EX2007_PFSUMMARY table into the data store. The EXSPI-8X Get Public IS Sum Data policy logs the metric values into the following columns in the EX2007_PFSUMMARY table:

Metric Name	Column Name
EDBFileSize	EDBSIZE
PublicFolderCount	FODLERCOUNT
Identity	INSTANCE_KEY
ServerName	SERVER_NAME
MessageCount	FOLDER_MSGCNT
EDBDriveFree	EDBFREE
EDBDriveTotal	EDBTOTAL
DatabaseName	DATABASE_NAME
EDBPath	EDBPATH
StorageGroupName	STORAGEGROUP_NAME

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Public Folder

Schedule: Once a week

EXSPI-8X Dc-IS Public Folder Performance

The EXSPI-8X Dc-IS Public Folder Performance policy monitors the counters of the MSExchangeIS Public performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Public Folder

Polling interval: Every 15 minutes

Collection details

The EXSPI-8X Dc-IS Public Folder Performance policy collects the following counters of the MSExchangeIS Public performance monitor object:

Counter Name	Data Type
Receive Queue Size	System.Int32
Average Delivery Time	System.Int32
Messages Delivered	System.Int32
Messages Sent	System.Int32
Messages Submitted	System.Int32
Message Recipients Delivered	System.Int32
Active Client Logons	System.Int32
Client Logons	System.Int32
Peak Client Logons	System.Int32
Single Instance Ratio	System.Int32
Total Count of Recoverable Items	System.Int32
Total Size of Recoverable Items	System.Int32

Replication Messages Received	System.Int32
Replication Messages Sent	System.Int32
Replication Receive Queue Size	System.Int32

The Microsoft Exchange SPI creates the EX2007_PFPERF table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Receive Queue Size	PFRECEIVEQ
Average Delivery Time	PFDELIVERYTIME
Messages Delivered	PFDELIVER
Messages Sent	PFSENT
Messages Submitted	PFSUBMITTED
Message Recipients Delivered	PFRECIPIENT
Active Client Logons	PFACTIVELOGON
Client Logons	PFLOGON
Peak Client Logons	PFLOGONPEAK
Single Instance Ratio	PFSIRATIO
Total Count of Recoverable Items	PFRECOVERITEMS
Total Size of Recoverable Items	PFRECOVERSIZE
Replication Messages Received	PFREPRCVD
Replication Messages Sent	PFREPSENT
Replication Receive Queue Size	PFREPQ

EXSPI-8X Public Folder Average Delivery Time

The EXSPI-8X Public Folder Average Delivery Time policy monitors the average delivery time for Public Folder Information Store instances. If the average delivery time exceeds the threshold, the policy sends alert messages to the message browser. It monitors the Average Delivery Time counter of the MSExchangeIS Public performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Public Folder

Default Threshold:

- 10000: Critical
- **5000:** Warning

Polling interval: Every 5 minutes

EXSPI-8X PublicFolderItemCount

The EXSPI-8X PublicFolderItemCount policy monitors the item count of the Public Folder. If the item count exceeds the threshold, the policy sends an alert message to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Public Folder

Default Threshold:

10: The policy sends an alert message of severity Minor.

Polling interval: Every 15 minutes

EXSPI-8X IS Public Receive Queue Length

The EXSPI-8X IS Public Receive Queue Length policy monitors the Receive Queue Size counter from the MSExchangeIS Public performance object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Public Folder

Default Threshold:

- 200: The policy sends an alert message of severity Critical.
- 100: The policy sends an alert message of severity Warning.

Polling interval: Every 2 minutes

EXSPI-8X IS Public Replication Queue Length

The EXSPI-8X IS Public Replication Queue Length policy monitors the Replication Receive Queue size counter of the MSExchangels Public performance monitor object. If the replication receive queue length of a Public Folder store instance exceeds the threshold, the policy sends an alert message to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Public Folder

Default Threshold:

- 200: The policy sends an alert message of severity Critical.
- 100: The policy sends an alert message of severity Warning.

Polling interval: Every 2 minutes

Monitoring Unified Messaging Servers

The Unified Messaging Server group includes the policies that help you monitor and manage the Exchange 2007 nodes with the unified messaging role. The policies in this group help you monitor the details related to the Unified Messaging PIN, Unified Messaging IP gateways, Unified Messaging hunt groups, and so on.

The group consists of the following subgroups and policies:

• Policy subgroups

- Availability-This group includes the EXSPI-8X Monitor Unified Messaging Server Services policy, which monitors states of the services that are necessary for a smooth function of the Unified Messaging Server.
- File Distribution Service-This group includes the following policies that help you monitor the MSExchangeFDS:UM performance monitor object from the Unified Messaging Servers:
 - EXSPI-8X-DownloadTaskCompleted-UM-All
 - EXSPI-8X DownloadTaskQueued-UM-All
 - EXSPI-8X UM Collect FDS Metrics
 - EXSPI-8X DownloadTasksQueued-UM-Total
- Policies
 - EXSPI-8X GetUM IPGatewayDetails
 - EXSPI-8X Get UMServer Details
 - EXSPI-8X Get UMMailbox Pin Details
 - EXSPI-8X Get Unified Messaging Mailbox Details
 - EXSPI-8X Get UMHuntGroup Details
 - EXSPI-8X UM DC-MSExchangeUMFax
 - EXSPI-8XUMDC-MSExchangeUMSubscriberAccess
 - \circ EXSPI-8X UM DC-MSExchange UMA vailability
 - EXSPI-8X UM DC-MSExchangeUMGeneral
 - \circ EXSPI-8X UM DC-MSExchangeUMAutoAttendant
 - EXSPI-8X UM DC-MSExchangeUMCallAnswer

• EXSPI-8X UM Th-MSExchangeUMA vailability

To monitor the Unified Messaging Servers, follow these steps:

- 1. Identify the Exchange 2007 nodes with the unified messaging server role that you want to monitor.
- 2. Verify the schedules of the scheduled-task policies. If required, modify the schedule.
- 3. Deploy the scheduled-task policies on the identified nodes.
- 4. Review the polling intervals and thresholds of the measurement-threshold policies in this group. Change these settings if required.
- 5. Deploy the measurement-threshold policies on the identified nodes.

The following sections present the details of each policy in the Unified Messaging Server group.

EXSPI-8X Monitor Unified Messaging Server Services

The EXSPI-8X Monitor Unified Messaging Server Services policy monitors the availability of the following necessary services on a Unified Messaging server:

- MSExchangeADTopology
- MSExchangeFDS
- MSS
- MSExchangeUM

If the policy finds one of these services not running on the Unified Messaging server, it sends alert messages to the message browser.

Policy Type: Scheduled Task

Policy group: SPI for Exchange → Exchange 2007 → Manual Deploy Group → Unified Messaging Server → Availability

Related Topics:

- Microsoft Exchange SPI policies for Microsoft Exchange Server 2007
- EXSPI-8X Get UMServer Details
- EXSPI-8X Dc-SMTP Performance for Outbound Connections

EXSPI-8X-DownloadTaskCompleted-UM-All

The policy monitors the Download Tasks Completed counter of the MSExchangeFDS:UM performance monitor object. This counter indicates the number of completed download tasks.

When the value of the Download Tasks Completed counter of the MSExchangeFDS:UM performance monitor object reaches the threshold, the policy sends an alert message to the message browser.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups> Unified Messaging Server > File Distribution Service

Default threshold: 0

Polling interval: Once a day

EXSPI-8X DownloadTaskQueued-UM-All

The policy monitors all instances of the Download Tasks Queued counter of the MSExchangeFDS:UM performance monitor object. This counter indicates the number of queued download tasks.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Unified Messaging Server > File Distribution Service

Polling interval: Every hour

Monitoring details

When the value of the Download Tasks Queued counter of the MSExchangeFDS:UM performance monitor object exceeds 1, the policy sends an alert message of the severity *Critical* to the message browser.

EXSPI-8X UM Collect FDS Metrics

The policy collects the values of the values of different counters of the Download Tasks Completed performance monitor object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups> Unified Messaging Server > File Distribution Service

Polling interval: Every 15 minutes

Collection details

The policy collects the following counters of the MSExchangeFDS:UM performance monitor object from the Unified Messaging Server node:

Counter Name	Data Type
Download Tasks Completed	System.Int32
Download Tasks Queued	System.Int32

The Microsoft Exchange SPI creates the EX2007_FDSUM table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Name	INSTANCE_NAME
Server Name	SERVER_NAME
Download Tasks Queued	TASK_QUEUED
Download Tasks Completed	TASKS_COMPLETED

EXSPI-8X DownloadTasksQueued-UM-Total

The policy monitors the Download Task Queued counter of the MSExchangeFDS:UM performance monitor object. This counter indicates the number of queued download tasks.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups> Unified Messaging Server > File Distribution Service

Default threshold:

- Critical: 10
- Warning: 5

Polling interval: Every hour

EXSPI-8X Get UMServer Details

The EXSPI-8X Get UMServer Details policy collects details related to the unified messaging server and logs the collected data into the data store.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups> Unified Messaging Server

Default schedule: Every hour

Collection details

The EXSPI-8X Get UMServer Details policy collects the following metrics from the Unified Messaging Server node:

Metric Name	Data Type
Name	System.String
MaxCallAllowed	System.Int32
MaxFaxCallAllowed	System.Int32
MaxTTSSessionsAllowed	System.Int32
MaxASRSessionsAllowed	System.Int32
Status	System.String

The Microsoft Exchange SPI creates the EX2007_UMSRV table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Name	UMSRV_NAME
MaxCallAllowed	UMSRV_CALLS
MaxFaxCallAllowed	UMSRV_FAX
MaxTTSSessionsAllowed	UMSRV_TTS
MaxASRSessionsAllowed	UMSRV_ASR
Status	UMSRV_STATUS

EXSPI-8X Get UMMailbox Pin Details

The EXSPI-8X Get UMMailbox Pin Details policy collects details related to the unified messaging mailbox PIN and logs the collected data into the data store.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups> Unified Messaging Server

Default schedule: Every hour

Collection details

The EXSPI-8X Get UMMailbox Pin Details policy collects the following metrics from the Unified Messaging Server node:

Metric Name	Data Type
UserID	System.String
PinExpired	System.Boolean
FirstTimeUser	System.Boolean
LockedOut	System.Boolean

The Microsoft Exchange SPI creates the EX2007_UMPIN table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
UserID	UMPIN_USER
PinExpired	UMPIN_EXP
FirstTimeUser	UMPIN_FRST
LockedOut	UMPIN_LOCK

EXSPI-8X GetUM IPGatewayDetails

The EXSPI-8X GetUM IPGatewayDetails policy collects details related to the IP gateway of the unified messaging server and logs the collected data into the data store.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups> Unified Messaging Server

Default schedule: Every hour

Collection details

The EXSPI-8X GetUM IPGatewayDetails policy collects the following metrics from the Unified Messaging Server node:

Metric Name	Data Type
Name	System.String
Address	System.String
OutcallsAllowed	System.Boolean
Enabled	System.String
Port	System.Int32
Simulator	System.Boolean

The Microsoft Exchange SPI creates the EX2007_UMIPGWAY table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Name	UMIPGWAY_NAME
Address	UMIPGWAY_ADD
OutcallsAllowed	UMIPGWAY_OUT
Enabled	UMIPGWAY_EN
Port	UMIPGWAY_PORT
Simulator	UMIPGWAY_SIM

EXSPI-8X Get UMHuntGroup Details

The EXSPI-8X Get UMHuntGroup Details policy collects details related to the hunt group of the unified messaging server and logs the collected data into the data store.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups> Unified Messaging Server

Default schedule: Every hour

Collection details

The EXSPI-8X Get UMHuntGroup Details policy collects the following metrics from the Unified Messaging Server node:

Metric Name	Data Type
Name	System.String
PilotIdentifier	System.String
UMDialPlan	System.String

The Microsoft Exchange SPI creates the EX2007_UMHUNT table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Name	UMHUNT_NAME
PilotIdentifier	UMHUNT_PILOT
UMDialPlan	UMHUNT_PLAN

EXSPI-8X Get Unified Messaging Mailbox Details

The EXSPI-8X Get Unified Messaging Mailbox Details policy collects details related to the mailbox of the unified messaging server and logs the collected data into the data store.

Policy type: Scheduled Task

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups> Unified Messaging Server

Default schedule: Every hour

Collection details

The EXSPI-8X Get Unified Messaging Mailbox Details policy collects the following metrics from the Unified Messaging Server node:

Metric Name	Data Type
AllowUMCallsFromNonUsers	System.String
AnonymousCallerCanLeaveMessages	System.Boolean
ASREnabled	System.Boolean
AutomaticSpeechRecognityionEnabled	System.Boolean
DialPlan	System.String
DisplayName	System.String
FaxEnabled	System.Boolean
MissedCallNotificationEnable	System.Boolean
Name	System.String
PrimarySmtpAddress	System.String
ServerName	System.String

System.Boolean
System.Boolean
System.Boolean
System.Boolean
System.Boolean
System.String
System.String
System.Int32
System.String

The Microsoft Exchange SPI creates the EX2007_UMMBOX table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	ColumnName
AllowUMCallsFromNonUsers	UMMBOX_NONUSR
AnonymousCallerCanLeaveMessages	UMMBOX_ANONYCALL
ASREnabled	UMMBOX_ASR
AutomaticSpeechRecognityionEnabled	UMMBOX_SPCH
DialPlan	UMMBOX_DIAL
DisplayName	UMMBOX_DNAME
FaxEnabled	UMMBOX_FAX
MissedCallNotificationEnable	UMMBOX_MISSCALL
Name	UMMBOXNAME
PrimarySmtpAddress	UMMBOX_PRISMTP
ServerName	UMMBOX_SNAME
SubscriberAccessEnable	UMMBOX_SUBACC

TUIAccessToAddressBookEnabled	UMMBOX_TUIBOOK
TUIAccessToCalendarEnabled	UMMBOX_TUICALL
TUIAccessToEmailEnabled	UMMBOX_TUIMAIL
UMEnabled	UMMBOX_EN
UMFaxId	UMMBOX_FXID
UMMailboxPolicy	UMMBOX_MPOL
UMMaxGreetingDuration	UMMBOX_GREET
UMOperatorNumber	UMMBOX_OPER

EXSPI-8X UM DC-MSExchangeUMAutoAttendant

The policy collects data from different counters of the MSExchangeUMAutoAttendant performance monitor object and stores the value of several counters into the data store.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups> Unified Messaging Server

Default polling interval 5 minutes

Collection details

The policy collects the following counters from the Unified Messaging Server node:

Counter Name	Data Type
Out of Hours Calls	System.Int32
Business Hours Calls	System.Int32
Average Call Time	System.Int32
Operator Transfers	System.Int32

The Microsoft Exchange SPI creates the EX2007_UMAUTO_ATTEN table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Out of Hours Calls	OUT_OF_HR_CALLS
Business Hours Calls	BUSS_HR_CALLS
Average Call Time	AVERAGE_CALL_TIME
Operator Transfers	OPER_TRANSFERS
EXSPI-8X UM DC-MSExchangeUMAvailability

The policy collects data from different counters of the MSExchangeUMA vailability performance object.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups> Unified Messaging Server

Default polling interval: 5 minutes

Collection details

The policy collects the following counters of the MSExchangeUMA vailability performance object from the Unified Messaging Server node:

Counter Name	Data Type
Hub Transport Access Failures	System.Int32
Directory Access Failures	System.Int32
Calls Disconnected by UM on Irrecoverable External Error	System.Int32
Calls Disconnected on Irrecoverable Internal Error	System.Int32
Mailbox Server Access Failures	System.Int32

The Microsoft Exchange SPI creates the EX2007_UMAVAIL table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Hub Transport Access Failures	HUB_ACCESS_FAIL
Directory Access Failures	DIR_ACCESS_FAIL
Calls Disconnected by UM on Irrecoverable External Error	CALLS_DISCN_EXT_ERR
Calls Disconnected on Irrecoverable Internal Error	CALLS_DISCN_INT_ERR
Mailbox Server Access Failures	MSERV_ACCESS_FAIL

EXSPI-8X UM DC-MSExchangeUMGeneral

The policy collects data from different counters of the MSExchangeUMGeneral performance monitor object and stores the data into the data store.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups> Unified Messaging Server

Default polling interval: 5 minutes

Collection details

The policy collects the following counters of the MSExchangeUMGeneral performance object from the Unified Messaging Server node:

Counter Name	Data Type
Delayed Calls	System.Int32
Total Calls	System.Int32

The Microsoft Exchange SPI creates the EX2007_UMGENERAL table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Delayed Calls	DELAYED_CALLS
Total Calls	TOTAL_CALLS

EXSPI-8X UM DC-MSExchangeUMCallAnswer

The policy collects data from different counters of the MSExchangeUMCallAnswer performance monitor object and stores the data into the data store.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups> Unified Messaging Server

Default polling interval: 5 minutes

Collection details

The policy collects the following counters of the MSExchangeUMCallAnswer performance object from the Unified Messaging Server node:

Counter Name	Data Type
Call Answering Missed Calls	System.Int32
Average Voice Message Size	System.Int32

The Microsoft Exchange SPI creates the EX2007_UMCALLANS table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Call Answering Missed Calls	CALL_ANSMISSED_CALLS
Average Voice Message Size	AV_VMSG_SIZE

EXSPI-8X UM DC-MSExchangeUMFax

The policy collects data from different counters of the MSExchangeUMFax performance monitor object and stores the data into the data store.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups> Unified Messaging Server

Default polling interval: 5 minutes

Collection details

The policy collects the following counters of the MSExchangeUMFax performance object from the Unified Messaging Server node:

Counter Name	Data Type
Fax Messages	System.Int32
Fax Incomplete	System.Int32

The Microsoft Exchange SPI creates the EX2007_UMFAX table into the data store on the node to store these details. The collected metrics are mapped into the following columns:

Metric Name	Column Name
Fax Messages	FAX_MSG
Fax Incomplete	FAX_INCOMPLETE

EXSPI-8X UM Th-MSExchangeUMAvailability

The policy monitors the Call Answer Queued Messages counter of the MSExchangeUMAvailability performance object counter.

Policy type: Measurement Threshold

Policy group: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups> Unified Messaging Server

Default threshold :

- Critical: 100
- Warning: 50

Polling interval: 5 minutes

Exchange 2007 reports

Microsoft Exchange SPI reports for Exchange 2007 are located in the HPOM console under **Reports** – **SPI for Exchange 2007**. The SPI for Exchange **Reports** and **Graphs** folders are created when data is collected on nodes and the Service Reporter consolidation process has run, usually after 24 hours.

NOTE

Regarding Scheduling : Most reports generate the day after the data is collected and gathered from the managed node. Because some collectors are scheduled to run on Sunday night, certain reports will not generate until Monday morning. Trend reports require at least three days of data gathered from the managed nodes.

😲 NOTE:

(a) To access reports and graphs from HPOM 8.10 console, you must install HP Reporter in your environment and HP Performance Manager on the HPOM management server.

(b) If you use OVO 7.50, you can view reports and graphs under the *Reports & Graphs* section of the console tree.

Exchange 2007 Availability

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Availability** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 Availability** in the HPOM console.

Report Template File Name: g_Exchange 2007 Availability.rpt

Description: This report indicates the availability status of Microsoft Exchange Server 2007. The Microsoft Exchange SPI monitors the availability of the services that are necessary for Microsoft Exchange Server 2007 to run smoothly. The Exchange 2007 Availability report helps you identify if any of these services are unavailable.

Report content:

This report (pie chart) displays the duration (percentage of time) for which the Exchange 2007 services could successfully run. Possible causes of availability failure are: lack of system resources, wrong configuration, or performance failures in the Exchange 2007 environment.

Available: Next day.

Required Policies:

For this report to work properly, deploy the following policy:

EXSPI-8X Get Exchange Availability

- Policy Schedule: Once in every 5 minutes
- **Policy Location:** Manual Deploy Groups \ Availability

Metrics:

This report uses the following metrics, which are logged into the Reporter database:

- SERVER_NAME
- AVAILABILITY

Reporter table:

EX2007_AVAILABILITY

Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Availability report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_AVAILABILITY
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - \circ Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12

- Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

There will be no data unless the EXSPI-8X Get Exchange Availability policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

5) Is the agent on the managed node running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - $\circ~$ On the HTTPS-managed nodes: ovc -start
 - On the DCE-managed nodes: **opcagt -start**

Exchange 2007 Client Access Server Availability

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Client Access Server Availability** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 Client Access Server Availability** in the HPOM console.

Report Template File Name: g_Exchange 2007 Client Access Server Availability.rpt

Description: This report indicates the availability status of the nodes with the Client Access Server role in the Exchange Organization. The Microsoft Exchange SPI monitors the availability of the services that are necessary for Microsoft Exchange Server 2007 nodes with the Client Access Server role to run smoothly. The Exchange 2007 Client Access Server Availability report helps you identify if any of these services are unavailable.

Report content:

This report (pie chart) displays the duration (percentage of time) for which the Exchange 2007 Client Access Server services could successfully run. Possible causes of availability failure are: lack of system resources, wrong configuration, or performance failures in the Exchange 2007 environment.

Available: Next day.

Required Policies:

For this report to work properly, deploy the following policy:

EXSPI-8X Get Exchange Availability

- Policy Schedule: Every 5 minutes
- Policy Location: Manual Deploy Groups\Availability

Metrics:

This report uses the following metrics, which are logged into the Reporter database:

- SERVER_NAME
- AVAILABILITY

• SERVER_ROLE

Reporter table:

EX2007_AVAILABILITY

Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Client Access Server Availability report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_AVAILABILITY
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - \circ Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA

- On a DCE-managed node: codautil -dumpds EX2007_DATA
- If there is no data in the CODA database, check if the CODA agent is running.
- You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
- Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

There will be no data unless the EXSPI-8X Get Exchange Availability policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

5) Is the agent on the managed node running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - $\circ~$ On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - $\circ~$ On the HTTPS-managed nodes: ovc -start
 - On the DCE-managed nodes: opcagt -start

Exchange 2007 Edge Transport Server Availability

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Edge Transport Server Availability** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 Edge Transport Server Availability** in the HPOM console.

Report Template File Name: g_Exchange 2007 Edge Transport Server Availability.rpt

Description: This report indicates the availability status of the nodes with the Edge Transport Server role in the Exchange Organization. The Microsoft Exchange SPI monitors the availability of the services that are necessary for Microsoft Exchange Server 2007 nodes with the Edge Transport Server role to run smoothly. The Exchange 2007 Edge Transport Server Availability report helps you identify if any of these services are unavailable.

Report content:

This report (pie chart) displays the duration (percentage of time) for which the Exchange 2007 Edge-Transport services could successfully run. Possible causes of availability failure are: lack of system resources, wrong configuration, or performance failures in the Exchange 2007 environment.

Available: Next day.

Required Policies:

For this report to work properly, deploy the following policy:

EXSPI-8X Get Exchange Availability

- Policy Schedule: Every 5 minutes
- Policy Location: Manual Deploy Groups\Availability

Metrics:

This report uses the following metrics, which are logged into the Reporter database:

- SERVER_NAME
- AVAILABILITY

• SERVER_ROLE

Reporter table:

EX2007_AVAILABILITY

Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Client Access Server Availability report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_AVAILABILITY
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - \circ Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA

- On a DCE-managed node: codautil -dumpds EX2007_DATA
- If there is no data in the CODA database, check if the CODA agent is running.
- You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
- Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

There will be no data unless the EXSPI-8X Get Exchange Availability policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

5) Is the agent on the managed node running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - $\circ~$ On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - $\circ~$ On the HTTPS-managed nodes: ovc -start
 - On the DCE-managed nodes: opcagt -start

Exchange 2007 Hub Transport Server Availability

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Hub Transport Server Availability** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 Hub Transport Server Availability** in the HPOM console.

Report Template File Name: g_Exchange 2007 Hub Transport Server Availability.rpt

Description: This report indicates the availability status of the nodes with the Hub Transport Server role in the Exchange Organization. The Microsoft Exchange SPI monitors the availability of the services that are necessary for Microsoft Exchange Server 2007 nodes with the Hub Transport Server role to run smoothly. The Exchange 2007 Hub Transport Server Availability report helps you identify if any of these services are unavailable.

Report content:

This report (pie chart) displays the duration (percentage of time) for which the Exchange 2007 Hub Transport Server services could successfully run. Possible causes of availability failure are: lack of system resources, wrong configuration, or performance failures in the Exchange 2007 environment.

Available: Next day.

Required Policies:

For this report to work properly, deploy the following policy:

EXSPI-8X Get Exchange Availability

- Policy Schedule: Every 5 minutes
- Policy Location: Manual Deploy Groups\Availability

Metrics:

This report uses the following metrics, which are logged into the Reporter database:

- SERVER_NAME
- AVAILABILITY

• SERVER_ROLE

Reporter table:

EX2007_AVAILABILITY

Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Hub Transport Server Availability report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_AVAILABILITY
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA

- On a DCE-managed node: codautil -dumpds EX2007_DATA
- If there is no data in the CODA database, check if the CODA agent is running.
- You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
- Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

There will be no data unless the EXSPI-8X Get Exchange Availability policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

5) Is the agent on the managed node running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - $\circ~$ On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: **opcagt -status**
- If the HP Operations agent is not running, restart with the following command:
 - $\circ~$ On the HTTPS-managed nodes: ovc -start
 - On the DCE-managed nodes: opcagt -start

Exchange 2007 Mailbox Server Availability

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Mailbox Availability** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 Mailbox Availability** in the HPOM console.

Report Template File Name: g_Exchange 2007 Mailbox Server Availability.rpt

Description: This report indicates the availability status of the nodes with the Mailbox Server role in the Exchange Organization. The Microsoft Exchange SPI monitors the availability of the services that are necessary for Microsoft Exchange Server 2007 nodes with the Mailbox Server role to run smoothly. The Exchange 2007 Mailbox Server Availability report helps you identify if any of these services are unavailable.

Report content:

This report (pie chart) displays the duration (percentage of time) for which the Exchange 2007 Mailbox Server services could successfully run. Possible causes of availability failure are: lack of system resources, wrong configuration, or performance failures in the Exchange 2007 environment.

Available: Next day.

Required Policies:

For this report to work properly, deploy the following policy:

EXSPI-8X Get Exchange Availability

- Policy Schedule: Every 5 minutes
- Policy Location: Manual Deploy Groups\Availability

Metrics:

This report uses the following metrics, which are logged into the Reporter database:

- SERVER_NAME
- AVAILABILITY
- SERVER_ROLE

Reporter table:

EX2007_AVAILABILITY

Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Mailbox Server Availability report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_AVAILABILITY
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.

- You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
- Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

There will be no data unless the EXSPI-8X Get Exchange Availability policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

5) Is the agent on the managed node running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - On the HTTPS-managed nodes: **ovc -start**
 - On the DCE-managed nodes: opcagt -start

Exchange 2007 Unified Messaging Server Availability

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Unified Messaging Availability** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 Unified Messaging Availability** in the HPOM console.

Report Template File Name: g_Exchange 2007 Unified Messaging Server Availability.rpt

Description: This report indicates the availability status of the nodes with the Unified Messaging Server role in the Exchange Organization. The Microsoft Exchange SPI monitors the availability of the services that are necessary for Microsoft Exchange Server 2007 nodes with the Unified Messaging Server role to run smoothly. The Exchange 2007 Unified Messaging Server Availability report helps you identify if any of these services are unavailable.

Report content:

This report (pie chart) displays the duration (percentage of time) for which the Exchange 2007 Unified Messaging Server services could successfully run. Possible causes of availability failure are: lack of system resources, wrong configuration, or performance failures in the Exchange 2007 environment.

Available: Next day.

Required Policies:

For this report to work properly, deploy the following policy:

EXSPI-8X Get Exchange Availability

- Policy Schedule: Every 5 minutes
- Policy Location: Manual Deploy Groups\Availability

Metrics:

This report uses the following metrics, which are logged into the Reporter database:

- SERVER_NAME
- AVAILABILITY

• SERVER_ROLE

Reporter table:

EX2007_AVAILABILITY

Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Unified Messaging Server Availability report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_AVAILABILITY
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - \circ Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA

- On a DCE-managed node: codautil -dumpds EX2007_DATA
- If there is no data in the CODA database, check if the CODA agent is running.
- You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
- Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

There will be no data unless the EXSPI-8X Get Exchange Availability policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

5) Is the agent on the managed node running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - $\circ~$ On the HTTPS-managed nodes: ovc -status
 - $\circ~$ On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - $\circ~$ On the HTTPS-managed nodes: ovc -start
 - On the DCE-managed nodes: opcagt -start

Exchange 2007 Top 100 Mailboxes

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Top 100 Mailboxes** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Mailbox Store**, and then **Exchange 2007 Top 100 Mailboxes** in the HPOM console.

Report Template File Name: g_Exchange 2007 Top Mailboxes.rpt

This report lists the top 100 mailboxes by disk space usage across all mailbox databases for all Exchange 2007 servers. It contains the most recent information available as of the date indicated.

Report sections:

Top Mailboxes by Disk Space Usage: This section contains information on high disk space usage mailboxes, as obtained from Exchange database queries through the Exchange cmdlets.

Size (MB): Logical size of the mailbox based on the sum of the size of all messages in the mailbox. Units are in megabytes.
Mailbox Name: Display name of the Exchange mailbox.
Location: Name of the server and location of the mailbox
Storage Limit: Has one of the following values: Not Available, Below Limit, Issue Warning, Prohibit Send, No Checking, and Mailbox Disabled .
No. Msgs: The number of messages in the Mailbox.

Available: The day after collection. This is a weekly collection.

Collection Detail: Each policy must execute once, and the data must be gathered to the Reporter database, and the report is generated from this data. The report only shows data from the most recent day; therefore all Exchange Systems should log this data during the same time period. This data is collected and logged weekly. The schedule out of the box is set to collect and log data late Friday. If the data is gathered to the Reporter database nightly, this report will be refreshed with data for Saturday viewing.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Get Mailbox Details Location: Manual Deploy Groups \ Mailbox Server\ Mailbox Metrics: MB_SIZE (MB) MB_MSGCOUNT: Number of Messages MB_STGLIMIT MB_LASTACCESS MB_SGNAME MB_DBNAME **Table:** EX2007_MBDETAIL

Troubleshoot the Exchange 2007 Top 100 Mailboxes report

If the report is not being generated or it is empty, follow these steps:

1) Is there relevant data in the Reporter database?

- First check if the data the report needs is in the Reporter database.
- Check the Reporter database on the HPOM management server or where Reporter is installed.
- Run the following SQL commands to see if data for a particular metric is being collected. SELECT * FROM EX2007_MBDETAIL
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics is missing from the Reporter database, go to the next step.

2) Has the Microsoft Exchange SPI Reporter package been installed properly?

- When data is missing in the Reporter database, the cause may be due to an incorrect configuration of the Microsoft Exchange SPI Reporter package.
- Check that the Microsoft Exchange SPI Reporter package was installed on the system on which you are attempting to generate the reports.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors report the problem.
- If there are no installation errors, go to the next step.

3) Is data being logged properly to the data store (CODA)?

- If there is no data in the Reporter database and the Exchange SPI Reporter package is installed properly, check that the data is being collected/logged on the managed node to the CODA database.
- Run the following CODA diagnostic command on the managed node to get the last logged record: codautil -dumpds EX2007_DATA
- If there is no data in the CODA database check that the CODA agent is running.

- You can restart the CODA agent on the managed node by running: opcagt -start -id 12
- Check that the acknowledged messages queue was acknowledged.
- If the CODA is running and there is still no data in the CODA database, go to the next step.

- There will be no data unless the above policies are deployed.
- Check on the management server to ensure the EXSPI-8X Get Mailbox Details policy was deployed on the relevant managed node.
- If not running as Local System, was the schedule task EXSPI-8X Get Mailbox Details updated to contain a domain user name and password with credentials that allow read access to Exchange databases and the Active Directory configuration partition?
- If there is no data in the Reporter database, or in the CODA database, and the above policy is deployed and the CODA is running, go to the next step.

5) Are the agents on the managed node up and running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent: Opcagt -status
- Restart the agent if it is down.

Exchange 2007 Public Folder Store Message Trends by Server

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Public Folder Store Msg Tnd** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Public Folder Store**, and then **Exchange 2007 Public Folder Store Msg Tnd** in the HPOM console.

Report Template File Name: g_Exchange 2007 Public Folder Store Msg Trends.rpt

Description: This report contains summary and detail trend graphs showing Public Folder Store message volumes. The summary graph for each server shows overall messaging trends on the Exchange server. Detail graphs show messaging trends for each public folder store in every public folder store and storage group, by server.

Report sections:

This report contains two sections for each Exchange Server:

Summary of Public Folder Store Messages Processed on Exchange Server: This section of the report provides a daily summary of all messages processed by all public folder hosted on the server. The default retention period for these metrics is 7 days.

Number of Messages Processed by : This section of the report provides a daily summary of all messages processed by the stated store. The default retention period for these metrics is 7 days.

Available: Next Day.

Required Policies:

Policy: EXSPI-8X Dc-IS Public Folder Performance Location: Manual Deploy Groups \ Mailbox Server \ Public Folder Metrics: PFDELIVER PFSENT PFSUBMITTED PFRECIPIENT Table: EX2007_PFPERF Summarization: 0 seconds

Troubleshoot Exchange 2007 Public Folder Store Message Trends by Server report:

If the report is not being generated, or it is empty, follow these steps:

1) Have the policies been deployed?

- There will be no data unless the EXSPI-8X Dc-IS Public Folder Performance policy is deployed.
- Check on the management server to ensure this policy was deployed on the relevant managed node.
- If there is no data in the Reporter database, or in the CODA database, and the above policy is deployed and the CODA is running, go to the next step.

2) Is there relevant data in the Reporter database?

- First check if the data that the report needs is in the Reporter database.
- Check the Reporter database on the HPOM management server or where Reporter is installed.
- Run the following SQL commands to see if data for a particular metric is being collected.

SELECT * FROM EX2007_PFPERF

- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

3) Has the Microsoft Exchange SPI Reporter package been installed properly?

- Sometimes when there is no data in the Reporter database the cause is incorrect configuration of the EXSPI Reporter package.
- Check that the EXSPI Reporter package was installed on the system on which you are attempting to generate the reports.
- Check for errors in the Reporter Status pane?
- If there are Reporter installation errors report the problem.
- If there are no installation errors, go to the next step.

4) Is the monitored performance Object active in perfmon?

Start Microsoft's perfmon application and attach it to the managed node. Attempt to add the Object **MSExchangeIS Public**. If this object is not available, you must enable it.

5) Is data being logged properly to the data store (CODA)?

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node to the CODA database.
- Run the following CODA diagnostic command on the managed node to get the last logged record:

codautil -dumpds EX2007_DATA

- If there is no data in the CODA database, check that the CODA agent is running.
- You can restart the coda agent on the managed node by running:

opcagt -start -id 12

- Check that the acknowledged messages queue was acknowledged.
- If the CODA is running and there is still no data in the CODA database, go to the next step.

6) Are the agents on the managed node up and running?

• Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:

Opcagt -status

• Restart the agent if it is down.

Exchange 2007 IMAP4 Connections by Server

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 IMAP4 Connections** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Client Access**, and then **Exchange 2007 IMAP4 Connections** in the HPOM console.

Report Template File Name: g_Exchange 2007 IMAP4 Connections.rpt

Description: This report provides a graph of the averaged connection counts for hours of the day over the time period indicated. The table shows the hourly plotted connection count values.

Report sections:

Two report sections are populated for each Exchange server where the IMAP4 service is running.

The first report section graphs the hourly averaged Connections, Failed, and Rejected connections for the time period indicated. This means that when a full week of data is consolidated to the database, connections over all of the days are averaged for plotting on the graph.

The second section is a table of the data used in the preceding graph. The Failed and Rejection Percentages are also calculated. The Rejection Percentage is the number of rejected connections divided by the number of connections; the Failed Percentage is the number of rejected connections divided by the number of connections.

Available: Next day.

Prerequisite: The MSExhangeIMAP4 service must be running on the server, and the associated Performance Object must be available through perfmon.

Required Policies:

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-IMAP4 Performance Schedule: Hourly Location: Manual Deploy Groups \ Client Access Server \ IMAP4 Metrics: IMAP4CON IMAP4FAILEDCON IMAP4REJECTEDCON Table: EX2007_IMAP4PERF Summarization: 0 seconds.

Troubleshoot the Exchange 2007 IMAP4 Connections by Server report

If the report is not being generated or it is empty, follow these steps:

1) Is there relevant data in the Reporter database?

- First check if the data the report needs is in the Reporter database.
- Check the Reporter database on the HPOM management server or where Reporter is installed.
- Run the following SQL commands to see if data for a particular metric is being collected. SELECT * FROM EX2007_IMAP4PERF
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Has the Microsoft Exchange SPI Reporter package been installed properly?

- When data is missing in the Reporter database, the cause may be due to a configuration problem with the EXSPI Reporter package.
- Check that the EXSPI Reporter package was installed on the system on which you are attempting to generate the reports.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors report the problem.
- If there are no installation errors, go to the next step.

3) Is data being logged properly to the data store (CODA)?

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node to the CODA database.
- Run the following CODA diagnostic command on the managed node to get the last logged record: codautil -dumpds EX2007_DATA
- If there is no data in the CODA database, check that the CODA agent is running.
- You can restart the coda agent on the managed node by running: opcagt -start -id 12

- Check that the acknowledged messages queue was acknowledged.
- If the CODA is running and there is still no data in the CODA database, go to the next step.

There will be no data unless the EXSPI-8X Dc-IMAP4 Performance policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command opctemplate.

5) Are the agents on the managed node up and running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent: Opcagt -status
- Restart the agent if it is down.

Exchange 2007 Users and Connections by Server

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 IS Users and Connections** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Mailbox Store**, and then **Exchange 2007 IS Users and Connections** in the HPOM console.

Report Template File Name: g_Exchange 2007 IS Connections.rpt

Description: This report provides a graph of the averaged user and connections count for hours of the day over the time period indicated. The table shows the hourly plotted connection count values. Each Exchange server is analyzed.

Report sections:

Graph and Table of User and Connection Activity: The graph shows hourly trends of user connection statistics.

Avg of Users: Average number of users connected to the information store.
Avg of Active Users: Average number of active users connected to the information store.
Avg of Connections : Average number of connections to the information store.
Avg of Active Connections : Average number of active connections to the information store.
Avg of Anonymous Users : Average number of anonymous users.
Avg of Active Anonymous Users : Average number of active anonymous users.

Available: Two days.

Prerequisites:

- 1. The User that the policy runs under must have read access to perfmon data.
- 2. Deploy the policy EXSPI-8X Dc-Information Store Performance. This policy gathers the perfmon data information store statistics and writes this data to CODA.

Collection Detail: The schedule policy EXSPI-8X Dc-Information Store Performance is scheduled to run every 15 minutes. Data is gathered to the reporter database, and the report is generated the following day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Information Store Performance Schedule: Every 15 mins Location: Manual Deploy Groups \ Mailbox Server \ Performance Metrics: ISUSERCNT ISACTIVEUSERCNT ISACTIVEUSERCNT ISACTIVEANONUSERCNT ISACTIVEANONUSERCNT ISCONNECTCNT ISACTIVECONNECTCNT Table: EX2007_ISPERF Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Users and Connections by Server report

If the report is not being generated or it is empty, follow these steps:

1) Is there relevant data in the Reporter database?

- First check if the data that the report needs is in the Reporter database.
- Check the Reporter database on the HPOM management server or where Reporter is installed.
- Run the following SQL commands to see if data for a particular metric is being collected. SELECT * FROM EX2007_ISPERF
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database then go to the next step.

2) Has the Microsoft Exchange SPI Reporter package been installed properly?

- When data is missing in the Reporter database, the cause may be due to an incorrect configuration of the EXSPI Reporter package.
- Check that the EXSPI Reporter package was installed on the system on which you are attempting to generate the reports.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors report the problem.
• If there are no installation errors, go to the next step.

3) Is data being logged properly to the data store (CODA)?

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node to the CODA database.
- Run the following CODA diagnostic command on the managed node to get the last logged record: codautil -dumpds EX2007_DATA
- If there is no data in the CODA database check to ensure that the CODA agent is running.
- You can restart the coda agent on the managed node by running: opcagt -start -id 12
- Check that the acknowledged messages queue was acknowledged.
- If the CODA is running and there is still no data in the CODA database, go to the next step.

4) Have the policies been deployed?

• There will be no data unless appropriate policies are deployed. Check on the managed node to ensure the EXSPI-8X Dc-Information Store Performance policy has been deployed and is enabled by executing the command opctemplate.

5) Are the agents on the managed node up and running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent: Opcagt -status
- Restart the agent if it is down.

Exchange 2007 Mailbox Store Msg Trends by Server

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Mailbox Store Msg Trends** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Mailbox Store**, and then **Exchange 2007 Mailbox Store Msg Trends** in the HPOM console.

Report Template File Name: g_Exchange 2007 Mailbox Store Msg Trends.rpt

Description: This report contains summary and detail trend graphs showing Mailbox Store message volumes. The summary graph for each server shows overall messaging trends on the Exchange server. Detail graphs show messaging trends for each mailbox store instance.

Report sections:

This report contains two sections for each Exchange server:

Summary of Mailbox Store Messages Processed on Exchange Server: This section of the report provides a daily summary of all messages processed by all mailbox stores hosted on the server. The default retention period for these metrics is 7 days.

Number of messages processed by *<Store Name >***:** This section of the report provides a daily summary of all messages processed by the stated store. The default retention period for these metrics is 7 days.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-IS Mailbox Performance Schedule: Every 15 mins Location: Manual Deploy Groups \ Mailbox Server \ Mailbox Metrics: MBDELIVER MBSENT MBSUBMITTED MBRECIPIENT MBLOCALDELIVER Table: EX2007_MBPERF

Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Mailbox Store Msg Trends by Server report

If the report is not being generated or it is empty, follow these steps:

1) Is there relevant data in the Reporter database?

- First check if the data that the report needs is in the Reporter database.
- Check the Reporter database on the HPOM management server or where Reporter is installed.
- Run the following SQL commands to see if data for a particular metric is being collected. SELECT * FROM EX2007_MBPERF
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Has the Microsoft Exchange SPI Reporter package been installed properly?

- When data is missing in the Reporter database, the cause may be due to an incorrect configuration of the EXSPI Reporter package.
- Check that the EXSPI Reporter package was installed on the system on which you are attempting to generate the reports.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors report the problem.
- If there are no installation errors, go to the next step.

3) Is data being logged properly to the data store (CODA)?

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node to the CODA database.
- Run the following CODA diagnostic command on the managed node to get the last logged record: codautil -dumpds EX2007_DATA
- If there is no data in the CODA database check that the CODA agent is running.
- You can restart the CODA agent on the managed node by running:

opcagt -start -id 12

- Check that the acknowledged messages queue was acknowledged.
- If the CODA is running and there is still no data in the CODA database, go to the next step.

4) Have the policies been deployed?

• There will be no data unless appropriate policies are deployed. Check on the managed node to ensure the EXSPI-8X Dc-IS Mailbox Performance policy was deployed and is enabled by running the command opctemplate.

5) Are the agents on the managed node up and running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent: Opcagt -status
- Restart the agent if it is down.

Exchange 2007 POP3 Connections by Server

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 POP3 Connections** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Client Access**, and then **Exchange 2007 POP3 Connections** in the HPOM console.

Report Template File Name: g_Exchange 2007 POP3 Connections.rpt

Description: This report provides a graph of the averaged connection counts for hours of the day over the time period indicated. The table shows the hourly plotted connection count values.

Report sections:

Two report sections are populated for each Exchange server where the POP3 service is running.

The first report section graphs the hourly averaged Connections, Failed, and Rejected connections for the time period indicated. This means that when a full week of data is consolidated to the database, connections over all of the days are averaged for plotting on the graph.

The second section is a table of the data used in the preceding graph. The Failed and Rejection Percentages are also calculated. The Rejection Percentage is the number of rejected connections divided by the number of connections; the Failed Percentage is the number of rejected connections divided by the number of connections.

Available: Next day.

Prerequisite: The MSExhangePOP3 service must be running on the server, and the associated Performance Object must be available through perfmon.

Required Policies:

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-POP3 Performance Schedule: Hourly Location: Manual Deploy Groups \ Client Access Server \ POP3 Metrics: POP3CON POP3FAILEDCON POP3REJECTEDCON Table: EX2007_POP3PERF Summarization: 0 seconds.

Troubleshoot the Exchange 2007 POP3 Connections by Server report

If the report is not being generated or it is empty, follow these steps:

1) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-POP3 Performance policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command opctemplate.

2) Is there relevant data in the Reporter database?

- First check if the data that the report needs is in Reporter database.
- Check the Reporter database on the HPOM management server or where Reporter is installed.
- Run the following SQL commands to see if data for a particular metric is being collected. SELECT * FROM EX2007_POP3PERF
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

3) Has the Microsoft Exchange SPI Reporter package been installed properly?

- When data is missing in the Reporter database, the cause may be due to a configuration problem with the EXSPIReporter package.
- Check that EXSPI Reporter package was installed on the system on which you are attempting to generate the reports.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors report the problem.
- If there are no installation errors, go to the next step.

4) Is the monitored performance Object active in perfmon?

Start Microsoft's perfmon application and attach to the managed node. Attempt to add the Object **MSExchangePOP3**. If this object is not available you will need to enable it.

5) Is the SMTP server running on the managed node?

Start Microsoft's services application and attach to the managed node. Select the **Microsoft Exchange POP3** server service. Verify that the service is running.

6) Is data being logged properly to the data store (CODA)?

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node to the CODA database.
- Run the following CODA diagnostic command on the managed node to get the last logged record: codautil -dumpds EX2007_DATA
- If there is no data in the CODA database check to ensure that the CODA agent is running.
- You can restart the CODA agent on the managed node by running: opcagt -start -id 12
- Check that the acknowledged messages queue was acknowledged.
- If the CODA is running and there is still no data in the CODA database, go to the next step.

7) Are the agents on the managed node up and running?

- Check that HP Operations agent is running. Run the following command on the managed node to get the status of the agent: Opcagt -status
- Restart the agent if it is down.

Exchange 2007 SMTP Receive Messaging Trends by Server

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 SMTP Msg Recv Trends** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 SMTP Msg Recv Trends** in the HPOM console.

Report Template File Name: g_Exchange 2007 SMTP Receive Messaging Trends.rpt

Description: This report contains trend graphs showing the Simple Mail Transport Protocol (SMTP) incoming message volume. Graphs show trends in incoming message volume by messages and megabytes.

Report sections:

Two report sections are populated for each Exchange server where the SMTP service is running.

The first report section graphs the Number of Messages Processed by each SMTP server instance. The number of messages received is graphed for each SMTP server instance active on the server.

The second section graphs the message megabytes processed by each SMTP server instance. The message size in megabytes of Received is graphed for each SMTP server instance active on the server.

Available: Next day.

Prerequisite: The SMTP service must be running on the server, and the associated Performance Object must be available through perfmon.

Required Policies:

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-SMTP Performance for Inbound Connections Schedule: Hourly Location: Manual Deploy Groups \ Hub Transport Server \ SMTP Metrics: SMTPMSGSENT, SMTPMSGRECEIVE, SMTPMSGBYTESENT, SMTPMSGBYTERECEIVE Table: EXSPI_SMTPPERF Summarization: 0 seconds.

Troubleshoot the Exchange 2007 SMTP Receive Messaging

Trends by server report

If the report is not being generated or it is empty, follow these steps:

1) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-SMTP Performance for Inbound Connections policy has been deployed. Check on the managed node to ensure this policy has been deployed and is enabled by running the command opctemplate.

2) Is there relevant data in the Reporter database?

- First check if the data that the report needs is in the Reporter database.
- Check the Reporter database on the HPOM management server or where Reporter is installed.
- Run the following SQL commands to see if data for a particular metric is being collected. SELECT * FROM EX2007_SMTPRECV
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database then go to the next step.

3) Has the Microsoft Exchange SPI Reporter package been installed properly?

- When data is missing in the Reporter database, the cause may be due to a configuration problem with the EXSPI Reporter package.
- Check that the EXSPI Reporter package was installed on the system on which you are attempting to generate the reports.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors report the problem.
- If there are no installation errors, go to the next step.

4) Is the monitored performance Object active in perfmon?

Start Microsoft's perfmon application and attach to the managed node. Attempt to add the Object **MSExchangeTransport SmtpReceive**. If this object is not available you will need to enable it.

5) Is the SMTP server running on the managed node?

Start Microsoft's services application and attach to the managed node. Select the SMTP server service.

Verify that the service is running.

6) Is data being logged properly to the data store (CODA)?

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node to the CODA database.
- Run the following CODA diagnostic command on the managed node to get the last logged record: codautil -dumpds EX2007_DATA
- If there is no data in the CODA database check that the CODA agent is running.
- You can restart the CODA agent on the managed node by running: opcagt -start -id 12
- Check that the acknowledged messages queue was acknowledged.
- If the CODA is running and there is still no data in the CODA database, go to the next step.

7) Are the agents on the managed node running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent: Opcagt -status
- Restart the agent if it is down.

Exchange 2007 Inactive Mailboxes by Server

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Inactive Mailboxes** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Mailbox Store**, and then **Exchange 2007 Inactive Mailboxes** in the HPOM console.

Report Template File Name: g_Exchange 2007 Inactive Mailboxes.rpt

Description: This report lists all the mailboxes on the server that have not been accessed in 20, 40, and 60 or more days.

Report sections:

This report contains data collected on Mailboxes grouped by Storage Group and Mailbox Store, sorted by Last Logon Date. It is in the form of a table with the following columns:

Mailbox Name: The name of the mailbox.
Last Sent Date: The date when mail was last sent.
Size (MB): Logical size of the mailbox based on the sum of the size of all messages in the mailbox.
Units are in megabytes.
No. Messages: The number of messages in the mailbox.

Available: The day after collection. This is a weekly collection.

Collection Detail: Each policy must execute once, and the data must be gathered to the Reporter database. The report is generated from this data. The report only shows data from the most recent day; therefore all Exchange Systems should log this data during the same time period. This data is collected and logged weekly. The schedule out of the box is set to collect and log data late Friday. If the data is gathered to the Reporter database nightly, this report will be refreshed with data for Saturday viewing.

Mailbox size and Last Logon Date are extracted from the Active Directory for each mailbox logged to the EX2007_MBDETAIL table.

Storage Group and Mailbox Store for each mailbox on the server are extracted from the Active Directory and logged to the EX2007_MBDETAIL table.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Get Mailbox Details **Location:** Manual Deploy Groups \ Mailbox Server \ Mailbox Metrics: MB_SIZE (MB) MB_LASTACCESS MB_SGNAME MB_DBNAME Table: EX2007_MBDETAIL

Troubleshoot the Exchange 2007 Inactive Mailboxes by Server report

If the report is not being generated or it is empty, follow these steps:

1) Is there relevant data in the Reporter database?

- First check if the data that the report needs is in the Reporter database.
- Check the Reporter database on the HPOM management server or where Reporter is installed.
- Run the following SQL commands to see if data for a particular metric is being collected. SELECT * FROM EX2007_MBDETAIL
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Has the Microsoft Exchange SPI Reporter package been installed properly?

- When data is missing in the Reporter database, the cause may be due to an incorrect configuration of the EXSPI Reporter package.
- Check the EXSPI Reporter package was installed on the system on which you are attempting to generate the reports.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors report the problem.
- If there are no installation errors, go to the next step.

3) Is data being logged properly to the data store (CODA)?

• If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node to the CODA database.

- Run the following CODA diagnostic command on the managed node to get the last logged record: codautil -dumpds EX2007_DATA
- If there is no data in the CODA database check that the CODA agent is running.
- You can restart the coda agent on the managed node by running: opcagt -start -id 12
- Check that the acknowledged messages queue was acknowledged.
- If the CODA is up and running and there is still no data in the CODA database, go to the next step.

4) Have the policies been deployed?

- There will be no data unless the above policy is deployed.
- Check on the management server to ensure the EXSPI-8X Get Mailbox Details policy was deployed on the relevant managed node.
- If not running as Local System, was the schedule task EXSPI-8X Get Mailbox Details updated to contain a domain user name and password with credentials that allow read access to Exchange databases and the Active Directory configuration partition?
- If there is no data in the Reporter database, or in the CODA database, and the above policy is deployed and the CODA is running, go to the next step.

5) Are the agents on the managed node up and running?

- Check that the HP Operations agent is up and running. Run the following command on the managed node to get the status of the agent: Opcagt -status
- Restart the agent if it is down.

Exchange 2007 Mailbox Details by Server

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Mailbox Details** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Mailbox Store**, and then **Exchange 2007 Mailbox Details** in the HPOM console.

Report Template File Name: g_Exchange 2007 Mailbox Details.rpt

Provides detailed information about the mailboxes on the server including summary totals, size distribution, and top mail users.

Report sections:

This report lists all the mailboxes on the server sorted by disk space usage. It contains the most recent information available as of the date indicated. Mailboxes are sorted by name, and grouped by storage group and database. The report is organized as a table with the following columns:

Mailbox Name: The name of the mailbox.

Size (MB): Logical size of the mailbox based on the sum of the size of all messages in the mailbox. Units are in megabytes.

No. Messages: The number of messages in the mailbox.

Storage Limits: Has one of the following values: Not Available, Below Limit, Issue Warning, Prohibit Send, No Checking, and Mailbox Disabled.

Available: The day after collection. This is a weekly collection.

Collection Detail: Each policy must execute once, and the data must be gathered to the Reporter database. The report is generated from this data. The report only shows data from the most recent day; therefore all Exchange Systems should log this data during the same time period. This data is collected and logged weekly. The schedule out of the box is set to collect and log data late Friday. If the data is collected in the Reporter database nightly then this report will be refreshed with data for Saturday viewing.

Required Policies

For this report to work properly, deploy the following policies:

Policy Names: EXSPI-8X Get Mailbox Details Location: Manual Deploy Groups \ Mailbox Server\ Mailbox Schedule: Friday at 21:05 Metrics: MB_SIZE (MB) MB_MSGCOUNT: Number of Messages MB_STGLIMIT MB_LASTACCESS MB_SGNAME MB_DBNAME **Table:** EX2007_MBDETAIL

Troubleshoot the Exchange 2007 Mailbox Details by Server report

If the report is not being generated or it is empty, follow these steps:

1) Is there relevant data in the Reporter database?

- First check if the data the report needs is in the Reporter database.
- Check the Reporter database on the HPOM management server or where Reporter is installed.
- Run the following SQL commands to see if data for a particular metric is being collected. SELECT * FROM EX2007_MBDETAIL
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the time periods are missing, verify Service Reporter processes.

2) Has the Microsoft Exchange SPI Reporter package been installed properly?

- When data is missing in the Reporter database, the cause may be due to an incorrect configuration of the EXSPI Reporter package.
- Check that the EXSPI Reporter package was installed on the system you are attempting to generate the reports.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.
- If there are no installation errors, go to the next step.

3) Is data being logged properly to the data store (CODA)?

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node to the CODA database.
- Run the following CODA diagnostic command on the managed node to get the last logged record: codautil -dumpds EX2007_DATA

- If there is no data in the CODA database, check that the CODA agent is up and running.
- Restart the coda agent on the managed node by running: opcagt -start -id 12
- Check that the acknowledged messages queue has been acknowledged.
- If the CODA is running and there is still no data in the CODA database, go to the next step.

4) Have the policies been deployed?

- There will be no data unless the above policy is deployed. Check on the management server that the EXSPI-8X Get Mailbox Details policy has been deployed on the relevant managed node. You must deploy the EXSPI-8X Get Mailbox Details policy only on the nodes with Mailbox server role.
- Make sure that the Collection Manager service is running on the managed node with the LocalSystem account or as an Exchange View Only administrator.
- If there is no data in the Reporter database, or in the CODA database, and the above policy is deployed and the

CODA is running, go to the next step.

5) Are the agents on the managed node up and running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent: Opcagt -status
- Restart the agent if it is down.

Exchange 2007 Top Senders

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Top Senders** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 Top Senders** in the HPOM console.

Report Template File Name: g_Exchange 2007 Top Senders.rpt

Description: This report lists the top senders of emails based on the number of megabytes of e-mail sent. Each message is counted only once regardless of the number of recipients.

Report contents:

This report displays tables indicating the size of the emails sent by every server with the data that was gathered by HP Reporter over a period of one week.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Sender Details Schedule: Every week Location: Manual Deploy Groups \ Hub Transport Server Metrics: SERVER_NAME Table: EX2007_SENDER Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Top Senders report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_SENDER

- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: **codautil -dumpds EX2007_DATA**
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Sender Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

5) Is the agent on the managed node running?

• Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:

- On the HTTPS-managed nodes: ovc -status
- On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - $\circ~$ On the HTTPS-managed nodes: ovc -start
 - $\circ~$ On the DCE-managed nodes: opcagt -start

Exchange 2007 Top Senders Per AD Site

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Top Senders Per AD Site** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 Top Senders Per AD Site** in the HPOM console.

Report Template File Name: g_Exchange 2007 Top Senders Per ADSite.rpt

Description: This report lists the top senders of emails based on the size of the emails sent by each server of every Active Directory site. The size of each email message is counted only once regardless of the number of recipients.

Report contents:

This report displays tables indicating the size of the emails sent by every server for every Active Directory site with the data that was gathered by HP Reporter over a period of one week.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Sender Details Schedule: Every week Location: Manual Deploy Groups \ Hub Transport Server Metrics: ADSITE_NAME Table: EX2007_SENDER Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Top Senders Per AD Site report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

• Check if the data is available in the Reporter database.

- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_SENDER
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Sender Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

5) Is the agent on the managed node running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - \circ On the HTTPS-managed nodes: **ovc -start**
 - On the DCE-managed nodes: **opcagt -start**

Exchange 2007 Top Outgoing E-mail

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Top Destination** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 Top Destination** in the HPOM console.

Report Template File Name: g_Exchange 2007 Top Destinations.rpt

Description: This report lists the top destinations of emails based on the number of megabytes of e-mail sent. Each message is counted once for every destination.

Report contents:

This report displays tables indicating the sizes of the emails sent to different destinations with the data that was gathered by HP Reporter over a period of one week. The table indicates the following types of email destinations:

- EX2007: The destination server is another Exchange 2007 Mailbox server within your organization. The actual destination name displayed is the combination of the site name and Mailbox Server name.
- EX: The destination server is another Exchange server (2003) within your organization. The actual destination name displayed is the name of the Exchange Server.
- SMTP: The destination is an Internet address. The destination is not located in your Exchange organization.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Destination Details Schedule: Every week Location: Manual Deploy Groups \ Hub Transport Server Metrics: SERVER_NAME Table: EX2007_DEST Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Top Outgoing E-mail report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_DEST
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - \circ Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Destination Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

5) Is the agent on the managed node running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - On the HTTPS-managed nodes: ovc -start
 - On the DCE-managed nodes: opcagt -start

Exchange 2007 Top Outgoing E-mail Per AD Site

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Top Destination Per AD Site** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 Top Destination Per AD Site** in the HPOM console.

Report Template File Name: g_Exchange 2007 Top Destinations.rpt

Description: This report lists the top destinations of emails based on the number of megabytes of e-mail sent for every Active Directory site. Each message is counted once for every destination.

Report contents:

This report displays tables indicating the sizes of the emails sent to different destinations with the data that was gathered by HP Reporter over a period of one week. The table indicates the following types of email destinations:

- EX2007: The destination server is another Exchange 2007 Mailbox server within your organization. The actual destination name displayed is the combination of the site name and Mailbox Server name.
- EX: The destination server is another Exchange server (2003) within your organization. The actual destination name displayed is the name of the Exchange Server.
- SMTP: The destination is an Internet address. The destination is not located in your Exchange organization.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Destination Details Schedule: Every week Location: Manual Deploy Groups \ Hub Transport Server Metrics: ADSITE_NAME Table: EX2007_DEST Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Top Outgoing E-mail Per AD Site report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_DEST
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12

- Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Destination Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

5) Is the agent on the managed node running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - $\circ~$ On the HTTPS-managed nodes: ovc -start
 - On the DCE-managed nodes: opcagt -start

Exchange 2007 Mailbox Server Messages Sent

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 MB Server Msg** Sent in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 MB Server Msg Sent** in the HPOM console.

Report Template File Name: g_exchange 2007 mailbox msg sent per AD Site.rpt

Description: This report shows the number of messages sent from each managed Exchange Server 2007 Mailbox Server for different Active Directory sites.

Report contents:

This report displays bar graphs indicating the number of messages sent from Mailbox Servers for different Active Directory sites over a period of one day. The X-axis represents different servers in every Active Directory site and the Y-axis represents the number of messages sent from every server.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Sender Details Schedule: Every hour Location: Manual Deploy Groups \ Hub Transport Server Metrics: ADSITE_NAME SERVER_NAME NUM_MSGS_SR Table: EX2007_SENDER Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Mailbox Server Messages Sent report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_SENDER
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: **codautil -dumpds EX2007_DATA**
 - On a DCE-managed node: ovcodautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Sender Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

5) Is the agent on the managed node running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - $\circ~$ On the HTTPS-managed nodes: ovc -start
 - $\circ~$ On the DCE-managed nodes: opcagt -start

Exchange 2007 Mailbox Server Top 20 Sender Servers of Messages

Launch this report by clicking **Reports > SPI for Exchange 2007 > Top 20 Sender MB Servers** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Top 20 Sender MB Servers** in the HPOM console.

Report Template File Name: g_exchange 2007 Top 20 mailbox servers msg sent.rpt

Description: This report lists the top senders of emails based on the size of the emails sent by each server. The size of each email message is counted only once regardless of the number of recipients.

Report contents:

This report displays bar graphs indicating the numbers of messages sent from mailboxes by 20 different servers with the data that was gathered by HP Reporter over a period of one week.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Sender Details Schedule: Every week Location: Manual Deploy Groups \ Hub Transport Server Metrics: SERVER_NAME NUM_MSGS_SR Table: EX2007_SENDER Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Mailbox Server Top 20 Sender Servers of Messages report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

• Check if the data is available in the Reporter database.

- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_SENDER
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Sender Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

5) Is the agent on the managed node running?

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: **opcagt -status**
- If the HP Operations agent is not running, restart with the following command:
 - On the HTTPS-managed nodes: **ovc -start**
 - On the DCE-managed nodes: opcagt -start

Exchange 2007 Top Recipients Per AD Site

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Top Recipients Per AD Site** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 Top Recipients Per AD Site** in the HPOM console.

Report Template File Name: g_Exchange 2007 Top Recipients per AD Site.rpt

Description: This report lists the top senders of emails based on the size of the emails received by each server of every Active Directory site. The size of each email message is counted only once regardless of the number of recipients.

Report contents:

This report displays tables indicating the size of the emails received by every server for every Active Directory site with the data that was gathered by HP Reporter over a period of one week.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Recipient Details Schedule: Every week Location: Manual Deploy Groups \ Hub Transport Server Metrics: ADSITE_NAME Table: EX2007_RECP Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Top Recipients Per AD Site report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

• Check if the data is available in the Reporter database.

- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_RECP
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Recipient Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.
- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - $\circ~$ On the HTTPS-managed nodes: ovc -start
 - $\circ~$ On the DCE-managed nodes: opcagt -start

Exchange 2007 Top Recipients

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Top Recipients** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 Top Recipients** in the HPOM console.

Report Template File Name: g_Exchange 2007 Top Recipients.rpt

Description: This report lists the top senders of emails based on the number of megabytes of e-mail received. Each message is counted only once regardless of the number of recipients.

Report contents:

This report displays tables indicating the size of the emails received by every server with the data that was gathered by HP Reporter over a period of one week.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Recipient Details Schedule: Every week Location: Manual Deploy Groups \ Hub Transport Server Metrics: SERVER_NAME Table: EX2007_RECP Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Top Recipients report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_RECP

- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: **codautil -dumpds EX2007_DATA**
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Recipient Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

5) Is the agent on the managed node running?

• Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:

- On the HTTPS-managed nodes: **ovc -status**
- On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - $\circ~$ On the HTTPS-managed nodes: ovc -start
 - $\circ~$ On the DCE-managed nodes: opcagt -start

Exchange Top Incoming E-mail

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Top Sources** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 Top Sources** in the HPOM console.

Report Template File Name: g_Exchange Top Sources.rpt

Description: This report lists the top sources of emails based on the number of megabytes of e-mail received. Each message is counted only once regardless of the number of recipients. If an email contains recipients intended for different Mailbox Servers, the email is counted once for each server.

Report contents:

This report displays tables indicating the sizes of the emails sent by different sources with the data that was gathered by HP Reporter over a period of one week. The table indicates the following types of email sources:

- EX2007: The source server is another Exchange 2007 Mailbox server within your organization. The actual source name displayed is the combination of the site name and Mailbox Server name.
- EX: The source server is another Exchange server (2003) within your organization. The actual source name displayed is the name of the Exchange Server.
- SMTP: The source is an Internet address. The source is not located in your Exchange organization.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Source Details Schedule: Every week Location: Manual Deploy Groups \ Hub Transport Server Metrics: SERVER_NAME Table: EX2007_SOURCE Summarization: 0 seconds.

Troubleshoot the Exchange Top Incoming E-mail report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: **SELECT * FROM EX2007_SOURCE**
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - \circ Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Source Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - On the HTTPS-managed nodes: **ovc -start**
 - On the DCE-managed nodes: opcagt -start

Exchange 2007 Top Incoming E-mail Per AD Site

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 Top Sources Per AD Site** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 Top Sources Per AD Site** in the HPOM console.

Report Template File Name: g_Exchange 2007 Top Sources Per AD Site.rpt

Description: This report lists the top sources of emails based on the number of megabytes of e-mail received for every Active Directory site in the organization. Each message is counted only once regardless of the number of recipients. If an email contains recipients intended for different Mailbox Servers, the email is counted once for each server.

Report contents:

This report displays tables indicating the sizes of the emails sent by different sources for every Active Directory site with the data that was gathered by HP Reporter over a period of one week. The table indicates the following types of email sources:

- EX2007: The source server is another Exchange 2007 Mailbox server within your organization. The actual source name displayed is the combination of the site name and Mailbox Server name.
- EX: The source server is another Exchange server (2003) within your organization. The actual source name displayed is the name of the Exchange Server.
- SMTP: The source is an Internet address. The source is not located in your Exchange organization.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Source Details Schedule: Every week Location: Manual Deploy Groups \ Hub Transport Server Metrics: ADSITE_NAME Table: EX2007_SOURCE

Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Top Incoming E-mail Per AD Site report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_SOURCE
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running:

On HTTPS-managed nodes: **ovc -start -id 12** On DCE-managed nodes: **opcagt -start -id 12**

- $\circ~$ Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Source Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - $\circ~$ On the HTTPS-managed nodes: ovc -start
 - On the DCE-managed nodes: opcagt -start

Exchange 2007 Mailbox Server Top 20 Receiver Servers of Messages

Launch this report by clicking **Reports > SPI for Exchange 2007 > Top 20 Receiver MB Server** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Top 20 Receiver MB Server** in the HPOM console.

Report Template File Name: g_exchange 2007 Top 20 mailbox servers msg received.rpt

Description: This report shows the top 20 receivers of messages.

Report contents:

This report displays bar graphs indicating the number of messages received by 20 different servers with the data that was gathered by HP Reporter over a period of one week.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Recipient Details Schedule: Every week Location: Manual Deploy Groups \ Hub Transport Server Metrics: SERVER_NAME NUM_MSGS_RR Table: EX2007_RECP Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Mailbox Server Top 20 Receiver Servers of Messages report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

• Check if the data is available in the Reporter database.

- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_RECP
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Recipient Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - $\circ~$ On the HTTPS-managed nodes: ovc -start
 - $\circ~$ On the DCE-managed nodes: opcagt -start

Exchange 2007 Mailbox Server Top 20 Receiver Servers of Largest Messages

Launch this report by clicking **Reports > SPI for Exchange 2007 > Top 20 Largest Msg Receiver MB Servers** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Top 20 Largest Msg Receiver MB Servers** in the HPOM console.

Report Template File Name: g_exchange 2007 Top 20 mailbox servers msg size received.rpt

Description: This report shows the top 20 receivers of messages (based on message size).

Report contents:

This report displays bar graphs indicating the sizes of messages received by 20 different servers with the data that was gathered by HP Reporter over a period of one week.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Recipient Details Schedule: Every week Location: Manual Deploy Groups \ Hub Transport Server Metrics: SERVER_NAME NUM_BYTES_RR Table: EX2007_RECP Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Mailbox Server Top 20 Receiver Servers of Largest Messages report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

• Check if the data is available in the Reporter database.

- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_RECP
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Recipient Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - $\circ~$ On the HTTPS-managed nodes: ovc -start
 - $\circ~$ On the DCE-managed nodes: opcagt -start

Exchange 2007 Mailbox Server Size of Messages Received

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 MB Server Msg** Size Received in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI** for Exchange 2007 > Messaging , and then Exchange 2007 MB Server Msg Size Received in the HPOM console.

Report Template File Name: g_exchange 2007 mailbox msg size received per AD Site.rpt

Description: This report shows the number of bytes of messages received by each managed Exchange 2007 Mailbox Server for different Active Directory sites.

Report contents:

This report displays bar graphs indicating the bytes of messages received by Mailbox Servers for different Active Directory sites with the data that was gathered by HP Reporter over a period of one week. The Xaxis represents different servers in every Active Directory site and the Y-axis represents the bytes of messages received by each server.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Recipient Details Schedule: Every week Location: Manual Deploy Groups \ Hub Transport Server Metrics: ADSITE_NAME NUM_BYTES_RR Table: EX2007_RECP Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Mailbox Server Size of Messages Received report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_RECP
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil-dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Recipient Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - $\circ~$ On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - \circ On the HTTPS-managed nodes: **ovc -start**
 - On the DCE-managed nodes: **opcagt -start**

Exchange 2007 Messages Received per Server by AD Site

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 MB Server Msg Received** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 MB Server Msg Received** in the HPOM console.

Report Template File Name: g_exchange 2007 mailbox msg received per AD Site.rpt

Description: This report shows the number of messages received in each managed Exchange 2007 Mailbox Server for different Microsoft Active Directory Sites.

Report contents:

This report displays bar graphs indicating the number of messages received from Mailbox servers over a period of time.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-IS Mailbox Performance Schedule: Every 15 mins Location: Manual Deploy Groups \ Mailbox Server \ Mailbox Metrics: MBDELIVER MBSENT MBSUBMITTED MBRECIPIENT MBLOCALDELIVER Table: EX2007_MBPERF Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Messages Received per Server by AD Site report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_MBPERF
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: codautil -dumpds EX2007_DATA
 - On a DCE-managed node: ovcodautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovagt -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - \circ Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Get Exchange Availability policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovagt -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - On the HTTPS-managed nodes: ovagt -start
 - On the DCE-managed nodes: **opcagt -start**

Exchange 2007 Messages Received per Server by AD Site

Report Template File Name: g_exchange 2007 mailbox msg received per AD Site.rpt

Description: This report shows the number of messages received by each managed Exchange 2007 Mailbox Server for different Active Directory sites.

Report contents:

This report displays bar graphs indicating the number of messages received by Mailbox Servers for different Active Directory sites over a period of one day. The X-axis represents different servers in an Active Directory site and the Y-axis represents the number of messages received by each server.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Recipient Details Schedule: Every hour Location: Manual Deploy Groups \ Hub Transport Server Metrics: ADSITE_NAME SERVER_NAME NUM_MSGS_RR Table: EX2007_RECP Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Messages Received per Server by AD Site report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.

- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_RECP
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: **codautil -dumpds EX2007_DATA**
 - On a DCE-managed node: ovcodautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Recipient Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - $\circ~$ On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - $\circ~$ On the HTTPS-managed nodes: ovc -start
 - On the DCE-managed nodes: opcagt -start

Exchange 2007 Mailbox Server Top 20 Sender Servers of Largest Messages

Launch this report by clicking **Reports > SPI for Exchange 2007 > Top 20 Largest Msg Sender MB Servers** in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Top 20 Largest Msg Sender MB Servers** in the HPOM console.

Report Template File Name: g_exchange 2007 Top 20 mailbox servers msg size sent.rpt

Description: This report shows the top 20 senders of messages (based on message size).

Report contents:

This report displays bar graphs indicating the sizes of messages sent from mailboxes by 20 different servers with the data that was gathered by HP Reporter over a period of one week.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Sender Details Schedule: Every week Location: Manual Deploy Groups \ Hub Transport Server Metrics: SERVER_NAME NUM_BYTES_SR Table: EX2007_SENDER Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Mailbox Server Top 20 Sender Servers of Largest Messages report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

• Check if the data is available in the Reporter database.

- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_SENDER
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Sender Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: **opcagt -status**
- If the HP Operations agent is not running, restart with the following command:
 - On the HTTPS-managed nodes: **ovc -start**
 - On the DCE-managed nodes: opcagt -start

Exchange 2007 Mailbox Server Size of Messages Sent

Launch this report by clicking **Reports > SPI for Exchange 2007 > Exchange 2007 MB Server Msg** Size Sent in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Exchange 2007 MB Server Msg Size Sent** in the HPOM console.

Report Template File Name: g_exchange 2007 mailbox msg size sent per AD Site.rpt

Description: This report shows the number of bytes of messages sent from each managed Exchange Server 2007 Mailbox Server for different Active Directory sites.

Report contents:

This report displays bar graphs indicating the bytes of messages sent from Mailbox Servers for different Active Directory sites with the data that was gathered by HP Reporter over a period of one week. The Xaxis represents different servers in every Active Directory site and the Y-axis represents the bytes of messages sent from every server.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Get Top Sender Details Schedule: Every week Location: Manual Deploy Groups \ Hub Transport Server Metrics: ADSITE_NAME NUM_BYTES_SR Table: EX2007_SENDER Summarization: 0 seconds.

Troubleshoot the Exchange 2007 Mailbox Server Size of Messages Sent report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_SENDER
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil-dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Get Top Sender Details policy was deployed. Check on the managed node to ensure this policy was deployed and is enabled by running the command **opctemplate**.

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - On the HTTPS-managed nodes: **ovc -start**
 - On the DCE-managed nodes: opcagt -start

Percentage of successful RPC client server operations between clients and Exchange 2007

Launch this report by clicking **Reports > SPI for Exchange 2007 > Percentage of successful RPC** operations in the HP Reporter or by clicking **Reports > Microsoft Exchange Server 2007 > SPI for Exchange 2007 > Messaging**, and then **Percentage of successful RPC operations** in the HPOM console.

Report Template File Name: g_Exchange 2007 Percentage Successful RPC Operations.rpt

Description: This report displays the percentage of successful RPC client/server operations between clients (Microsoft Office Outlook 2003 and higher) and Exchange Server 2007.

Report contents:

This report displays pie charts indicating the percentage of successful RPC client/server operations between clients and Exchange Server 2007.

Available: Next day.

Required Policies

For this report to work properly, deploy the following policy:

Policy Name: EXSPI-8X Dc-Outlook Client Schedule: Every 5 minutes Location: Manual Deploy Groups \ Mailbox Server \ Outlook Performance Metrics: SYSTEMNAME ISCRPCATTEMPT ISCRPCSUCCEED Table: EX2007_ISCLIENT Summarization: 0 seconds.

Troubleshoot the Percentage of successful RPC client server operations between clients and Exchange 2007 report

If the report is not being generated or if it is empty, follow these steps:

1) Check the Reporter database.

- Check if the data is available in the Reporter database.
- Check the Reporter database on the HP Reporter server.
- Run the following SQL commands to see if data for a particular metric is being collected: SELECT * FROM EX2007_ISCLIENT
- If there is data in the Reporter database for every metric listed above and the Reporter trace files do not reveal the cause of the problem, contact the HP Support Team.
- If the data for some or all of the above metrics are missing from the Reporter database, go to the next step.

2) Check the reporter package installation.

- Make sure that the EXSPI Reporter package was installed on the HP Reporter server.
- Check for errors in the Reporter Status pane.
- If there are Reporter installation errors, report the problem.

3) Check the data store.

- If there is no data in the Reporter database and the EXSPI Reporter package is installed properly, check that the data is being collected/logged on the managed node into the data store (CODA or HP Performance Agent).
- If you are using CODA:
 - Run the following CODA diagnostic command on the managed node to get the last logged record:
 - On an HTTPS-managed node: ovcodautil -dumpds EX2007_DATA
 - On a DCE-managed node: codautil -dumpds EX2007_DATA
 - If there is no data in the CODA database, check if the CODA agent is running.
 - You can restart CODA on the managed node by running: On HTTPS-managed nodes: ovc -start -id 12
 On DCE-managed nodes: opcagt -start -id 12
 - Check that the acknowledged messages queue was acknowledged.
- If you are using the HP Performance Agent, refer to the HP Performance Agent documentation.

4) Have the policies been deployed?

There will be no data unless the EXSPI-8X Dc-Outlook Client policy was deployed. Check on the

managed node to ensure this policy was deployed and is enabled by running the command opctemplate .

- Check that the HP Operations agent is running. Run the following command on the managed node to get the status of the agent:
 - On the HTTPS-managed nodes: ovc -status
 - On the DCE-managed nodes: opcagt -status
- If the HP Operations agent is not running, restart with the following command:
 - On the HTTPS-managed nodes: **ovc -start**
 - On the DCE-managed nodes: opcagt -start

Exchange 2007 graphs

The Microsoft Exchange SPI comes with an array of pre-configured graphs. If you want to access graphs from the HPOM console, you must install HP Performance Manager on the HPOM management server. In the console tree, open **Graphs** — **SPI for Exchange 2007**. Graphs are located in the following folders:

- Client Access
- Information Store
- Mailbox Store
- Public Folder Store
- Transport Server Role

😲 NOTE:

If you use the SPI with OVO for Windows 7.50, you can view graphs from the OVO console without installing the commercial version of HP Performance Manager as OVO 7.50 is installed with a default graphing component. While using OVO 7.50, open **Reports & Graphs** \rightarrow **SPI for Exchange 2007** to view the graphs.

Client Access

Outlook Client Failures

This graph shows the percentage of RPCs failed in different categories. Run this graph only on nodes with the Mailbox Server role.

This graph uses the data collected by the EXSPI-8X Dc-Outlook Client policy. In the data store of the node, the EX2007_ISCLIENT table is used to construct this graph.

IMAP4 Connections

This graph shows the IMAP4 connection activity.

This graph uses the data collected by the EXSPI-8X Dc- IMAP4 Performance policy. In the data store of the node, the EX2007_IMAP4PERF table is used to construct this graph.

MAPI RPC Performance

This graph shows metrics of information store RPC requests and RPC operations rate (operations/sec).

Run this graph only on nodes with the Mailbox Server role.

This graph uses the data collected by the EXSPI-8X Dc Information Store Performance policy. In the data store of the node, the EX2007_ISPERF table is used to construct this graph.

MAPI RPC Latency Levels

This graph shows the number of successful RPCs with different Outlook client latency levels. The graph displays three different levels of latency: RPC Latency > 10, RPC Latency > 5, and RPC Latency > 2. Run this graph only on nodes with the Mailbox Server role.

This graph uses the data collected by the EXSPI-8X Dc-Outlook Client policy. In the data store of the node, the EX2007_ISCLIENT table is used to construct this graph.

POP3 Connections

This graph shows the POP3 connection activity. The graph displays POP3 connection, failed POP3 connections, and rejected POP3 connections for a server with the help of three line graphs.

This graph uses the data collected by the EXSPI-8X Dc-POP3 Performance policy. In the data store of the node, the EX2007_POP3PERF table is used to construct this graph.

POP3 Performance

This graph shows POP3 messages delivered to mailboxes.

This graph uses the data collected by the EXSPI-8X Dc-POP3 Performance policy. In the data store of the node, the EX2007_POP3PERF table is used to construct this graph.

Outlook Client RPC Performance

This graph shows the Outlook Client RPC Performance. The graph displays the following details: RPCs attempted, RPCs failed, and RPCs succeeded. Run this graph only on nodes with the Mailbox Server role.

This graph uses the data collected by the EXSPI-8X Dc-Outlook Client policy. In the data store of the node, the EX2007_ISCLIENT table is used to construct this graph.

Information Store

Information Store Users and Connections

This graph shows user and connection count metrics for the current day.

This graph uses the data collected by the EXSPI-8X Dc Information Store Performance policy. In the data store of the node, the EX2007_ISPERF table is used to construct this graph.
Virtual Memory 16MB Free Block Trend

This graph shows information store virtual memory 16MB free block use trends.

This graph uses the data collected by the EXSPI-8X Dc Information Store Performance policy. In the data store of the node, the EX2007_ISPERF table is used to construct this graph.

Virtual Memory Large Free Block Megabytes Usage

This graph shows information store virtual memory large free block megabytes usage.

This graph uses the data collected by the EXSPI-8X Dc Information Store Performance policy. In the data store of the node, the EX2007_ISPERF table is used to construct this graph.

Virtual Memory Largest Block Size

This graph shows the change of the information store virtual memory largest block size.

This graph uses the data collected by the EXSPI-8X Dc Information Store Performance policy. In the data store of the node, the EX2007_ISPERF table is used to construct this graph.

Mailbox Store

Mailbox Store Delivery Time

This graph shows hourly metrics for the average delivery times of messages to Exchange server private and public mailboxes. The graph shows the average delivery time of local messages to Exchange Server private mailboxes for every hour.

This graph uses the data collected by the EXSPI-8X Dc-IS Mailbox Performance policy. In the data store of the node, the EX2007_MBPERF table is used to construct this graph.

Mailbox Store Message Volume

This graph shows Exchange server private mailbox volume. The graph displays the following details: local deliveries, the number of messages delivered to all recipients, the number of messages sent to the transport, the number of messages submitted by clients, and the number of recipients that have received a message

This graph uses the data collected by the EXSPI-8X Dc-IS Mailbox Performance policy. In the data store of the node, the EX2007_MBPERF table is used to construct this graph.

Mailbox Store Queues

This graph shows Exchange server mailbox store queue lengths.

This graph uses the data collected by the EXSPI-8X Dc-IS Mailbox Performance policy. In the data store of the node, the EX2007_MBPERF table is used to construct this graph.

Exchange 2007 Mailbox Store EDB Database Statistics

This graph shows Exchange Server Mailbox Store EDB Database (edb) Statistics. The graph displays the following details: the physical amount of space used by the mailbox database (in megabytes), the physical amount of space available for use by mailbox database (in megabytes), and the amount of space that is not available for use by the mailbox database.

This graph uses the data collected by the EXSPI-8X Get Mailbox IS Sum Data policy. In the data store of the node, the EX2007_MBSUMMARY table is used to construct this graph.

Public Folder Store

Public Folder Store Delivery Time

This graph shows hourly metrics for the average delivery times of local messages to Exchange servers.

This graph uses the data collected by the EXSPI-8X Dc-IS Public Folder Performance policy. In the data store of the node, the EX2007_PFPERF table is used to construct this graph.

Public Folder Store Message Volume

This graph shows Exchange server public folder volume. The graph displays the following details: the number of messages delivered to all recipients, the total number of messages sent to the transport, the number of messages submitted by clients, and the number of recipients that have received a message.

This graph uses the data collected by the EXSPI-8X Dc-IS Public Folder Performance policy. In the data store of the node, the EX2007_PFPERF table is used to construct this graph.

Public Folder Store Queues

This graph shows Exchange server public folder store queue lengths. The graph displays the following details: length of the Receive Queue and length of the Replication Receive Queue.

This graph uses the data collected by the EXSPI-8X Dc-IS Public Folder Performance policy. In the data store of the node, the EX2007_PFPERF table is used to construct this graph.

Exchange 2007 Public Folder Store EDB Database Statistics

This graph shows Exchange Server Public Folder Store Database (edb) Statistics. The graph displays the following details: the physical amount of space used by the public folder database (megabytes), the physical amount of space available for use by the the public folder database (megabytes), and the amount

of space that is not available for use by the public folder database.

This graph uses the data collected by the EXSPI-8X Get Public IS Sum Data policy. In the data store of the node, the EX2007_PFSUMMARY table is used to construct this graph.

Transport Server Role

Transport Server Queues

This graph shows Exchange 2007 Server Transport Server queue lengths. The graph displays lengths of the following queues:

- Poison Queue
- Submission Queue
- Aggregate Delivery Queue
- Unreachable Queue
- Retry Mailbox Delivery Queue
- Active Remote Delivery Queue
- Retry Remote Delivery Queue
- Largest Queue
- Active Mailbox Delivery Queue

This graph uses the data collected by the EXSPI-8X Dc Transport Queues policy. In the data store of the node, the EX2007_TRANSQ table is used to construct this graph.

To display a graph

- 1. In the console tree, open the folders Graphs \rightarrow SPI for Exchange 2007.
- 2. Double-click a graph from the list in the details pane.
- 3. In the **Display graph** dialog, select required Exchange servers and the date range you want for the graph.
- 4. If desired, check Periodically update data in graph and click Finish .
- 5. The graph displays in the web interface.

The policies that enable data collection for these graphs are all deployed automatically.

Microsoft Exchange SPI for Microsoft Exchange Server 2003

The Smart Plug-in for Microsoft Exchange Servers (**Microsoft Exchange SPI**) integrates with HP Operations Manager for Windows (HPOM), enabling you to oversee your distributed Exchange environment from a central, easy-to-use console. With the Microsoft Exchange SPI integrated into the HPOM console you can:

- Increase Microsoft Exchange availability and performance
- Lower the support costs associated with your Microsoft Exchange servers
- Improve capacity management and planning for Microsoft Exchange servers

Related Topics:

- Tools
- Policies
- Reports
- Graphs
- Configure end-to-end message ping

Exchange 2000/2003 error message catalog

Exchange 2000/2003 Errors EXSPI-DATASOURCE **EXSPI-Discovery EXSPI-MAPI** Error-2 Error-3 Error-4 Error-5 Error-8 Error-9 Error-26 Error-28 Error-35 Error-50 Error-58 Error-63 Error-64 Error-65 Error-66 Error-69 Error-71 Error-72 Error-74 Error-231 Error-233-235 Error-300 Error-310 Error-1000

Exchange 2003: Using Exchange SPI tools

The EXSPI tools are in **Tools** --> **SPI for Exchange** --> **Exchange** 2000 and 2003. This folder contains the following tools, within the groups below:

- Client SLA Configurations : Configure Client MAPI Logon, Configure Client Message Read, Configure Client Message Send, MBOX creation for MAPI client based policies.
- End-to-End SLA Configuration: End-to-End Configuration, MBOX Configuration.
- Exchange Server Utilities: Enable Message Tracking, Mount Exchange Information Store.
- EXSPI Support: Trace On, Tracing Off, Self Healing Info.
- Exchange Topology: Operations Topology Viewer.
- **EXSPI Utilities** : Embedded Performance Component Configuration and Exchange Cluster Configuration .

To use a tool:

Right-click the tool and select **All Tasks Launch Tool...**, or double-click the tool.

Client SLA Configurations

These Microsoft Exchange SPI tools configure the SLA values for the client probes which measure the time it takes users to read emails, send emails, or log onto mailbox stores. Probes are sent to monitor any number of mailbox stores, on any number of Exchange servers. The MAPI-based client probes monitor client's email experience, and alarm on weaknesses in functionality before problems arise.

See MAPI-based client probes for more information and procedures for these tools.

End-to-End SLA Configurations

End-to-End Configuration

This tool configures End-to-End Message Ping on HPOM managed Exchange 2003 and Exchange 2000 servers. See SLAs: End-to-End Message Ping , for more information.

MBOX Config

This tool creates mailbox enabled User Accounts for the End-to-End Message Ping. A mailbox created with this tool is hidden from the Global Address List (GAL). Execution of this tool requires a user name/password with User Account creation privileges, such as an Exchange administrator.

The script for the tool now supports two options. The syntax is:

```
exspi_e2k_cfg [-m ] [ -ou ]
```

```
-m (optional parameter) = username prefix.
```

```
-ou (optional parameter) = Organizational Unit.
```

If the *-m* parameter is not specified, the default prefix is **MSXSPI**. The mailbox enabled User Account is created as **MSXSPI**<*hostname* > . This username prefix is added to the exspi\defaults file as line "MAILBOX Username Prefix". The username prefix should not contain any white space and must comply with Microsoft Active Directory domain user naming conventions. The password for the user is randomly generated.

If the -ou parameter is not specified, the User will be created in the USERS Organization Unit.

Exchange Server Utilities

Enable Message Tracking

Enables message tracking on Exchange 2000/2003 servers. Turning Message Tracking on will cause the Exchange server to write tracking log files. The Microsoft Exchange SPI track log schedule policy parses these log files to collect data for the four tracklog reports: Exchange Top Destinations, Exchange Top Recipients, Exchange Top Senders, and Exchange Top Sources. In addition, the Exchange 2003 and 2000 Message Delivery SLA report is based on message tracking log data.

Regarding privileges : This tool can be run as local system account, or any account with the ability to read WMI, such as a Domain admin or an Exchange admin.

Mount Exchange Information Store

This tool can search for and mount dismounted mailbox or public folder stores. The tool can take one or all of the following parameters:

- -s Search for dismounted information stores.
- -m Search for dismounted information stores and attempt to mount any found.
- *-p* Print the output.

-a Forward an alarm message to the console.

-t Timeout: the time the tool can take to re-mount a dismounted information store (in seconds). If not provided, the script will automatically set the timeout value to be 5 seconds. If the information store cannot be remounted within the time frame given, you can set a higher timeout value, for example, 30 seconds. If remounting the dismounted information store still fails, and there is no error in the output of the tool, there is probably a problem with the Exchange information store service.

For more information on this tool, see Using the Mount Exchange Information Store tool.

EXSPI Support

Trace On

Enables tracing; default setting is OFF. This tool is generally used for troubleshooting. When tracing is turned on the results are written to:

```
%OvAgentDir% \Installed Packages \{790C06B4-844E-11D2-972B-080009EF8C2A}\bin\exspi\log on an OVO 7.50 managed node,
```

or %OvAgentDir% \bin\exspi\log on an HPOM 8.10 managed node.

where %OvAgentDir% is the installation directory of the HP Operations agent on the managed node.

Tracing Off

Disables tracing; default setting is OFF.

Self-Healing Info

The Self-Healing Info tool gathers system information, and configuration, log, and trace Microsoft Exchange SPI files, for assisting to troubleshoot problems. Gathered information and files are placed in a pre-defined output directory. The data collector gathers real-time data, which reduces the probability of troubleshooting with stale data. See Self Healing Info for more information on this tool.

Exchange Topology

Operations Topology Viewer

Operations Topology Viewer provides for the visualization of Microsoft Exchange and directory servers with a 3-dimensional perspective. Using the viewer you are able to quickly see sites, routing groups, Exchange servers and the roles they play within your Exchange environment.

For more information, see Using the Exchange Topology Viewer, and *Microsoft Exchange SPI Configuration Guide*.

ovo Utilities

Embedded Performance Component Configuration

This tool creates the EXSPI_DATA datasource, classes and metrics. It performs the same function as the Auto Deploy policy **EXSPI-6.X exspi Agent Configuration** in the **ovo Exchange SPI core → Data Collection group**. The tool will list all current datasources prior to creation of the EXSPI_DATA datasource. To verify successful creation, wait a few minutes after initial execution, and execute the tool again. See the *Microsoft Exchange SPI Configuration Guide* for a complete listing of the EPC schema.

Exchange Cluster Configuration

The Microsoft Exchange SPI can be configured to accommodate cluster environments where failovers still allow uninterrupted Exchange availability. Synchronized with the cluster environment, Microsoft Exchange SPI monitoring can be made to switch off for the failed node and switch on for the active node.

The Exchange Cluster Configuration tool prints apminfo data, which can be used to create the apminfo.xml file used by the Microsoft Exchange SPI to recognize clustered instances. For further information about Microsoft Exchange SPI monitoring clusters with Microsoft Exchange SPI, see the *Microsoft Exchange SPI Configuration Guide*, and Using the Exchange Cluster Configuration tool in the online Help.

Privileges : This tool can be run as local system account, or any account with the ability to read wmi, such as a Domain admin or an Exchange admin account.

Using the Exchange Cluster Configuration tool

The Exchange Cluster Configuration tool is located in Tools --> SPI for Exchange --> Exchange 2000 and 2003 --> EXSPI Utilities .

Exchange Cluster Configuration

The Microsoft Exchange SPI can be configured to accommodate cluster environments where failovers still allow uninterrupted Exchange availability. Synchronized with the cluster environment, Microsoft Exchange SPI monitoring can be made to switch off for the failed node and switch on for the active node.

The Exchange Cluster Configuration tool prints apminfo data, which can be used to create the apminfo.xml file used by the Microsoft Exchange SPI to recognize clustered instances. For further information about Microsoft Exchange SPI monitoring clusters, see the *Microsoft Exchange SPI Configuration Guide*.

Privileges : This tool can be run as local system account, or any account with the ability to read WMI, such as a Domain admin or an Exchange admin.

To launch the tool:

- 2. Select one or more of the listed nodes. Right-click and select Launch .
- 3. Select All (Control+a) the contents of the file, and copy (Control+C) the contents into a text file.
- 4. Name the file **apminfo.xml**.
- 5. Save the completed apminfo.xml file on each node in the cluster, in this directory: For DCE-managed nodes—%OvAgentDir%/conf/OpC/ For HTTPS-managed nodes—%OvAgentDir%/conf/conf/

This file, working in conjunction with the Microsoft Exchange SPI **msexchange.apm.xml** file, allows you to associate Microsoft Exchange SPI monitored instances with cluster resource groups. As a result, when a resource group is moved from one node in a cluster to another node in the same cluster, monitoring stops on the failed node and starts on the new node.

6. Restart the agent on the managed node: on each node, stop and restart the agent by running the following commands:

opcagt -kill

opcagt -start

7. You are now ready to monitor the Exchange Cluster by deploying appropriate policies to the managed node.

The Mount Exchange Information Store tool is located in the **Tools** — **SPI for Exchange** — **Exchange 2000 and 2003** — **Exchange Server Utilities** group.

Mount Exchange Information Store

This tool can search for and mount dismounted mailboxes or public folder store databases. The tool can take one or all of the following parameters:

- -s Search for dismounted information stores
- -m Search for dismounted information stores and attempt to mount any found
- -p Print the output.
- -a Forward an alarm message to the console.
- *-t* Timeout: the time the tool can take to re-mount a dismounted information store (in seconds).

By default, *m* and *p* are specified.

If not provided, the script will automatically set the timeout value to be 5 seconds. If the information store cannot be remounted within the time frame given, you can set a higher timeout value, for example, 30 seconds. If remounting the dismounted information store still fails, and there is no error in the output of the tool, there is probably a problem with the Exchange information store service.

To launch the tool:

- 1. Open Tools -> SPI for Exchange -> Exchange 2000 and 2003 -> Exchange Server Utilities , and double-click Mount Exchange Information Store.
- 2. Select one or more of the listed nodes. Right-click and select Launch .

Using the Self Healing Info tool

The Self-Healing Info tool gathers system information, and configuration, log, and trace Microsoft Exchange SPI files, for assisting to troubleshoot problems. Gathered information and files are placed in a pre-defined output directory. The data collector gathers real-time data, which reduces the probability of troubleshooting with stale data.

To launch the Self-Healing Info tool on the node from which you want to gather data:

- 1. Right-click the **Self-Healing Info** tool in the **Tools** --> **SPI for Exchange** group.
- 2. Select All Tasks, then click Launch Tool.
- 3. Select the node to which the data collector has to be launched, and click Launch .
- 4. You are notified where the output file is placed. Submit this file to HP Support for assistance, or use the file to identify and correct the problem you encountered.

Related Topics:

• Troubleshoot the Microsoft Exchange SPI

MAPI-based client probes

The Microsoft Exchange SPI has functionality to measure the time it takes users to read emails, send emails, or log onto mailbox stores. Probes can be sent to monitor any number of mailbox stores, on any number of Exchange servers. View data collected through the probes in the Microsoft Exchange SPI reports and graphs, located in the **Client Access** report/graph groups.

Monitor your client's email experience using the MAPI-based client probes, and note weaknesses in functionality before problems arise.

To configure and deploy the MAPI-based client probes:

- Create a mailbox in each mailbox store for each Exchange server.
- Configure SLA values for each MAPI-based client probe.
- Deploy the associated policies.

Create a mailbox in each mailbox store for each Exchange server:

This mailbox will be used for all MAPI-based client probes, so perform this step only once:

- 1. Select or create a User to act as the service account for the mapi-based client probes. Add the user to the group *<domain* >\HP-OVE-GROUP. This adds them as a local administrator of all managed nodes.
- Run the tool MBOX creation for MAPI client based policies, located in Tools -- SPI for Exchange -- Exchange 2000 and 2003 -- Client SLA Configurations. Select the Exchange servers to be probed and click Launch....
- 3. Under the **Parameters** tab, update the *-t* parameter with the service account User.
- 4. Under the Login tab, enter a Domain Admin User name and Password, and select Launch....

Configure SLA values for each MAPI-based client probe:

- Open the required tool (Configure Client MAPI Logon, Configure Client Message Read or Configure Client Message Send) in the Client SLA Configurations tool group, located in Tools
 SPI for Exchange - Exchange 2000 and 2003.
- 2. Select the Exchange servers the probe should be sent to, and click Launch... .

- 3. According to the SLA, edit the Met SLA (-*m*) and Almost met SLA (-*a*) parameters (size in seconds), in the **Edit Parameters** dialog, or accept the default values.
- 4. For the **Configure Client Message Read** tool, update the message Size parameter (-*s*) to reflect the size of the messages to read.
- 5. Select **Launch...**.. Note the Tool Status report.
- 6. Repeat these steps for additional tools, if desired.

Deploy associated policies:

- Each tool has an associated policy, located in the Manual Deploy group under the appropriate Exchange version folder, under Policy groups -> SPI for Exchange -> Exchange version -> Manual Deploy Groups -> Exchange Server -> Client Accessibility on the console tree.
- 2. Open the policy, under the **Task** tab select **Edit**, and add the service account User name and Password in the fields.
- 3. Deploy policies: select the desired policy, right-click and select **All Tasks** -> **Deploy on...**, then select the targeted managed nodes.

Definitions for Met SLA and Almost Met SLA (same as for End to End):

- Met SLA: If the measured time is less than the MetSLA, then the measured time has met the SLA.
- Almost Met SLA: If the measured time is greater than the MetSLA but less than the Almost Met SLA, the measured time has almost met the SLA.
- **Exceeded SLA:** If the measured time has exceeded the Almost Met SLA, then the measured time has Exceeded the SLA.

Using the Operations Topology Viewer

After you complete the steps below, the Operations Topology Viewer tool gathers information about your Exchange Server 2007 and 2003 environment. This information displays in a tree with hierarchically linked components on the left, and a map graphically representing Exchange sites, routing groups and servers on the right.

To start the Operations Topology Viewer:

- 1. At the HPOM console expand the tree to display **Operations Manager** → **Tools** → **SPI for Exchange** (2003 or 2007) → **Exchange Topology**.
- 2. Double-click the **Operations Topology Viewer**.
- 3. In the Operations Topology Viewer window, in the left pane (console tree), right-click **Forests**, and then select **Add Forest...**.
- 4. In the **Connect to Forest** dialog, identify the Domain Controller or Active Directory Domain which will be interrogated for Exchange data, and enter the requested information.
- 5. To collect advanced Exchange data, check this option. If collected, this data appears under the **Dependant DCs** tab of the **Properties** dialog of any discovered Exchange server, and in the Site Topology view if you have the Active Directory SPI installed. If you do not select to gather this information now, any time you select to open the **Properties** dialog of a discovered Exchange server, the Operations Topology Viewer will try to retrieve this data for the particular server, and if the user's permissions allow access to this data it will display under the **Dependant DCs** tab. Note the warning below.
- 6. Click **OK** .

WARNING: The process of collecting advanced Exchange data can take several hours as a check is performed against EACH Exchange server. In addition, in order to collect Exchange data your security credentials must have sufficient privilege to access WMI on discovered Exchange servers. If this is not the case, WMI may timeout. Check the error log files for connection warnings to determine if your privileges were sufficient.

Server role icon legend

In the map, each server shows a number of icons. Press F2 to display the icon legend or select View \rightarrow Legend from the menu, to understand what server information is displayed.

NOTE:

If the server is located in the same domain as the HPOM management server, the name you enter for the server does not need to be fully qualified.



Related Topics:

- Exchange Topology viewer functions through toolbar buttons
- Exchange Topology viewer functions through menu selections

Configure Exchange 2003 End-to-End Message Ping

The Microsoft Exchange SPI End-to-End Message Ping determines SLA performance by sending and receiving messages. It requires the following MBOX Configuration and End-to-End Configuration tools:

- 1. MBOX Configuration is used to specify an existing mailbox or to create a new one on the managed Exchange server. This mailbox will send ping messages, and receive delivery notification of sent ping messages.
- 2. End-to-End Configuration configures the End-to-End managed Exchange servers, which are the source servers of the End-to-End ping.
- 3. The processing of the End-to-End configuration XML file requires MSXML 1.0 (or later) on the managed node.

Task 1: Manage servers

Configure the target Exchange server as an HPOM managed node. This will deploy the SPI for Exchange Auto Deploy policy group to the managed server.

Task 2: Create a new source mailbox for each managed source server

- 1. In the HPOM management server console expand the Tools --> SPI for Exchange --> Exchange 2000 and 2003 --> End-to-End SLA Configuration folder.
- 2. In the details pane double-click the **MBOX Config** tool.
- Launch the MBOX Configuration tool on the managed Exchange server to create a new user and associated mailbox with a prefix ID. The default prefix ID is msxspi, and the user/mailbox name will be msxspi< server name>. The user account password is randomly set with a 10 character length. It can be reset as needed through the Microsoft utility Active Directory Users and Computers.

⁽¹⁾ If you receive an error message, try to manually create a mailbox for each Exchange server with the prefix ID **msxspi**, followed by the Windows hostname, with no spaces: *<prefix ID><server name>*, for example, MSXSPI*<server name>*.

Task 3: Run the End-to-End Configuration wizard and configure the End-to-End pairs for the server

- 1. In the HPOM console expand the Tools → SPI for Exchange → Exchange 2000 and 2003 → End-to-End SLA Configuration folder.
- 2. In the details pane on the right, double-click the End-to-End Configuration tool. This launches the wizard.
- 3. The introductory dialog gives an example of a typical SLA, read this and click Next .
- 4. Select the Microsoft Exchange SPI configuration setting that best matches your SLA. Click Next .
- 5. Select from the list of HPOM managed servers. A source server is a server from which email is sent, which is the server from which the SLA is determined. Click **Next**. (If the server you want to send email from is not in the list, manage the server and then rerun the tool).
- 6. Select the destination servers from the list. These can be any Exchange servers within your organization, not only HPOM managed Exchange servers. Click **Next**.
- 7. Specify the Service Level Agreement by assigning the thresholds (in seconds) for Timeout, Met SLA and Almost met SLA. Click **Next**.
- 8. Confirm or make changes to the SLAs. Click Next .

Task 4: Edit and Deploy the EXSPI-6.X End-to-End Message Ping policy

The next step of the wizard offers to select to deploy all End-to-End Policies to the managed nodes. Only managed nodes configured to determine SLAs will send and receive mail. If desired, select to deploy the policies, click **Next**. Then click**Finish**, then **OK**.

This step can also be performed manually by deploying SPI for Exchange 2003 instrumentation, and the EXSPI End-to-End Message Ping policy group to any desired managed nodes. Edit the EXSPI-6.X End-to-End Message Ping policy in the **Manual Deploy Groups** \rightarrow **Exchange Server** \rightarrow **Message Delivery** \rightarrow **EXSPI End-to-End Message Ping** as needed and deploy the policy to the managed Exchange server.

Related Topics

• Troubleshoot End-to-End Message Ping

Troubleshoot Exchange 2003 End-to-End Message Ping

The following problems may occur in the execution of the Microsoft Exchange SPI End-to-End Message Ping for Exchange 2003:

Failed to load End-to-End configuration XML file

An End-to-End configuration XML file has to be generated with the End-to-End Configuration tool (see Configuring Exchange 2003 End-to-End Message Ping) before running End-to-End Ping. The Microsoft Exchange SPI collector loads the configuration XML file and evaluates the message round trip time for each End-to-End pair configured.

A WARNING error message "*End-to-End Ping Failed to load End-to-End configuration file [file path and name]*" is sent to the management server if either the file does not exist, is unreadable, or there is a failure in loading the file (for example, MSXML not installed).

1. **The configuration file does not exist or is unreadable** : The trace message for this error is: "*The configuration file [full path] does not exist or is unreadable* ".

Solution: Launch the End-to-End Configuration tool on the server and make sure the specified configuration file has been generated. After the successful completion of the End-to-End Configuration tool process, the configuration file is stored in the SPI for Exchange 2003 instrumentation directory on the management server. The wizard then deploys the instrumentation SPI for Exchange 2003 files to all managed Exchange servers.

2. Failure of loading the End-to-End Configuration file : The trace message for this error is "Loading Configuration XML file error: [ERROR]".

Solution: Most likely, the cause of this error is that MSXML is missing on the Exchange server. Processing of the End-to-End Configuration XML file requires MSXML 1.0 (or later). Make sure that the appropriate version of MSXML is installed on the Exchange server.

3. **The configuration file does not exist:** When the End-to-End configuration tool is executed from a remote console or an inactive cluster node, deploy the instrumentation (this is the location of the newly created end-to-end.xml file) and the EXSPI-6.X End to End Message Ping to the managed nodes.

Solution: Deploy the instrumentation SPI for Exchange 200X and the policy EXSPI-6.X End to End Message Ping to all managed Exchange nodes.

Failed to Open Sender's Mailbox

A WARNING error message "*End-to-End Ping Failed to open the mailbox of the user "[username]"* is sent to the management server when the specified mailbox fails to open. The trace message for this error is "*Opening the mailbox failed*".

1. **Specified mailbox not existing** : SPI for Exchange 2003 first examines the default setting in the file "defaults" for the mailbox. If no mailbox is found, a user "MSXSPI [*hostname*]" is used to send the ping message.

Solution: In the case of failing to open the mailbox for End-to-End Ping, launch the MBOX Config tool to create a new one, or specify an existing user/mailbox to use for the End-to-End Ping. Log on to the Exchange server as the newly created/specified user. Create a message to the System Attendant (SERVERNAMR-sa@domain) of a destination Exchange server with the option of **Request a delivery receipt for this message**. Make sure that **Sent Items** has the sent message and the **Inbox** receives a delivery notification.

2. **Specified mailbox not accessible** : The user configured in the schedule policy for End-to-End Message Ping must have full access to the MSXSPI [*hostname*] mailbox.

Solution: Check the permissions for the Exchange User.

3. **Microsoft Exchange Information Store service not running** : the End-to-End Ping is unable to open the sender's mailbox when MS Exchange Information Store or MS Exchange System Attendant service are not running.

Solution: Logon to the problem Exchange server and restart the stopped service.

End-to-End Configuration tool does not populate with managed nodes

The list of **Source** and **Destination** Exchange nodes that appear in the End-to-End Configuration tool is taken from WMI. WMI is populated with these nodes after the Microsoft Exchange SPI Discovery has run, which is right after an Exchange node becomes managed. The EXSPI-6.X Exchange Service Discovery policy is auto deployed to every managed node and this policy launches the Exchange SPI Discovery process on that node. If the node is an Exchange server, discovery figures out the Exchange environment and reports it back to the management server. If a Source node is not showing up in the tool list, it is probably because the Exchange Discovery policy has not been deployed to that node, or discovery of the node has failed.

Solution: Deploy the EXSPI-6.X Exchange Service Discovery policy manually to any managed node not displaying in the tool list.

Regarding End-to-End Ping Active Messages

In an End-to-End Ping message, the **Node** is the name of the managed server. The **Application** and **Object** of the message are defined as EXSPI-Ping and Metric 1002, respectively. The **Text** of the message is the message of End-to-End Ping.

- 1. **Critical Error Message** : A ping message sent from the managed server to a destination Exchange server is either undeliverable or a delivery notification has not been received before it timed out. The message text describes whether the error is due to it being timed out or undeliverable.
- 2. **Major Error Message** : The round trip time of a ping message from the managed server to a destination, violates the SLA level of Almost Met SLA.
- 3. **Minor Error Message** : The round trip time of a ping message from the managed server to a destination, violates the SLA level of Met SLA.

Related Topics

- Configuring Exchange 2003 End-to-End Message Ping
- Troubleshoot Microsoft Exchange SPI

Microsoft Exchange SPI policies for Exchange 2003

By default, groups of policies are automatically deployed to managed Exchange nodes, where relevant services have been discovered.

Policies specifically for Exchange 2003 have names with the prefix 6.5 and 6.x.

Click an area of functionality in the table below, to link to detailed Microsoft Exchange SPI policy specifications.

Auto Deploy Groups	Manual Deploy Groups
Availability	Site Replication Service
Client Accessibility	Active Directory Connector Server
Cluster	Exchange Server
Directory	
Information Store	
Messaging	
Exchange SPI core	

This automatic deployment setting can be turned off, and all policies deployed manually. For information about manual deployment, see the following links:

- Deploying policies manually to Exchange 2003 servers
- Manual Deploy policy groups for Exchange 2003 servers

Deploying Auto-Deploy policies to Exchange 2003 servers

By default, **Auto Deploy Groups** of Microsoft Exchange SPI policies deploy automatically when relevant applications or services are discovered on managed nodes. The setting to automatically deploy policies when services are discovered can be turned off, and each group of policies deployed manually.

If manual deployment of policies is wanted, use the following table to determine which policy groups to deploy to manage an Exchange Server:

Policy Group	Deploy when	Location
Data Collection	AllExchangenodes	SPI for Exchange
Availability	AllExchangenodes	SPI for Exchange→en→Exchange 2003→ Auto Deploy Groups→ Availability
Virus Scan	AllExchangenodes	SPI for Exchange Exchange 2003 Auto Deploy Groups Information Store Virus Scan
Tracking Log	AllExchangenodes	SPI for Exchange→en→Exchange 2003→ Auto Deploy Groups→Messaging→ Tacking Log
Directory	AllExchangenodes	SPI for Exchange Exchange 2003 Auto Deploy Groups Directory
Ероху	AllExchangenodes	SPI for Exchange
IS Performance	AllExchangenodes	SPI for Exchange
IMAP4	IMAP4Svc is running	SPI for Exchange
POP3	POP3Svc is running	SPI for Exchange→en→Exchange 2003→ Auto Deploy Groups→Client Accessibility → POP3

Microsoft	Exchange	SPI
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MAPI	All Exchange mailbox and Public folder servers	SPI for Exchange→en→Exchange 2003→ Auto Deploy Groups→Client Accessibility → MAPI
OWA Front End	All Exchange mailbox servers	SPI for Exchange→en→Exchange 2003→ Auto Deploy Groups→Client Accessibility → OWA→Front End
OWA Back End	All Exchange mailbox servers	SPI for Exchange→en→Exchange 2003→ Auto Deploy Groups→Client Accessibility → OWA→Back End
Outlook 2003	All Exchange mailbox servers	SPI for Exchange→en→Exchange 2003→ Auto Deploy Groups→Client Accessibility →Outlook 2003
Active Sync and OMA	Exchange server with OMA installed	SPI for Exchange—en—Exchange 2003— Auto Deploy Groups—Client Accessibility — Active Sync
		SPI for Exchange en Exchange 2003 Auto Deploy Groups Client Accessibility OMA
MTA	MSExchangeMTA service is running	SPI for Exchange
SMTP	SMTPSVC is running	SPI for Exchange
NNTP	NNTP service is running	SPI for Exchange
Lotus ccMail	MsExchangeCCMC service is running	SPI for Exchange
Lotus Notes	LME-NOTES service is running	SPI for Exchange
Mailbox	Exchange Mailbox server (mailbox store on server AND database files exist)	SPI for Exchange
Public Folder	Exchange public folder server (public folder store on server AND database files exist)	SPI for Exchange—en—Exchange 2003— Auto Deploy Groups—information Store— Public Folder

Full Text Index	Mailbox or Public folder server	SPI for Exchange
Cluster	Clustered node that can host an Exchange Virtual server	SPI for Exchange Exchange 2003
Transaction Log	Mailbox or Public Folder server	SPI for Exchange

Policy name prefixes and Exchange versions:

Policies specifically for Exchange 2003 have the prefix 6.5 and 6.x.

Deploying policies manually:

- 1. Select the wanted policy/policies.
- 2. Right-click and select **All Tasks** → **Deploy on...**
- 3. Select the nodes on which to deploy the policies.
- 4. Select Launch...

Related Topics:

• Auto Deploy policies for Exchange 2003 servers

Manual Deploy policies for Exchange 2003

All manual deploy policies are created for Exchange 2003, and have names with the prefix 6.X. Click a policy group below to see individual Microsoft Exchange SPI manual deploy policy specifications:

- Site Replication Services
- Active Directory Connector Server
- Exchange Server

Site Replication Services

Policy Name	What it does
EXSPI-6.X SRS Remaining Updates	Monitors directory replication to verify that synchronization updates are being processed efficiently
EXSPI-6.X SRS Pending Synchronizations	Monitors directory replication to verify that synchronization updates are being processed efficiently
EXSPI-6.X-0113	Percent Low SRS Data Free Space
EXSPI-6.X-0112	MB used by the SRS Database File
EXSPI-6.X SRS Process Monitor	Monitors the amount of CPU time being used by SRS processes
EXSPI-6.X SRS Service	Monitors the SRS service
EXSPI-6.X SRS Data Space Usage	Collects SRS data metrics for use by metrics 112 and 113, and for SRS graphs

Active Directory Connector Server (ADC)

Policy Name	What it does	
EXSPI-6.X ADC Service	Monitors the ADC service	
EXSPI-6.X ADC Operation Failure Rate Alarms on operation failure rate		
EXSPI-6.X ADC Import Failure Rate	Alarms on rate of import failures	
EXSPI-6.X ADC Process Monitor	Monitors the amount of CPU time being used by ADC	

Exchange Server

Policy Name

What it does

AVAILABILITY	
EXSPI-6.X Inactive	Monitors the core Microsoft Exchange processes to check that they are using
Process Monitor	some CPU cycles. A process consistently at 0% could indicate a problem.
EXSPI-6.X Exchange	Forwards all Exchange event log warning messages to the management server.
Application Warning	Uses all Application event log sources
EXSPI-6.X Exchange System Warnings	Forwards all Exchange related system event log warning messages to the management server. System Event Log Sources: EXIPS, SMTPSVC, NNTPSVC and W3SVC.
EXSPI-6.X Exchange Application	Forwards all Exchange event log informational messages to the management server. Uses all Application event log sources.
Information	
EXSPI-6.X Exchange System Information	Forwards all Exchange related system event log informational messages to the management server. System Event Log Sources: EXIPS, SMTPSVC, NNTPSVC and W3SVC.
EXSPI-6.X Server State	This policy forwards the state of your Exchange monitors. These monitors are set up through Exchange System Manager. When these monitors are not set up, you
	may receive a console message that indicates the unknown state of server
	components. The Microsoft procedures to set up the Exchange monitors are contained in the Microsoft Exchange System Manage help.
	Source: ROOT\CIMV\Applications\Exchange
	ExchangeServerState.ServerState
	NOTE: If you do not implement Exchange Monitors through the Exchange System Manager, then this policy should be removed from the managed node.
TRANSACTION LOG	
EXSPI-6.X 0005	Low Log File Disk Space, amount of free disk space remaining in MegaBytes.
EXSPI-6.X 0006	Transaction Log File Disk Space, the amount of disk space being used by the Exchange transaction log files in megabytes.
EXSPI-6.X Transaction Log Storage Use	Determines megabytes used and available to the Transaction Log.
MESSAGE DELIVERY	
EXSPI-6.X End to End	Sends message from defined managed servers to any other server in the
Message Ping	organization. Alarming based on user defined Service Level Agreements.Default values: Met SLA 60, Almost Met SLA 60, Time Out 3000

 $\bullet \ \ Dependencies: Execution of tools \text{-} MBox \ Config and End-to-End \ Config$

CLIENT ACCESSIBILITY	See MAPI-based client probes for procedures
EXSPI-6.X Client Message Read	 Measures the amount of time it takes to read a mail message over MAPI. Execute: exspi_e2k_cmr.wsf Dependencies: tool CASA, tool MBox creation for MAPI client based policies, tool Configure Client Message Read, update policy to contain CASA.
EXSPI-6.X Client MAPILogon	 Measures the amount of time it takes to logon to a mailbox using MAPI. Execute: exspi_e2k_logon.wsf Dependencies: tool CASA, tool MBox creation for MAPI client based policies, tool Configure Client MAPI Logon, update policy to contain CASA.
EXSPI-6.X Client Message Send	 Measures the amount of time it takes to send a mail message using MAPI. Execute: exspi_e2k_send.wsf Dependencies: tool CASA, tool MBox creation for MAPI client based policies, tool Configure Client MAPI Send, update policy to contain CASA.

Exchange 2003 reports

Exchange SPI reports for Exchange 2003 are located on the HPOM console under **Reports** — **SPI for Exchange 2003**. (The SPI for Exchange **Reports** folder is created when data is collected on nodes and the Service Reporter consolidation process has run, usually after 24 hours).

😲 NOTE:

If you use the SPI with HPOM 8.10, you must install HP Reporter in your environment to view Microsoft Exchange SPI reports.

If you use this SPI with OVO 7.50, view the reports under **Reports & Graphs --> Reports --> SPI for** Exchange 2003

Follow the links for individual report details:

Report	Report Group
Exchange 2003 and 2000 OMA Sync Usage	Client Access
Exchange 2003 and 2000 OWA Authentications	Client Access
Exchange 2003 and 2000 OWA Front End Connections	Client Access
Exchange 2003 and 2000 OWA Usage	Client Access
Exchange 2003 ActiveSync Usage	Client Access
Exchange 2003 ActiveSync Notifications	Client Access
Exchange 2003 and 2000 MAPI Logon SLA	Client Access
Exchange 2003 and 2000 Message Send SLA	Client Access
Exchange 2003 and 2000 Message Read SLA	Client Access
Exchange 2003 and 2000 Messaging Port Availability	Client Access
Exchange 2003 and 2000 IMAP4 Connections	Client Access
Exchange 2003 and 2000 POP3 Connections	Client Access
Exchange 2000 and 2003 System Information Summary	Exchange Server
Exchange 2003 and 2000 Transaction Log Stats	Information Store
Exchange 2003 and 2000 IS Users and Connections	Information Store
Exchange 2003 and 2000 Full-Text Indexing Stats	Information Store
Exchange 2003 and 2000 Inactive Mailboxes	Mailbox Store
Exchange 2003 and 2000 Mailbox Details	Mailbox Store
Exchange 2003 and 2000 Mailbox Store Stats	Mailbox Store

Exchange 2003 and 2000 Mailbox Summary	Mailbox Store
Exchange 2003 and 2000 Mailbox Store Msg Trends	Mailbox Store
Exchange 2003 and 2000 Top 100 Mailboxes	Mailbox Store
Exchange 2003 and 2000 Mailbox Usage Trends	Mailbox Store
Exchange 2003 and 2000 SMTP Connections	Messaging
Exchange 2003 and 2000 MTA Msg Trends	Messaging
Exchange 2003 and 2000 SMTP Msg Trends	Messaging
Exchange 2003 and 2000 SMTP Virtual Server Data Stats	Messaging
Exchange 2003 and 2000 MTA Queue Data Stats	Messaging
Exchange 2003 and 2000 Message Delivery SLA	Messaging
Exchange 2003 and 2000 Top Destinations	Messaging
Exchange 2003 and 2000 Top Recipients	Messaging
Exchange 2003 and 2000 Top Senders	Messaging
Exchange 2003 and 2000 Top Sources	Messaging
Exchange 2003 and 2000 Message Tracking Stats	Messaging
Exchange 2003 and 2000 All Local Msg Delivery SLA	Messaging
Exchange 2003 and 2000 Folder Summary	Public Folder Store
Exchange 2003 and 2000 Folder Usage Trends	Public Folder Store
Exchange 2003 and 2000 Inactive Folders	Public Folder Store
Exchange 2003 and 2000 Public Folder Store Stats	Public Folder Store
Exchange 2003 and 2000 Public Folder Store Msg Tnd	Public Folder Store
Exchange 2000 and 2003 Top 100 Public Folders	Public Folder Store

NOTE Regarding Scheduling : Most reports generate the day after the data is collected and gathered from the managed node. Due to the fact that some collectors are scheduled to run on Sunday night, certain reports will not generate until Monday morning. Trend reports require at least three days of data gathered from the managed nodes.

NOTE:

For full functionality of the Microsoft Exchange SPI reports, the full version of Reporter, or Reporterlite (only when you use the SPI with OVO 7.50), must be installed on the same management server as HPOM/OVO for Windows.

Required policies for Exchange 2003 reports

Microsoft Exchange SPI reports display data collected by EXSPI policies deployed to HPOM managed Exchange servers. Most reports generate the day after the data is collected and gathered from the managed node. Due to the fact that some collectors are scheduled to run on Sunday night, certain reports will not generate until Monday morning. Trend reports require at least three days of data gathered from the managed nodes.

Report	Policy Name	Location	
Exchange 2003 Active Sync Usage	EXSPI-6.X Dc-ActiveSync	Reports > SPI for Exchange 2003 > (Access	
Exchange 2003 Active Sync Notifications	EXSPI-6.X Dc-ActiveSyncNotify	Reports > SPI for Exchange 2003 > C Access	
Exchange 2003 OMA Sync Usage	EXSPI-6.X Dc-OMA	Reports > SPI for Exchange 2003 > C Access	
Exchange 2003 and 2000 IMAP4 Connections	EXSPI-6.X Dc-IMAP4 Performance	Reports > SPI for Exchange 2003 > C Access	
Exchange 2003 and 2000 IS Users and Connections	EXSPI-6.X Dc-Information Store Performance	Reports > SPI for Exchange 2003 > C Access	
Exchange 2003 and 2000 MAPI Logon SLA	EXSPI-6.X Client MAPI Logon	Reports > SPI for Exchange 2003 > C Access	
Exchange 2003 and 2000 Message Read SLA	EXSPI-6.X Client Message Read	Reports > SPI for Exchange 2003 > C Access	
Exchange 2003 and 2000 Message Send SLA	EXSPI-6.X Client Message Send	Reports > SPI for Exchange 2003 > C Access	
	EXSPI-6.X SMTP Port Response		
Exchange 2003 and 2000	EXSPI-6.X POP3 Port Response	Reports > SPI for Exchange 2003 > (
Messaging Ports	EXSPI-6.X IMAP4 Port Response	Access	
	EXSPI-6.X HTTP Port Response		
Exchange 2003 and 2000 OWA Usage	EXSPI-6.X Dc-OWA Back End	Reports > SPI for Exchange 2003 > C Access	

The specific policies required for Exchange SPI to generate particular reports are as follows:

Exchange 2003 and 2000 OWA Authentications	EXSPI-6.X Dc-OWA Back End	Reports > SPI for Exchange 2003 > C Access
Exchange 2003 and 2000 OWA Connections	EXSPI-6.X Dc-OWA Front End	Reports > SPI for Exchange 2003 > C Access
Exchange 2003 and 2000 POP3 Connections	EXSPI-6.X Dc-POP3 Performance	Reports > SPI for Exchange 2003 > C Access
Exchange 2003 and 2000 System Information Summary	EXSPI-6.X Dc-Mailbox IS Sum. Data EXSPI-6.X Dc-Public IS Sum.Data	Reports > SPI for Exchange 2003 > Exchange Server
Exchange 2003 and 2000 Full Text Indexing Stats	EXSPI-6.X Dc-Full Text Index	Reports > SPI for Exchange 2003 > Information Store
Exchange 2003 and 2000 Transaction Log Stats	EXSPI-6.X Dc-Transaction Log Space Usage	Reports > SPI for Exchange 2003 > Information Store
Exchange 2003 and 2000 Inactive Mailboxes	EXSPI 6.X Dc-Mailbox Data	Reports > SPI for Exchange 2003 > Mailbox Store
Exchange 2003 and 2000 Mailbox Details	EXSPI 6.X Dc-Mailbox Data	Reports > SPI for Exchange 2003 > Mailbox Store
Exchange 2003 and 2000 Mailbox Store Stats	EXSPI-6.X Dc-Mailbox IS Sum.data	Reports and Graphs > Reports > SPI f Exchange 2003 > Mailbox Store
Exchange 2003 and 2000 Mailbox Summary	EXSPI 6.X Dc-Mailbox IS Sum. Data	Reports > SPI for Exchange 2003 > Mailbox Store
Exchange 2003 and 2000 Mailbox Usage Trends	EXSPI-6.X Dc-Mailbox IS Sum. Data	Reports > SPI for Exchange 2003 > Mailbox Store
Exchange 2003 and 2000 Mailbox Store Messaging Trends	EXSPI-6.X Dc-IS Mailbox Performance	Reports > SPI for Exchange 2003 > Mailbox Store
Exchange 2003 and 2000 Top 100 Mailboxes	EXSPI-6.X Dc-Mailbox Data	Reports > SPI for Exchange 2003 > Mailbox Store
Exchange 2003 and 2000 Message Delivery SLA	EXSPI-6.X End to End Message Ping	Reports > SPI for Exchange 2003 > Messaging
Exchange 2003 and 2000 Top Destinations	EXSPI-6.X Dc-TrackLog Data	Reports > SPI for Exchange 2003 > Messaging
Exchange 2003 and 2000 Top Recipients	EXSPI-6.X Dc-TrackLog Data	Reports and Graphs > Reports > SPI f Exchange 2003 > Messaging
Exchange 2003 and 2000 Top Senders	EXSPI-6.X Dc-TrackLog Data	Reports > SPI for Exchange 2003 > Messaging

Exchange 2003 and 2000 Top Sources	EXSPI-6.X Dc-TrackLog Data	Reports and Graphs > Reports > SPI f Exchange 2003 > Messaging
Exchange 2003 and 2000 All Local	EXSPI-6.X Dc-TrackLog SLA	Reports > SPI for Exchange 2003 >
Msg Delivery SLA	Delivery	Messaging
Exchange 2003 and 2000 MTA	EXSPI-6.X Dc-MTA	Reports > SPI for Exchange 2003 >
Msg Trends	Performance	Messaging
Exchange 2003 and 2000 MTA	EXSPI-6.X Dc-X.400 Service	Reports and Graphs > Reports > SPI f
Queue Data Stats	MTA Queue	Exchange 2003 > Messaging
Exchange 2003 and 2000 Message	EXSPI-6.X Dc-Message	Reports > SPI for Exchange 2003 >
Tracking Stats	Tracking Log Space Usage	Messaging
Exchange 2003 and 2000 SMTP	EXSPI-6.X Dc-SMTP Server	Reports and Graphs > Reports > SPI f
Connections	Performance	Exchange 2003 > Messaging
Exchange 2003 and 2000 SMTP	EXSPI-6.X Dc-SMTP Server	Reports > SPI for Exchange 2003 >
Msg Trends	Performance	Messaging
Exchange 2003 and 2000 Virtual	EXSPI-6.X Dc-SMTP Virtual	Reports > SPI for Exchange 2003 >
Server Stats	Server Storage	Messaging
Exchange 2003 and 2000 Exchange	EXSPI-6.X Dc-Public IS	Reports > SPI for Exchange 2003 > F
Folder Summary	Sum.Data	Folder Store
Exchange 2003 and 2000 Exchange	EXSPI-6.X Dc-IS Public Folder	Reports and Graphs > Reports > SPI f
Folder Usage Trends	Performance	Exchange 2003 > Public Folder Sto
Exchange 2003 and 2000 Inactive Folders	EXSPI 6.X Dc-Public Folder Data	Reports > SPI for Exchange 2003 > F Folder Store
Exchange 2003 and 2000 Public	EXSPI-6.X Dc-Public IS	Reports and Graphs > Reports > SPI f
Folder Store Stats	Sum.data	Exchange 2003 > Public Folder Sto
Exchange 2003 and 2000 Public	EXSPI-6.X Dc-Public IS	Reports > SPI for Exchange 2003 > F
Folder Store Msg Tnd	Sum.data	Folder Store
Exchange 2003 and 2000 Top 100	EXSPI-6.X Dc-Public Folder	Reports > SPI for Exchange 2003 > F
Public Folders	Data	Folder Store

NOTE:

If you use the SPI with HPOM 8.10, you must install HP Reporter in your environment to view Microsoft Exchange SPI reports.

If you use this SPI with OVO 7.50, view the reports under **Reports & Graphs --> Reports --> SPI for** Exchange 2003
Troubleshoot Exchange 2003 reports

Report generation for the Microsoft Exchange SPI requires the co-operation of policy deployment, the HP Operations agent, the SPI data collector, and HP Reporter (or Reporter Lite if you are using OVO for Windows 7.50). For the troubleshooting of the Microsoft Exchange SPI report generation, it may be necessary to check all of the components involved to find out what the root of the cause for an error is. Click any report name below to link to troubleshooting information about that report.

Report	Report Group
Exchange 2003 and 2000 OMA Sync Usage	Client Access
Exchange 2003 and 2000 OWA Authentications	Client Access
Exchange 2003 and 2000 OWA Front End Connections	Client Access
Exchange 2003 and 2000 OWA Usage	Client Access
Exchange 2003 ActiveSync Usage	Client Access
Exchange 2003 ActiveSync Notifications	Client Access
Exchange 2003 and 2000 MAPI Logon SLA	Client Access
Exchange 2003 and 2000 Message Send SLA	Client Access
Exchange 2003 and 2000 Message Read SLA	Client Access
Exchange 2003 and 2000 Messaging Port Availability	Client Access
Exchange 2003 and 2000 IMAP4 Connections	Client Access
Exchange 2003 and 2000 POP3 Connections	Client Access
Exchange 2000 and 2003 System Information Summary	Exchange Server
Exchange 2003 and 2000 Transaction Log Stats	Information Store
Exchange 2003 and 2000 IS Users and Connections	Information Store
Exchange 2003 and 2000 Full-Text Indexing Stats	Information Store
Exchange 2003 and 2000 Inactive Mailboxes	Mailbox Store
Exchange 2003 and 2000 Mailbox Details	Mailbox Store
Exchange 2003 and 2000 Mailbox Store Stats	Mailbox Store
Exchange 2003 and 2000 Mailbox Summary	Mailbox Store
Exchange 2003 and 2000 Mailbox Store Msg Trends	Mailbox Store
Exchange 2003 and 2000 Top 100 Mailboxes	Mailbox Store
Exchange 2003 and 2000 Mailbox Usage Trends	Mailbox Store
Exchange 2003 and 2000 Message Tracking Stats	Messaging
Exchange 2003 and 2000 SMTP Connections	Messaging

Exchange 2003 and 2000 MTA Msg Trends	Messaging
Exchange 2003 and 2000 SMTP Msg Trends	Messaging
Exchange 2003 and 2000 SMTP Virtual Server Data Stats	Messaging
Exchange 2003 and 2000 MTA Queue Data Stats	Messaging
Exchange 2003 and 2000 Top Destinations	Messaging
Exchange 2003 and 2000 Top Recipients	Messaging
Exchange 2003 and 2000 Top Senders	Messaging
Exchange 2003 and 2000 Top Sources	Messaging
Exchange 2003 and 2000 Message Delivery SLA	Messaging
Exchange 2003 and 2000 All Local Msg Delivery SLA	Messaging
Exchange 2003 and 2000 Folder Summary	Public Folder Store
Exchange 2003 and 2000 Folder Usage Trends	Public Folder Store
Exchange 2003 and 2000 Inactive Folders	Public Folder Store
Exchange 2003 and 2000 Public Folder Store Stats	Public Folder Store
Exchange 2003 and 2000 Public Folder Store Msg Trends	Public Folder Store
Exchange 2000 and 2003 Top 100 Public Folders	Public Folder Store

Exchange 2003 graphs

The Microsoft Exchange SPI comes with an array of pre-configured graphs. To view these graphs from the HPOM console, you must install the HP Performance Manager on the HPOM management server. In the console tree, open **Graphs** \rightarrow **SPI for Exchange 2003**. Graphs are located in the following folders:

- Client Access
- Directory Service
- Information Store
- Mailbox Store
- Messaging
- Public Folder Store

NOTE:

If you use the SPI with OVO for Windows 7.50, you can access Exchange 2003 graphs under **Reports** and Graphs -> Graphs -> SPI for Exchange 2003. In this case, you can view the Microsoft Exchange SPI graphs with the help of the built-in graphing component (if you do not have the HP Performance Manager installed on the HPOM management server).

Client Access

- ActiveSync Performance : This graph shows the ActiveSync Microsoft Exchange active directory, connection, and pending requests.
- ActiveSync Users: This graph shows the current users of Microsoft Exchange ActiveSync.
- Outlook Client Failures: This graph shows the percentage of RPCs failed in different categories.
- **IMAP4 Connections** : This graph shows the IMAP4 connection activity.
- **IMAP4 Performance** : This graph shows the IMAP4 transaction activity.
- **OMA Response Time** : This graph shows the MSExchangeOMA last response time in seconds.
- **OWA Connections** : This graph shows the OWA connection activity.
- MAPI RPC Performance : This graph shows metrics of information store RPC requests and RPC operations rate (operations/sec).

- MAPI RPC Latency Levels : This graph shows the number of successful RPCs with different Outlook client latency levels.
- **POP3 Connections** : This graph shows the POP3 connection activity.
- **POP3 Performance** : This graph shows POP3 messages delivered to mailboxes.
- **Outlook Client RPC Performance** : This graph shows the Outlook Client RPC Performance.

Directory Service

- **DSAccess Cache Hit-Miss Ratio**: This graph shows MSExchangeDSAccess cache hit and miss ratio for Exchange 2000 and 2003 servers.
- Site Replication Service Space Free: This graph shows the percentage of free space on the Site Replication Service volume.
- Site Replication Service Space Used: This graph shows Site Replication Service space usage on the Exchange server.

Information Store

- Full-Text Indexing Space Usage: This graph shows disk space usage for full-text indexing of Microsoft Exchange information stores.
- Information Store Users and Connections: This graph shows user and connection count metrics, for the current day.
- Virtual Memory 16MB Free Block Trend: This graph shows information store virtual memory 16MB free block use trends.
- Virtual Memory Large Free Block Megabytes Usage: This graph shows information store virtual memory large free block megabytes usage.
- Virtual Memory Largest Block Size: This graph shows the change of the information store virtual memory largest block size.
- **Transaction Log Percentage Free** : This graph shows the percentage of free space on the transaction log volumes.
- **Transaction Log Space Used** : This graph shows Exchange server transaction log space usage on the Exchange server.

Mailbox Store

• Mailbox Store Delivery Time : This graph shows hourly metrics for the average delivery times of

messages to Exchange server private and public mailboxes.

- Mailbox Store EDB Database Statistics : This graph shows Exchange server private mailbox store database statistics.
- Mailbox Store Streaming Database Statistics : This graph shows Exchange mailbox store streaming database statistics.
- Mailbox Store Storage Usage: This graph shows mailbox store storage usage.
- Mailbox Store Message Volume: This graph shows Exchange server private mailbox volume.
- Mailbox Store Queues: This graph shows Exchange server mailbox store queue lengths.

Messaging

- MTA Message Volume : This graph shows Exchange server Message Transfer Agent volume.
- MTA Queues: This graph shows Exchange server queue lengths.
- **SMTP Connections** : This graph shows SMTP virtual server connections on the Exchange server.
- SMTP Queues : This graph shows SMTP server queues on the Exchange server
- **SMTP Message Volume** : This graph shows SMTP volume on the Exchange server.
- **SMTP Queue, Badmail, and Pickup Counts**: This graph shows SMTP badmail, pickup and queue item counts for each SMTP virtual server.
- **SMTP Queue, Badmail, and Pickup Size**: This graph shows SMTP badmail, pickup and queue sizes for each SMTP virtual server.
- X400 MTA Queue Space Usage : This graph shows disk space usage for X400 service MTA queue.

Public Folder Store

- **Public Folder Store Delivery Time** : This graph shows hourly metrics for the average delivery times of local messages to Exchange servers.
- **Public Folder Store EDB Database Statistics** : This graph shows Exchange server public folder store (edb) database statistics.
- Public Folder Store Message Volume : This graph shows Exchange server public folder volume.
- **Public Folder Store Streaming Database Statistics** : This graph shows Exchange Public Folder store streaming database statistics.
- Public Folder Store Storage Usage : This graph shows Exchange server public folder usage.

• **Public Folder Store Queues** : This graph shows Exchange server public folder store queue lengths.

To display a graph

- 1. In the console tree, open the folders **Reports and Graphs** --> **SPI for Exchange 2003**.
- 2. Double-click a graph from the list in the details pane.
- 3. In the **Display graph** dialog, select required Exchange servers and the date range you want for the graph.
- 4. If desired, check Periodically update data in graph and click Finish .
- 5. The graph displays in the web interface.

The policies that enable data collection for these graphs are all deployed automatically.

Related Topics:

• Exchange 2003 reports

A Data Store Tables for the Microsoft Exchange 2007 Nodes

The Microsoft Exchange SPI creates the following data tables for Microsoft Exchange Server 2007 metrics in the data store on the node to facilitate the data-collection procedure:

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_AGCFG This table includes the	AGCFG_ID	String	Identity: The name of the transport agent.
details of the configuration of a transport agent on a node with the Edge Transport server role or the	AGCFG_EN	Boolean	Enabled: The status of the transport agent (enabled or disabled).
Hub Transport server role. The data is collected by running the cmdlet Get-TransportAgent at every 15 minutes and logged into this table without further processing.	AGCFG_PRI	Int	Priority: The priority of the transport agent; this property indicates the order of processing email messages by transport agents.
Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI-8X Edge Get Configuration of the Transport Agent			

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_ATTACHFILTER The data is collected from all instances of the	INSTANCE_NA ME	String	Instance Name: Instance name of the performance monitor counter.
performance monitor object MSExchange Attachment Filtering at every 15 minutes and logged into this	SERVER_NAM E	String	Server Name: Name of the monitored node (Microsoft Exchange Server).
table without further processing. Attachment filtering helps you control the attachments that the	MSGFILTERPE RSEC	Int	Messages Filtered/sec: The number of messages filtered by the attachment filtering agent every second.
mail recipients receive. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI Edge Transport Agent > EXSPI-8X Edge DC-MSExchange Attachment Filtering	MSGATT_FILT ERED	Int	Messages Attachment Filtered: The total number of messages with attachments that are deleted, blocked, or modified by the attachment filtering agent.
EX2007_AVAILABILITY This table includes the details of the availability of	SERVER_NAM E	String	Server: Name of the monitored node (Microsoft Exchange Server).
the Exchange Server. The data is collected from the cmdlet	ADSITE_NAME	String	ADSite: The name of the Active Directory site where the Exchange Server belongs.
Get-ExchangeServerAvail ability (a customized cmdlet available in the PowerShell Snap-in GetExspiPSSnapIn) at every 5 minutes and logged into the table without further processing.	SERVER_ROLE	String	Role: The role of the Exchange Server
	AVAILABILITY	String	Availability: The availability of necessary services.
Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Availability > EXSPI-8X Get Exchange Availability			

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_CONNFILTER This table includes the details of the Connection	INSTANCE_NA ME	String	Instance Name: The instance name of the performance monitor object counter.
Filter agent (an anti-spam agent on a Microsoft Exchange Server with the Edge Transport server role).	SERVER_NAM E	String	Server: Name of the monitored node (Microsoft Exchange Server).
The data is collected from the MSExchangeConnection Filtering Agent performance monitor object and stored into the table without further processing. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI Edge Transport Agent > EXSPI-8X Edge DC-MSExchange Connection Filtering Agent	CONNIPALLO WLIST	Int	Connections on IP Allow List: The total number of connections in the IP Allow List.
	CONNIPBCKLI ST	Int	Connections on IP Block List: The total number of connections in the IP Block List.
	CONNIPBCKLI STPVD	Int	Connections on IP Block List Providers: The total number of connections with IP Block List providers.
	CONNIPALLO WLISTPVD	Int	Connections on IP Allow List Providers: The total number of connections with IP Allow List providers.

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_CONTFILTER This table includes the details of the Content Filter	INSTANCE_NA ME	String	Instance Name: The instance name of the performance monitor object counter.
agent (an anti-spam agent). This agent allocates spam confidence levels (SCL) to messages. The data is	SERVER_NAM E	String	Server: Name of the monitored node (Microsoft Exchange Server).
collected from the	MSGWITHSCL1	Int	Messages with SCL 1
counter	MSGWITHSCL0	Int	Messages with SCL 0
MSExchangeContent Filtering Agent and	MSGWITHSCL2	Int	Messages with SCL 2
logged into the table	MSGWITHSCL3	Int	Messages with SCL 3
Source policy: SPI for	MSGWITHSCL4	Int	Messages with SCL 4
Exchange > en > Exchange 2007 > Manual Daploy	MSGWITHSCL5	Int	Messages with SCL 5
Groups > Edge Server >	MSGWITHSCL6	Int	Messages with SCL 6
EXSPI Edge Transport Agent > EXSPI-8X Edge	MSGWITHSCL7	Int	Messages with SCL 7
DC-MSExchange Content	MSGWITHSCL8	Int	Messages with SCL 8
ritter Agent	MSGWITHSCL9	Int	Messages with SCL 9
	MSGQUARANT INED	Int	Messages Quarantined: The total number of messages quarantined by the Content Filter agent.
	MSGDELETED	Int	Messages Deleted: The total number of messages deleted by the Content Filter agent.
	MSGBYPASSSC AN	Int	Messages Bypassed: The total number of messages that bypassed the scanned by the Content Filter Agent.
	MSGSCANNED	Int	Messages Scanned: The total number of messages scanned by the Content Filter Agent.
	MSGREJECTE D	Int	Messages Rejected: The total number of messages rejected by the Content Filter Agent.

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_DEST This table includes the following details related to every Mailbox in a specific	DEST_ADDR	String	DestinationAddr: The address where mails were sent from every Mailbox in an Active Directory site.
 Active Directory site: Mail destinations (grouped into three categories: Exchange 2007, Exchange 2000/2003 and SMTP) 	DOMAIN_NAM E	String	DestinationDomainName: Domain names of the servers where mails were sent from every Mailbox in an Active Directory site.
 Domain names of destinations 	DEST_KEY	String	DestinationKey: A unique identifier of a destination server.
 Bytes of messages sent to destinations The total number of messages sent to 	SERVER_NAM E	String	ServerName: The name of the source server that sent mails to a particular destination.
destinations The data is collected by running the cmdlet	ADSITE_NAME	String	AdsiteName: The name of the Active Directory site where the source server belongs.
Get-ExspiMessageTrackin gLog DR (a customized cmdlet in the PowerShell Snap-in GetExspiPSSnapIn)	IS_INTERNAL	String	isInternal: Indicates if the destination server is internal to your organization.
every week and logged into the table without further processing.	NUM_BYTES_D R	Int	TotalBytes: Bytes of messages sent to every destination.
Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server > EXSPI-8X Dc-Get Top Destination Details	NUM_MSGS_D R	Int	nMsgCount: The number of messages sent to every destination.

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_FDSOAB This table includes the details of the Microsoft	INSTANCE_NA ME	String	Instance Name: The instance name of the performance monitor object counter.
Exchange File Distribution Service (a service that downloads Offline Address Books from Microsoft	SERVER_NAM E	String	Server: Name of the monitored node (Microsoft Exchange Server).
Exchange servers). The data is collected from	TASK_QUEUE D	Int	Download Task Queued: The status of the task (1 = queued).
all instances of the performance monitor object MSExchangeFDS:OAB at every 15 minutes and logged into the table without further processing. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > File Distribution Service > EXSPI-8X CAS Collect FDS Metrics	TASKS_COMPL ETED	Int	Download Tasks Completed: The number of tasks that were completed.
EX2007_FDSUM	INSTANCE_NA	String	Instance Name: The instance
This table includes the details of the Microsoft	ME		name of the performance monitor object counter.
Exchange File Distribution Service (a service that downloads Offline Address Books from Microsoft Exchange servers). The data is collected from	SERVER_NAM E	String	Server: Name of the monitored node (Microsoft Exchange Server).
	TASK_QUEUE D	Int	Download Task Queued: The status of the task (1 = queued).
all instances of the performance monitor object MSExchangeFDS:UM at every 15 minutes.	TASKS_COMPL ETED	Int	Download Tasks Completed: The number of UM dial plan downloads that were completed
Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Unified Messaging Server > File Distribution Service > EXSPI-8X UM Collect FDS Metrics			compreted.

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_HUBTRANSDSN This table includes details of Delivery Status	INSTANCE_NA ME	String	Instance Name: The instance name of the performance monitor object counter.
Notifications (DSNs); DSNs send updates to a mail sender about the delivery status of a message.	SERVER_NAM E	String	Server: Name of the monitored node (Microsoft Exchange Server).
The data is collected from the performance monitor object	FAIL_DSNs_TO TAL	Real	Failure DSNs: The number of DSNs that indicate the delivery status as <i>failure</i> .
MSExchangeTransport DSN and logged into the table without further processing. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server > EXSPI-8X HUB Transport DSN	DELAY_DSNs	Real	Delay DSNs: The number of DSNs that indicate the delivery status as <i>delayed</i> .
EX2007_IMAP4PERF The data is collected from the performance monitor	INSTANCE_NA ME	String	Instance Name: The instance name of the performance monitor object counter.
object MSExchangeIMAP4 and logged into the table without further processing.	SERVER_NAM E	String	Server: Name of the monitored node (Microsoft Exchange Server).
Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy	ADMINDISPLA Y_NAME	String	Admin Display Name: Display name
Groups > Client Access Server > IMAP4 > EXSPI-8X Dc-IMAP4 Performance	IMAP4CON	Int	Connections Total: The number of connections attempted since the start of the IMAP service.
	IMAP4FAILED CON	Int	Connections Failed: The number of failed connections since the start of the IMAP service.
	IMAP4REJECT EDCON	Int	Connections Failed: The number of failed connections since the start of the IMAP service.

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_ISCLIENT The data is collected from the performance monitor object MSExchangeIS and logged into the table	ISCLATENCY1 0	Int	Client: Latency > 10 sec RPCs: The number of successful RPCs (reported by client) with latencies higher than 10 seconds.
without further processing. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access	ISCLATENCY5	Int	Client: Latency > 5 sec RPCs: The number of successful RPCs (reported by client) with latencies higher than 5 seconds.
Server > IMAP4 > EXSPI-8X Dc-IMAP4 Performance	ISCLATENCY2	Int	Client: Latency > 2 sec RPCs: The number of successful RPCs (reported by client) with latencies higher than 2 seconds.
	ISCRPCATTEM PT	Int	Client: RPCs attempted: The number of attempted RPCs since the start of the store (reported by client).
	ISCRPCSUCCE ED	Int	Client: RPCs succeeded: The number of successful RPCs since the start of the store (reported by client).
	ISCRPCFAIL	Int	Client: RPCs Failed: The number of failed RPCs since the start of the store (reported by client).
	ISCRPCFUNAV	Int	Client: RPCs Failed: Server Unavailable: The number of RPCs failed due to unavailability of the server since the start of the store (reported by client).
	ISCRPCFBUSY	Int	Client: RPCs Failed: Server Too Busy: The number of RPCs failed when the server was busy since the start of the store (reported by client).
	ISCRPCFCANC EL	Int	Client: RPCs Failed: Call Cancelled: The number of RPCs failed due to call cancellation since the start of the store (reported by client).

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
I F I S	ISCRPCFCALL FAIL	Int	Client: RPCs Failed: Call Cancelled: The number of RPCs failed due to call failure since the start of the store (reported by client).
	ISCRPCFACCE SSDENY	Int	Client: RPCs Failed: Access Denied: The number of RPCs failed due to access denial since the start of the store (reported by client).
	ISCRPCFOTHE R	Int	Client: RPCs Failed: All other errors: The number of RPCs failed due to all other errors since the start of the store (reported by client).

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_MBDETAIL This table includes the following details of a	MB_IDENTITY	String	Identity: A unique identifier of the mailbox available on the monitored Mailbox Server.
mailbox:The size of the mailbox	MB_NAME	String	DisplayName: The display name of the mailbox.
 The number of messages it contains The last time the 	MB_SVRNAME	String	ServerName: The name of the monitored Mailbox Server.
mailbox was accessed The details are collected for all the mailboxes available	MB_SGNAME	String	StorageGroupName: The name of the Storage Group where the mailbox belongs.
on a particular Mailbox Server by running the cmdlet	MB_DBNAME	String	DatabaseName: The name of the database where the mailbox belongs.
every week. The cmdlet output is logged into the table without further	MB_SIZE	Int	TotalItemSize: The size of the contents of the mailbox (in bytes).
processing. Source policy: SPI for Exchange > en > Exchange	MB_MSGCOUN T	Int	ItemCount: The number of items available in the mailbox.
2007 > Manual Deploy Groups > Mailbox Server >	MB_LASTACCE SS	String	LastLogonTime: The last time the mailbox was accessed.
Mailbox > EXSPI-8X Get Mailbox Details	MB_DISCONNE CT	String	DisconnectedDate: The last time when the mailbox got disconnected.
	MB_DELCOUN T	Int	DeletedItemCount: The number of deleted items available in the mailbox.
	MB_DELSIZE	Int	TotalDeletedItemSize: The size of deleted items (in bytes).
	MB_STGLIMIT	String	StorageLimitStatus: Indicates the storage limit of the limit.

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_MBPERF The data is collected from the MSExchangeIS Mailbox	INSTANCE_NA ME	String	Instance Name: The instance name of the performance monitor object counter.
performance monitor object. The data is logged into the table without further processing.	SERVER_NAM E	String	Server: Name of the monitored node (Microsoft Exchange Server).
Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server >	MBRECEIVEQ	Int	Receive Queue Size: The number of messages available in the receive queue of the mailbox store.
Mailbox > EXSPI-8X Dc-IS Mailbox Performance	MBDELIVERYT IME	Int	Average Delivery Time: For the last 10 messages, the average time interval (milliseconds) between message submission to the mailbox store and message delivery to all local recipients.
	MBLOCALDELI VER	Int	Local Deliveries: The number of messages that were delivered locally.
	MBDELIVER	Int	Messages Delivered: The number of messages distributed to all recipients since the start of the mailbox.
	MBSENT	Int	Messages Sent: The number of messages that were sent to the transport since the start of the mailbox.
	MBSUBMITTE D	Int	Messages Submitted: The number of submitted messages (by clients) since the start of the service.
	MBRECIPIENT	Int	Message Recipients Delivered: The number of recipients who received a message since the start of the mailbox.
	MBACTIVELOG ON	Int	Active Client Logons: The number of clients that completed some actions in the last ten minutes.

Table 3	Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
	MBLOGON	Int	Client Logons: The number of clients that are logged on at present.
	MBLOGONPEA K	Int	Peak Client Logons: The maximum number of simultaneous logons by clients since the start of the service.
	MBSIRATIO	Real	Single Instance Ratio: The average reference number for every message.
	MBRECOVERIT EMS	Int	Total Count of Recoverable Items: The number of items preserved for Item Recovery.
	MBRECOVERSI ZE	Int	Total Size of Recoverable Items: The size (kilobytes) of items preserved for Item Recovery.

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_MBSUMMARY This table includes details of all mailboxes on all	INSTANCE_KE Y	String	Identity: Unique identifier of the mailbox available on the Mailbox Server.
databases on the local Exchange Mailbox Server. The details are collected by	STORAGEGRO UP_NAME	String	StorageGroupName: The name of the Storage Group where the mailbox belongs.
Get-MailboxStoreSummary (a customized cmdlet available in the PowerShell	DATABASE_NA ME	String	DatabaseName: The name of the database where the mailbox belongs.
Snap-in GetExspiPSSnapIn) every week and stored into the table without further processing	SERVER_NAM E	String	ServerName: Name of the monitored node (Microsoft Exchange Server).
Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy	EDBPATH	String	EDBPath: The path of the EDB file of the database where the mailbox belongs.
Groups > Mailbox Server > Mailbox >EXSPI-8X Get Mailbox IS Sum Data	EDBSIZE	String	EDBFileSize: The size of the EDB file of the database where the mailbox belongs.
	EDBFREE	String	EDBDriveFree: The available space on the drive where the EDB file resides.
	EDBTOTAL	String	EDBDriveTotal: The total space on the drive where the EDB file resides.
	MAILBOX_USR CNT	String	UserCount: The number of users with mailboxes in the particular database.
	MAILBOX_MSG CNT	String	MessageCount: The number of messages available in the particular database.

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_PFDETAIL This table includes the	PF_NAME	String	Name: Name of the public folder.
details of public folders. The details are collected by	PF_SVRNAME	String	ServerName: Name of the monitored Mailbox Server.
Get-PublicFolderStatist ics at every hour. The collected data is stored into	PF_SGNAME	String	StorageGroupName: Name of the Storage Group where the public folder belongs.
the table without further processing. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Public Folder >EXSPI-8X	PF_DBNAME	String	DatabaseName: Name of the database where the public folder belongs.
	PF_SIZE	Int	TotalItemSize: Total size of all the contents of the public folder.
Get Public Folder Details	PF_POSTCOUN T	Int	ItemCount: Number of items included in the public folder.
	PF_LASTACCE SS	String	LastAccessTime: The last time when the public folder was accessed.
EX2007_PFPERF The data is collected from all instances of the performance monitor object MSExchangeIS Public at every 15 minutes. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > Public Folder >EXSPI-8X Dc-IS Public Folder Performance	INSTANCE_NA ME	String	Instance Name: The instance name of the performance monitor object counter.

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
	SERVER_NAM E	String	Server: Name of the monitored node (Microsoft Exchange Server).
	PFRECEIVEQ	Int	Receive Queue Size: The number of messages present in the receive queue of the public store.
	PFDELIVERYTI ME	Int	Average Delivery Time: For the last 10 messages, the average time interval (milliseconds) between message submission to the public store and message delivery to all local recipients.
	PFDELIVER	Int	Messages Delivered: The number of messages delivered to users since the beginning.
	PFSENT	Int	Messages Sent: The number of messages sent to the transport since the beginning.
	PFSUBMITTED	Int	Messages Submitted: The number of submitted messages since the beginning of the service.
	PFRECIPIENT	Int	Message Recipients Delivered: The number of users who received a message the beginning.
	PFACTIVELOG ON	Int	Active Client Logons: The number of clients that completed some actions in the last ten minutes.
	PFLOGON	Int	Client Logons: The number of clients logged on at present.
	PFLOGONPEA K	Int	Peak Client Logons: The maximum number of simultaneous logons by clients since the start of the service.
	PFSIRATIO	Real	Single Instance Ratio: The average reference number for every message.

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
	PFRECOVERIT EMS	Int	Total Count of Recoverable Items: The number of items preserved for Item Recovery.
	PFRECOVERSI ZE	Int	Total Size of Recoverable Items: The size (kilobytes) of items preserved for Item Recovery.
	PFREPRCVD	Int	Replication Messages Received: The number of replication messages obtained from different servers since the start of the service.
	PFREPSENT	Int	Replication Messages Sent: The number of replication messages sent to different servers since the start of the service.
	PFREPQ	Int	Replication Receive Queue Size: The number of replication messages that are yet to be processed.

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_PFSUMMARY The table includes details of	INSTANCE_KE Y	String	Identity: The unique identifier of the public folder.
all public folders on the local server. The details are collected by running the emdlet	STORAGEGRO UP_NAME	String	StorageGroupName: The name of the storage group where the public folder belongs.
Get-PublicStoreSummary (a customized cmdlet available in the PowerShell Span in	DATABASE_NA ME	String	DatabaseName: The name of the database where the public folder belongs.
GetExspiPSSnapIn) every week. The data is stored into the table without	SERVER_NAM E	String	Server: Name of the monitored node (Microsoft Exchange Server).
further processing. Source policy: SPI for Exchange > en > Exchange	EDBPATH	String	EDBPath: The path of the EDB file of the database where the public folder belongs.
Groups > Mailuar Deploy Groups > Mailbox Server > Public Folder >EXSPI-8X Get Public IS Sum Data	EDBSIZE	Int	EDBFileSize: The size of the EDB file of the database where the public folder belongs.
	EDBFREE	Int	EDBDriveFree: The available space on the drive where the EDB file resides.
	EDBTOTAL	Int	EDBDriveTotal: The total space on the drive where the EDB file resides.
	FOLDER_COU NT	Int	PublicFolderCount: The number of public folders available on the Mailbox Server
	FOLDER_MSG CNT	Int	MessageCount: The number of messages available in the database.

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_POP3PERF The table includes the data collected from all instances	INSTANCE_NA ME	String	Identity: The instance name of the performance monitor object counter.
of the performance monitor object MSExchangePOP3 at every hour. The data is stored into the table without	SERVER_NAM E	String	Server: Name of the monitored node (Microsoft Exchange Server).
further processing. Source policy: SPI for	ADMINDISPLA Y_NAME	String	Admin Display Name: Display name
Exchange > en > Exchange 2007 > Manual Deploy Groups > Client Access Server > POP3 > EXSPI-8X Dc-POP3 Performance	POP3CON	Int	Connections Total: The number of connections that were opened since the start of the POP service.
	POP3FAILEDC ON	Int	Connections Failed: The number of connections that failed since the start of the POP service.
	POP3REJECTE DCON	Int	Connections Rejected: The number of connections that were rejected since the start of the POP service.
	POP3DELE	Int	DELE Total: The number of DELE commands that were received since the start of the POP service.
	POP3RETR	Int	RETR Total: The total number of RETR commands that were received since the start of the POP service.

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_PRTAGT The table includes the details collected from the	INSTANCE_NA ME	String	InstanceName: The instance name of the performance monitor object counter.
performance monitor object MSExchange Protocol Analysis Agent. The collected data is stored into	SERVER_NAM E	String	Server: Name of the monitored node (Microsoft Exchange Server).
the table without further processing. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI Edge Transport Agent > EXSPI-8X Edge DC-MSExchange Protocol Analysis Agent	SENDBCK_LOP NPXY	Int	Senders Blocked Because of Local Open Proxy: The number of senders blocked due to an open local proxy
	SENDBCK_LCK EDLSRL	Int	Senders Blocked Because of Local SRL: The number of senders blocked due to sender-reputation level (local).
	SENDBCK_LCK EDRSRL	Int	Senders Blocked Because of Remote SRL: The number of senders blocked due to sender-reputation level (remote).
	SENDBCK_ROP ENPXY	Int	Senders Blocked Because of Remote Open Proxy: The number of senders blocked due to an open proxy (remote).
	SENDBYPASS_ LSRLCALC	Int	Senders Bypass Local SRL Calculation: The number of senders that have bypassed sender-reputation level (local) calculation.
	SENDPROCESS ED	Int	Senders Processed: The number of processed senders.

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_QINFO This table includes details	QINFO_ID	String	Identity: Unique identifier of the queue.
on queues on a node with the Hub Transport server role or Edge Transport server role.	QINFO_DLVTY PE	String	DeliveryType: The type of delivery for this queue (transport defined).
The details are collected by running the cmdlet Get-Queue at every hour. The collected data is stored into the table without further processing. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI-8X Get Queue Data	QINFO_NHDO MAIN	String	NextHopDomain: Queue's next hop domain; this is indicated as a server name, a remote SMTP domain, an MDB identifier, or an Active Directory site name.
	QINFO_NHCN NT	Int	NextHopConnector: The GUID of the connector that has been used while creating the queue.
	QINFO_MSGCN T	Int	MessageCount: The number of messages available in the queue.
	QINFO_LSTER R	Int	LastError: The last error string registered for the queue.

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_RECP This table includes the following details of recipient nodes:	SERVER_NAM E	String	RecipientServerName: The name of the server where mails were received from the Mailbox servers.
Active Directory siteStorage groupStore names	ADSITE_NAME	String	RecipientAdSite: The Active Directory site where the recipient servers belong.
 Mailbox names The details are collected by running the cmdlet Get-ExspiMessageTrackin gLog RR (a customized cmdlet available with the PowerShell Snap-in GetExspiPSSnapIn) every week. The collected data is stored into the table without further processing. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server > EXSPI-8X Dc-Get Top Recipient Details 	SG_NAME	String	RecipientStorageGroup: The name of the storage group of the recipient nodes.
	STORE_NAME	String	RecipientStoreName: The name of the recipient-server store.
	MBOX_NAME	String	RecipientMbox: The name of the mailbox for the recipients.
	EMAIL_ADDR	String	RecipientEmailAddr: The email address of a particular recipient where mails were received.
	NUM_BYTES_R R	Int	TotalBytes: The size of the messages received by every recipient.
	NUM_MSGS_R R	Int	nMsgCount: The number of messages received by every recipient.

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_RECPFILTER This table includes the details of the recipient filter agent (an anti-spam agent), which is available on nodes with the edge Transport server role)	INSTANCE_NA ME	String	Instance Name: Instance name of the performance monitor object counter.
	SERVER_NAM E	String	ServerName: Name of the monitored node (Microsoft Exchange Server).
The details are collected from all instances of the performance monitor object MSExchange Recipient Filtering Agent at every 15 minutes. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI Edge Transport Agent > EXSPI-8X Edge DC-MSExchange Recipient Filter Agent	RECPREJ_REC PVLDATION	Int	Recipients Rejected by Recipient Validation: The number of rejected recipients (due to validation).
	RECPREJ_BCK LIST	Int	Recipients Rejected by Block List: The number of rejected recipients (rejected by the block list)

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_REPLSUMM This table includes the	REPL_IDENTIT Y	String	Identity: A unique identifier for the storage group.
details of the storage groups in a cluster continuous replication (CCR) local	REPL_SGNAM E	String	StorageGroupName: Name of the storage group.
continuous replication (LCR), or standby continuous replication	REPL_STATUS	String	SummaryCopyStatus: A summary of the status of the copy.
details are collected by running the Get-StorageGroupCopySta	REPL_LSTCPL OGTIME	String	LastCopiedLogTime: The time required to modify the last log, which was copied successfully.
tus cmdlet (a customized cmdlet available with the PowerShell Snap-in GetExspiPSSnapIn) at every hour. From the output	REPL_LSTINSL OGTIME	String	LastInspectedLogTime: The time required to modify the last log, which was validated by the system that hosts the copy.
of this cmdlet, the Log times and Backup times metrics are converted to the dateTime format.	REPL_LSTRPL LOGTIME	String	LastReplayedLogTime: The time required to modify the last log, which was replayed by the system that hosts the copy
Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Mailbox Server > High Availability >	REPL_LSTLOG GEN	String	LastLogGenerated: The log-generation number of the last log that was generated on the active node.
Replication Monitoring> EXSPI-8X Dc Replication Summary	REPL_LSTLOG CP	String	LastLogCopied: The log-generation number of the last log that was copied to the copy.
	REPL_LSTLOG INS	String	LastLogInspected: The log-generation number of the last log that was inspected by the copy
	REPL_LSTLOG RPL	String	LastLogReplayed: The log-generation number of the last log that was replayed by the copy.
	REPL_LSTBCK PTIME	String	LatestFullBackupTime: The time of the last complete backup.
	REPL_LSTIBC KPTIME	String	LatestIncrementalBackupTime : The time of the last backup (incremental).

Table 3	Data Store	Table Details
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Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
	REPL_CPQLEN	String	CopyQueueLength: The number of logs that must be replicated to the copy.
	REPL_RPLQLE N	String	ReplayQueueLength: The number of available logs to be replayed into the database of the copy.
	REPL_TARGET	String	CCRTargetNode
EX2007_SENDER This table includes the following details of the	SERVER_NAM E	String	ServerName: The name of the server where mails were sent to the Mailbox servers.
sender nodes:Active Directory siteStorage group	ADSITE_NAME	String	ServerAdSite: The Active Directory site where the sender servers belong.
Store namesMailbox namesThe details are collected by	SG_NAME	String	SenderStorageGroup: The name of the storage group of the sender nodes.
running the cmdlet Get-ExspiMessageTrackin gLog_SB (a customized	STORE_NAME	String	SenderStoreName: The name of the sender-server store.
cmdlet available with the PowerShell Snap-in	MBOX_NAME	String	SenderMbox: The name of the mailbox for the senders.
week. The collected data is stored into the table without further processing. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server > EXSPI-8X Dc-Get Top Sender Details	EMAIL_ADDR	String	SenderEmailAddr: The email address of a particular sender where mails originated.
	NUM_BYTES_S R	Int	TotalBytes: The size of the messages received from every sender.
	NUM_MSGS_S R	Int	nMsgCount: The number of messages received from every sender.

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_SENDERID This table includes the details of the sender ID filter agent (an anti-spam agent), which is available on nodes with the edge Transport server role). The details are collected from all instances of the performance monitor object MSExchange Sender Id Agent at every 15 minutes. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI Edge Transport Agent > EXSPI-8X Edge DC-MSExchange Sender ID Agent	INSTANCE_NA ME	String	InstanceName: Name of the performance monitor object instance.
	SERVER_NAM E	String	ServerName: Name of the monitored node (Microsoft Exchange Server).
	MSGBYPASSE D	Int	Messages That Bypassed Validation: The number of messages that have bypassed the validation process by the Sender Id agent.
	MSGSOFTFAIL ED	Int	Messages Validated with a SoftFail Result: The number of messages that were validated with the result SoftFail.
	MSGNEUTRAL RESULT	Int	Messages Validated with a Neutral Result: The number of messages that were validated with the result Neutral.
	MSGFAILMAL DOMAIN	Int	Messages Validated with a Fail - Malformed Domain Result: The number of messages that were validated with the result Fail - Malformed Domain.
	MSGVALIDATE D	Int	Messages Validated: The number of messages that were validated by the Sender Id agent.
	MSGPASSRESU LT	Int	Messages Validated with a Pass Result: The number of messages that were validated with the result Pass.
	MSGTEMPERR OR	Int	Messages Validated with a TempError Result: The number of messages that were validated with the result TempError.
	MSGNONERES ULT	Int	Messages Validated with a None Result: The number of messages that were validated with the result None.

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
	MSGFAIL_NON EXISTDMN	Int	Messages Validated with a Fail - Non-Existent Domain Result: The number of messages that were validated with the result Fail - Non-existent Domain.
	MSGPERMERR OR	Int	Messages Validated with a PermError Result: The number of messages that were validated with the result of PermError.
	MSGMISSORGI P	Int	Messages Missing Originating IP : The number of messages where the source IP addresses were not traced.
	MSGWITHNOP RA	Int	Messages with No PRA: The number of messages without a valid PRA.
	MSGFAIL_NOT PERMIT	Int	Messages Validated per Second with a Fail Not - Permitted Result: The number of messages that were validated every second with the result Fail - Not Permitted.
EX2007_SENDFILTER This table includes the details of the sender filter agent (an anti-spam agent), which is available on nodes with the edge Transport server role). The details are collected from all instances of the performance monitor object MSExchange Sender Filter Agent at every 15 minutes. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > EXSPI Edge Transport Agent > EXSPI-8X Edge DC-MSExchange Sender Filter Agent	INSTANCE_NA ME	String	InstanceName: Name of the performance monitor object instance.
	SERVER_NAM E	String	ServerName: Name of the monitored node (Microsoft Exchange Server).
	MSGEVALUAT ED	Int	Messages Evaluated by Sender Filter: The number of messages that were evaluated by the Sender Filter agent.
	MSGFILTERED	Int	Messages Filtered by Sender Filter: The number of messages that were filtered by the Sender Filter agent.

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_SMTPRECV The table includes the data collected from all instances	INSTANCE_NA ME	String	InstanceName: Name of the performance monitor object instance.
of the performance monitor object MSExchangeTransport SmtpReceive at every hour.	SERVER_NAM E	String	ServerName: Name of the monitored node (Microsoft Exchange Server).
Source policy: SPI for Exchange > en > Exchange	ADMINDISPLA Y_NAME	String	AdminDisplayName: Display name
2007 > Manual Deploy Groups > Edge Server > SMTP > EXSPI-8X Edge	SMTPBYTERE CV	Int	Bytes Received Total: The number of bytes received.
Dc-SMTP Perf Inbound Cnn, SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server > SMTP > EXSPI-8X Dc-SMTP Performance for Inbound Connections	SMTPMSGREC V	Int	Message Bytes Received Total: The number of bytes received in the form of messages and written to the database.
	SMTPMSGBYT ERECV	Int	Messages Received Total: The number of messages received.
	SMTPCONNCU RR	Int	Connections Current: The number of inbound connections.
	SMTPCONNTO T	Int	Connections Total: The total number of connections established to the SMTP server since the beginning.

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_SMTPSEND The table includes the data collected from all instances of the performance monitor object MSExchangeTransport SmtpSend at every hour. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Edge Server > SMTP > EXSPI-8X Edge Dc-SMTP Perf Outbound Cnn, SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server > SMTP > EXSPI-8X Dc-SMTP Performance for Outbound Connections	INSTANCE_NA ME	String	InstanceName: Name of the performance monitor object instance.
	SERVER_NAM E	String	ServerName: Name of the monitored node (Microsoft Exchange Server).
	ADMINDISPLA Y_NAME	String	AdminDisplayName: Display name
	SMTPBYTESE ND	Int	Bytes Sent Total: The number of bytes sent.
	SMTPMSGSEN D	Int	Messages Sent Total: The number of messages sent.
	SMTPMSGBYT ESEND	Int	Message Bytes Sent Total: The number of message bytes sent successfully.
	SMTPCONNCU RR	Int	Connections Current: The number of outbound connections.
	SMTPCONNTO T	Int	Connections Total: The total number of connections established from the SMTP Send connector since the beginning.

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
 EX2007_SOURCE This table includes the following details of a mailbox: Active Directory site information for all mail sources Domain names of the sources Volume of messages ovebanged 	SOURCE_ADD R	String	SourceAddr: The source address of mails that were sent to each mailbox in a particular Active Directory site.
	DOMAIN_NAM E	String	SourceDomainName: The domain name of the above source servers.
	SOURCE_KEY	String	SourceKey: A unique identifier for a source.
The details are collected by running the cmdlet Get-ExspiMessageTrackin gLog SRCR (a customized cmdlet available with the PowerShell Snap-in GetExspiPSSnapIn) every week. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server > EXSPI-8X Dc-Get Top Source Details	SERVER_NAM E	String	ServerName: The name of the server where mails arrived from the sources.
	ADSITE_NAME	String	AdsiteName: The name of the Active Directory site where the destination server belongs.
	IS_INTERNAL	String	isInternal: Indicates if the source server is internal to your organization.
	NUM_BYTES_S RC	Int	TotalBytes: The size of the messages obtained from each source.
-	NUM_MSGS_S RC	Int	nMsgCount: The number of messages received.

Table 3Data Store Table Details
Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_TRANSQ The table includes the details collected from the	INSTANCE_NA ME	String	InstanceName: Name of the performance monitor object instance.
performance object monitor MSExchangeIMAP4 at every 5 minutes.	SERVER_NAM E	String	ServerName: Name of the monitored node (Microsoft Exchange Server).
Exchange > en > Exchange 2007 > Manual Deploy Groups > Hub Transport Server > EXSPI-8X Dc	POISON_Q_LE NGTH	Int	Poison Message Queue Length: The number of messages present in the poison message queue.
Transport Queues	SUB_Q_LENGT H	Int	Submission Queue Length: The number of messages present in the Submission queue.
	RETRY_NONS MTP_QLEN	Int	Retry Non-SMTP Delivery Queue Length: The number of messages that are present in the non-SMTP gateway delivery queues and in the retry mode.
	AGGDEL_ALLQ _LEN	Int	Aggregate Delivery Queue Length (All Queues): The number of messages available in all queues for delivery.
	UNREACH_Q_L ENGTH	Int	Unreachable Queue Length: The number of messages that are present in the unreachable queue.
	RET_MD_Q_LE N	Int	Retry Mailbox Delivery Queue Length: The number of messages present in the retry mode.
	ACT_REM_DQL ENGTH	Int	Active Remote Delivery Queue Length: The number of messages present in the active remote delivery queue.
	ACT_NonSMTP _DQLENG	Int	Active Non-SMTP Delivery Queue Length: The number of messages available in the Drop directory, which is used by a Foreign connector.

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
	RET_REM_DQL ENGTH	Int	Retry Remote Delivery Queue Length: The number of messages available in the retry mode in remote delivery queues.
	LARG_DQ_LEN GTH	Int	Largest Delivery Queue Length: The number of messages available in the largest delivery queue.
	ACT_MDQ_LEN GTH	Int	Active Mailbox Delivery Queue Length: The number of messages available in active mailbox queues.
EX2007_UMAUTO_ATTE N This table includes the details of the Unified Messaging Auto Attendant. The details are collected from all instances of the performance monitor object MSExchangeUMAutoAttenda nt at every 5 minutes. Source policy: SPI for Exchange > en > Exchange	BUSS_HR_CAL LS	Int	Business Hours Calls: The number of calls attended by the auto attendant at business hours.
	OPER_TRANSF ERS	Int	Operator Transfers: The number of calls transferred to the operator.
	OUT_OF_HR_C ALLS	Int	Out of Hours Calls: The number of calls attended by the auto attendant during non-business hours.
2007 > Manual Deploy Groups > Unified Messaging Server > EXSPI-8X UM DC-MSExchangeUMAutoAt tendant	AVERAGE_CAL L_TIME	String	Average Call Time: The average duration of calls attended by the auto attendant.

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_UMAVAIL The table includes the data collected from all instances of the performance monitor object	CALLS_DISCN_ EXT_ERR	Int	Calls Disconnected by UM on Irrecoverable External Error: The number of calls that got disconnected due to an irrecoverable external error.
MSExchangeUMAvailabilit y at every 5 minutes. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Unified	CALLS_DISCN_ INT_ERR	Int	Calls Disconnected on Irrecoverable Internal Error: The number of calls that got disconnected due to an internal system error.
Groups > Unified Messaging Server > EXSPI-8X UM DC-MSExchangeUMAvaila bility	HUB_ACCESS_ FAIL	Int	Hub Transport Access Failures: The number of unsuccessful attempts made to access a Hub Transport server.
	MSERV_ACCES S_FAIL	Int	Mailbox Server Access Failures: The number of unsuccessful attempts made to access a Mailbox server.
	DIR_ACCESS_F AIL	Int	Directory Access Failures: The number of unsuccessful attempts made to access Active Directory.
EX2007_UMCALLANS The table includes the data collected from all instances	AV_VMSG_SIZE	Int	Average Voice Message Size: The average size of voice messages.
collected from all instances of the performance monitor object MSExchangeUMCallAnswer at every 5 minutes. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Unified Messaging Server > EXSPI-8X UM DC-MSExchangeUMCallAn	CALL_ANSMIS SED_CALLS	Int	Call Answering Missed Calls: The number of dropped diverted calls without a message.
swer			

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric	
EX2007_UMFAX The table includes the data	FAX_MSG	Int	Fax Messages: The number of fax messages received.	
collected from all instances of the performance monitor object MSExchangeUMFax at every 5 minutes. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Unified Messaging Server > EXSPI-8X UM DC-MSExchangeUMFax	FAX_INCOMPL ETE	Int	Fax Incomplete: The number of fax calls dropped before call completion.	
EX2007_UMGENERAL	DELAYED_CAL	Int	Delayed Calls: The number of calls that suffered delays	
collected from all instances			longer than 2 seconds.	
of the performance monitor object MSExchange General at every 5 minutes. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Unified Messaging Server > EXSPI-8X UM DC-MSExchangeUMGenera l	TOTAL_CALLS	Int	Total Calls: The number of calls since the start of the service.	
EX2007_UMHUNT The table includes the details of a Unified Messaging hunt group.	UMHUNT_PIL OT	String	PilotIdentifier: The unique identifier for the pilot access number for the particular IP gateway.	
The details are collected by running the cmdlet	UMHUNT_DIA L	String	UMDialPlan: The dial plan used with the UM hunt group.	
hour and the collected data is stored into the table without further processing. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Unified Messaging Server > EXSPI-8X Get UMHuntGroup Details	UMHUNT_NA ME	String	Name: The display name for the UM hunt group.	

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_UMIPGWAY This table includes details on the properties and values for the list of Unified Messaging IP gateways. The details are collected by running the cmdlet Get-UMIPGateway at every hour and the collected data is stored into the table without further processing. Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Unified Messaging Server >	UMIPGWAY_A DD	String	Address: The IP address on the IP gateway or SIP-enabled IP PBX.
	UMIPGWAY_O UT	String	OutcallsAllowed: Indicates if outgoing calls are allowed from the IP gateway.
	UMIPGWAY_E N	String	Status: Indicates if the calls destined for the IP gateway are enabled or disabled.
	UMIPGWAY_PO RT	Int	Port: The configured port number of the IP gateway.
	UMIPGWAY_SI M	String	Simulator: Enables a client to establish a connection to the Unified Messaging server
EXSPI-8X GetUM IPGatewayDetails	UMIPGWAY_N AME	String	Name: Display name of the IP gateway.

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_UMMBOX This table includes details on the properties of a UM-enabled recipient. The	UMMBOX_NON USR	String	AllowUMCallsFromNonUsers: Indicates if the mailbox can be excluded from directory searches.
details are collected by running the cmdlet Get-UMMailbox at every hour and the collected data is stored into the table	UMMBOX_ANO NYCALL	String	AnonymousCallerCanLeaveMe ssages: Indicates if diverted calls without a caller ID can drop a message.
without further processing. Source policy: SPI for Exchange > en > Exchange	UMMBOX_ASR	String	ASREnabled: Indicates if the Automatic Speech Recognition program can be used.
2007 > Manual Deploy Groups > Unified Messaging Server > EXSPI-8X Get Unified Messaging Mailbox Details	UMMBOX_SPC H	String	AutomaticSpeechRecognitionE nabled: Indicates if the Automatic Speech Recognition program can be used.
	UMMBOX_DIA L	String	DialPlan: The UM dial plan with the UM Mailbox.
	UMMBOX_DNA ME	String	DisplayName: The display names for the following parameters: ADObjectID, GUID, DN, Domain\Account, UPN, LegacyExchangeDN, SmtpAddress, and Alias
	UMMBOX_FAX	String	FaxEnabled: Indicates if a user can receive faxes.
	UMMBOX_MIS SCALL	String	MissedCallNotificationEnable: Indicates whether to missed call notifications can be sent.
	UMMBOX_NA ME	String	Name: User's display name
	UMMBOX_PRIS MTP	String	PrimarySmtpAddress: The e-mail address that external users can see when replies arrive from this user.
	UMMBOX_SNA ME	String	ServerName: Name of the monitored node (Microsoft Exchange Server).
	UMMBOX_SUB ACC	String	SubscriberAccessEnable: Indicates if the user has the subscriber access privilege to the mailboxes.

Table 3Data Store Table Details

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
	UMMBOX_TUI BOOK	String	TUIAccessToAddressBookEnab led: Indicates if a user can access the directory and contact details over phone.
	UMMBOX_TUI CALL	String	TUIAccessToCalendarEnabled: Indicates if users can access calendars over the phone.
	UMMBOX_TUI MAIL	String	TUIAccessToEmailEnabled: Indicates if users can access emails over the phone.
	UMMBOX_EN	String	UMEnabled: Indicates if the UM option is enabled for the mailbox.
	UMMBOX_FXI D	String	UMFaxId: Indicates the fax number of the user.
	UMMBOX_MPO L	String	UMMailboxPolicy: Indicates the UM mailbox policy associated with the user's mailbox.
	UMMBOX_GRE ET	String	UMMaxGreetingDuration
	UMMBOX_OPE R	String	UMOperatorNumber: The digits for the operator.
EX2007_UMPIN This table includes details of	UMPIN_USER	String	UserID: Identifier for the mailbox.
a UM-enabled user's mailbox. The details are collected by running the cmdlet Get-UMServer at every hour and the collected data is stored into the table without further processing.	UMPIN_EXP	String	PinExpired: Indicates if the PIN is deemed as expired.
	UMPIN_FRST	String	FirstTimeUser
	UMPIN_LOCK	String	LockedOut: Indicates if the mailbox can be locked.
Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy Groups > Unified Messaging Server > EXSPI-8X Get UMMailbox Pin Details			

Table in the data store	Metrics in the table	Metric data type	Corresponding Performance Monitor Object Counter/Cmdlet metric
EX2007_UMSRV This table includes different properties of the nodes with	UMSRV_NAME	String	Name: The unique identifier of the Unified Messaging server object.
the Unified Messaging Server role. The details are collected by running the cmdlet	UMSRV_CALLS	Int	MaxCallsAllowed: The maximum number of simultaneous calls allowed by the Unified Messaging server.
and the collected data is stored into the table without further processing. Source policy: SPI for Exchange > en > Exchange	UMSRV_FAX	Int	MaxFaxCallsAllowed: The maximum number of simultaneous fax calls allowed by the Unified Messaging server.
2007 > Manual Deploy Groups > Unified Messaging Server > EXSPI-8X Get UMServer Details	UMSRV_TTS	Int	MaxTTSSessionsAllowed: The maximum number of simultaneous Text-to-Speech sessions allowed by the Unified Messaging server.
	UMSRV_ASR	Int	MaxASRSessionsAllowed: The maximum number of simultaneous Automatic Speech Recognition sessions allowed by the Unified Messaging server.
	UMSRV_STATU S	String	Status: Status of the server.
EX2007_UMSUBACCESS This table includes the details on the subscriber	VOICE_MSG_S ENT	Int	Voice Messages Sent: The number of voice messages from authenticated UM subscribers.
access. The data is collected from all instances of the performance monitor object MSExchange UMSubscriberAccess at every 5 minutes	EMAIL_MSGQ_ ACCESSED	Int	Email Message Queue Accessed: The number of accesses to the e-mail message queue with the telephone user interface.
Source policy: SPI for Exchange > en > Exchange 2007 > Manual Deploy	AVER_SUB_CA LL_DURA	Int	Average Subscriber Call Duration: The average log-on duration by subscribers.
Groups > Unified Messaging Server > EXSPI-8X UM DC-MSExchangeUMSubscri berAccess	EMAIL_MSG_H EARD	Int	Email Messages Heard: The number of emails heard by authenticated subscribers.

B Data Store Tables for the Microsoft Exchange 2003 Nodes

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
EXSPI_ ASNOTIFY - This policy uses embedded script.MSExchange ActiveSync Notify OmaPushNo id is associated with this policy.Holicy Name: EXSPI-6.5 Dc-ActiveSyncN otify	MSExchange ActiveSync Notify OmaPush	Categorizer Notifications Discarded Total	Number of notifications rejected by the mobile categorizer due to errors	ASNDISCARD
	Categorizer Notifications Bifurcated Total	Number of notifications separated by the mobile categorizer due to a number devices	ASNBIFUR CATED	
		Categorizer Notifications Sent Total	Number of successful notifications sent by the mobile categorizer	ASNSENT
		Categorizer Notifications Expired Total	Number of notifications rejected by the mobile categorizer because of lapse	ASNEXPIRED

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
		Categorizer Notifications Processed Total	Number of notifications processed by the mobile categorizer	ASNTOTAL
		Categorizer Notifications Ignored Total	Number of notifications ignored by the mobile categorizer due to batching	ASNIGNORE
EXSPI_I MAP4PERF - This policy uses	MSExchange IMAP4	Connections Total	Number of connections since startup	IMAP4CON
embedded script. No id is associated with this policy.		Connections Failed	Number of failed connections since startup	IMAP4FAILED CON
Policy Name: EXSPI-6.X Dc-IMAP4 Performance		UID Total	Number of UID commands received since startup	IMAP4UID
		Connections Rejected	Number of rejected connections since startup	IMAP4 REJECTED CON
EXSPI_OMA - This policy uses the embedded script. No id is associated with	MSExchange ActiveSync Notify OmaPush	OmaSink Notifications Sent Total	Number of successful notifications sent bythe omasink	OMASENT
this policy. <i>Policy Name:</i> EXSPI-6.5 Dc-OMA		OmaSink Notifications Discarded Total	Number of notifications rejected by the omasink due to errors	OMADISCARD
		OmaSink Notifications Ignored Total	Number of notifications ignored by the omasink	OMAIGNORE
	MSExchange OMA	Last Response Time	The response time of the last request in milliseconds	OMA RESPONSE

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
EXSPI_ ISCLIENT - This policy uses embedded script. No id is associated with this policy.	MSExchangeIS	Client: RPCs Failed: All Other Errors	The client-reported number of failed RPCs (since the store was started) due to all other RPC errors	ISCRPCF OTHER
Policy Name: EXSPI-6.5 Dc-Outlook Client		Client: RPCs Failed: Call Cancelled	The client-reported number of failed RPCs (since the store was started) due to the Call Cancelled RPC errors	ISCRPCF CANCEL
		Client: RPCs Failed	The client-reported number of failed RPCs (since the store was started)	ISCRPCFAIL
		Client: RPCs Failed: Access Denied	The client-reported number of failed RPCs (since the store was started) due to the Access Denied RPC errors	ISCRPCF ACCESSDENY
		Client: RPCs Attempted	The client-reported total number of RPCs attempted by the users (since the store was started)	ISCRPC ATTEMPT

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
		Client: RPCs Failed: Server Unavailable	The client-reported number of failed RPCs (since the store was started) due to the Server Unavailable RPC errors	ISCRPCFUNAV
		Client: RPCs Failed: Call Failed	The client-reported number of failed RPCs (since the store was started) due to the Call Failed RPC errors	ISCRPCF CALLFAIL
		Client: Latency > 5 sec RPCs	The client-reported number of successful RPCs with latencies > 5 seconds	ISCLATENCY5
		Client: Latency > 10 sec RPCs	The client-reported number of successful RPCs with latencies > 10 seconds	ISCLATENCY 10
		Client: Latency > 2 sec RPCs	The client-reported number of successful RPCs with latencies > 2 seconds.	ISCLATENCY2
		Client: RPCs succeeded	The client-reported total number of successful RPCs (since the store was started)	ISCRPC SUCCEED

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
		Client: RPCs Failed: Server Too Busy	The client-reported number of failed RPCs (since the store was started) due to the Server Too Busy RPC error	ISCRPCFBUSY
EXSPI_ OWABE - This policy uses embedded script. No id is associated with this policy. Policy Name: EXSPI-6.X Dc-OWA Back End	MSExchange Web Mail	Authentications (total)	Number of Authentications. This is the total number of times authentication is needed	OWAAUTHS
		Authentications (in cache)	Number of Authentications (in cache). This gives the number of different users who have accessed the Microsoft Exchange store through DAV in the last few minutes	OWA AUTHSCACHE
		Message Sends (total)	Number of messages sent	OWA MSGSSENT
		Authentication Cache Hits (total)	Number of Authentication cache hits. This is the number of times that the needed authentication is retrieved from a cache.	OWA RECENT AUTHS
		Message Opens (total)	Number of messages opened	OWA MSGSOPEN

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
EXSPI_ OWAFE - This policy uses embedded script. No id is associated with this policy.	Web service	Maximum Connections	Maximum number of concurrent connections established with the Web service (since service startup)	OWAMAX CONNECT IONS
Policy Name: EXSPI-6.X Dc-OWA Back End		Current Connections	Current number of connections established with the Web service.	OWA CONNECT IONS
EXSPI_ POP3PERF -MThis policy uses embedded script. No id isH	MSExchange POP3	RETR Total	Number of RETR commands received since startup	POP3RETR
associated with this policy.		Connections Total	Number of connections since startup	POP3CON
EXSPI-6.X Dc-POP3 Performance	EXSPI-6.X Dc-POP3 Performance	Connections Failed	Number of failed connections since startup	POP3 FAILEDCON
		Connections Rejected	Number of rejected connections since startup	POP3 REJECTED CON
		DELE Total	Number of DELE commands received since startup	POP3DELE

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
EXSPI_ DSACCESS - This policy uses embedded policy.	MSExchange DSAccess Caches	Cache Hits/Sec	Number of "object found in cache" events per second	CACHE HITSPERSEC
No id is associated with this policy. Policy Name: EXSPI-6.X Dc-DSAccess Performance		Cache Misses/Sec	Number of "object not found in cache" events per second	CACHE MISSES PERSEC
EXSPI_ MBPERF - This policy uses embedded script. No id is	MSExchange IS Mailbox	Messages Delivered	Number of messages delivered to all recipients since startup	MBDELIVER
associated with this policy.		Total Count of Recoverable Items	Number of items retained for Item Recovery	MBRECOVER ITEMS
Policy Name: EXSPI-6.X Dc-IS Mailbox Performance		Single Instance Ratio	Average number of references to each message in the mailbox store	MBSIRATIO
		Messages Submitted	Number of messages submitted by clients since service startup	MB SUBMITTED
		Receive Queue Size	Number of messages in the mailbox store's receive queue	MBRECEIVEQ
		Total Size of Recoverable Items	Total size in kilobytes of items retained for Item Recovery	MB RECOVERSIZE

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
		Client Logons	Number of clients (including system processes) currently logged on	MBLOGON
		Messages Sent	Number of messages sent to the transport since startup	MBSENT
		Active Client Logons	Number of clients that performed any action within the last 10 minute time interval	MB ACTIVELOGON
		Local deliveries	Number of messages delivered locally	MBLOCAL DELIVER
		Send Queue Size	Number of messages in the mailbox store's send queue	MBSENDQ
		Peak Client Logons	Number of concurrent client logons since the service started	MB LOGONPEAK

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
	Average Delivery Time	Average time in milliseconds between the submission of a message to the mailbox store and the delivery to all local recipients (recipients on the same server) for the last 10 messages	MBDELIVERY TIME	
		Message Recipients Delivered	Number of recipients that have received a message since startup	MBRECIPIENT

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
EXSPI_ISPERMF- This policyuses embeddedscript. No id isassociated withthis policy.Policy Name:EXSPI-6.XDc-InformationStorePerformance	MSExchangeIS	VM Total 16MB Free Blocks	Number of free Virtual Memory blocks larger than or equal to 16MB	ISVM16 MBFREE
		Connection Count	Number of client processes connected to the information store	IS CONNECTCNT
		RPC Requests	Number of client requests that are currently being processed by the information store	RPCREQUESTS
		User Count	Number of users connected to the information store	ISUSERCNT
		VM Total Large Free Block Bytes	Number of bytes in free Virtual Memory blocks larger than or equal to 16MB	ISVM LARGE FREEBB
		Anonymous User Count	Number of anonymous users connected to the information store	IS ANONUSER CNT

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
		RPC Operations/ Sec	Rate that RPC operations occur	RP COPERATIONS PERSEC
		VM Largest Block Size	Size of the largest free virtual memory block	ISVMLARGEST BLOCK
		Active Anonymous User Count	Number of active users	ISACTIVE ANONUSER CNT
		Active User Count	Number of user connections that have shown some activity in the last 10 minutes	ISACTIVE USERCNT
		Active Connection Count	Number of connections that have shown some activity in the last 10 minutes	ISACTIVE CONNECTCNT
EXSPI_ PFPERF - This policy uses embedded script. No id is	EXSPI_ PFPERF - This policy uses embedded script. No id is associated with this policy.MSExchangeIS PublicPolicy Name: EXSPI-6.X Dc-IS Public Folder PerformanceMSExchangeIS Public	Messages Delivered	Number of messages delivered to all recipients since startup	PFDELIVER
associated with this policy. <i>Policy Name:</i> EXSPI-6.X Dc-IS Public Folder Performance		Total Size of Recoverable Items	Total size in kilobytes of items retained for Item Recovery	PFRECOVER SIZE

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
		Message Recipients Delivered	Number of recipients that have received a message since startup	PFRECIPIENT
		Replication Messages Sent	Number of replication messages that have been sent to other servers since service startup	PFREPSENT
		Replication Receive Queue Size	Number of replication messages waiting to be processed	PFREPQ
		Receive Queue Size	Number of messages in the public store's receive queue.	PFRECEIVEQ
		Messages Submitted	Number of messages submitted by clients since service startup	PFSUBMITTED

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
		Single Instance Ratio	Average number of references to each message in the public store	PFSIRATIO
		Total Count of Recoverable Items	Number of items retained for Item Recovery	PFRECOVER ITEMS
		Client Logons	Number of clients (including system processes) currently logged on	PFLOGON
		Messages Sent	Number of messages sent to the transport since startup	PFSENT
		Active Client Logons	Number of clients that performed any action within the last 10 minute time interval	PFACTIVE LOGON
		Send Queue Size	Number of messages in the public store's send queue	PFSENDQ

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
		Average Delivery Time	Average time in milliseconds between the submission of a message to the public store and the delivery to all local recipients (recipients on the same server) for the last 10 messages	PFDELIVERY TIME
	Peak Client Logons	Number of concurrent client logons since the service started	PF LOGONPEAK	
		Replication Messages Received	Number of replication messages received from other servers since service startup	PFREPRCVD

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
EXSPI_ MTAPERF - This policy uses embedded script. No id is associated with this policy. Policy Name: EXSPI-6.X Dc-MTA Performance	MSExchange MTA	Work Queue Length	Number of outstanding messages in the Work Queue, which indicates the number of messages not yet processed to completion by the MTA	MTAWORKQ
		Outbound Bytes Total	Total volume of message content transmitted since MTA initialization, measured in kilobytes.	MTA BYTESOUT
		Outbound Messages Total	Number of messages transmitted since MTA initialization	MTAMSGOUT
		Inbound Messages Total	Number of messages received since MTA initialization	MTAMSGIN
		Inbound Bytes Total	Total volume of message content received since MTA initialization, measured in kilobytes	MTABYTESIN
		Total Recipients Outbound	Number of recipients specified in all messages transmitted since MTA initialization	MTARCPOUT

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
		Total Recipients Inbound	Number of recipients specified in all messages received since MTA initialization	MTARCPIN
EXSPI_ SMTPPERF - This policy uses embedded script.	SMTP Server	Outbound Connections Total	Number of outbound connections attempted	SMTPOUT BOUNDCON
No id is associated with this policy.		Messages Sent Total	Number of outbound messages sent	SMTP MSGSENT
Policy Name: EXSPI-6.X Dc-SMTP Server Performance		Outbound Connections Refused	Number of outbound connection attempts refused by remote sites	SMTP OUTBOUND CONREF
		Messages Received Total	Number of inbound messages accepted	SMTP MSGRECEIVE
		Message Bytes Sent Total	Number of bytes sent in messages	SMTP MSGBYTE SENT
		Inbound Connections Total	Number of inbound connections received	SMTP INBOUNDCON
		Message Bytes Received Total	Number of bytes received in messages.	SMTP MSGBYTE RECEIVE
		Bytes Sent Total	Number of bytes sent	SMTP BYTESENT
		Bytes Received Total	Number of bytes received.	SMTP BYTERECEIVE

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
EXSPI_SMTPQ - This policy uses embedded script. No id is associated with this policy. Policy Name: EXSPI-6.X Dc-SMTP Queues	SMTP Server	Local Queue Length	Number of messages in the local queue	LOCALQ
		Remote Retry Queue Length	Number of messages in the retry queue for remote delivery	REMOTE RETRYQ
		Categorizer Queue Length	Number of messages in the categorizer queue	CATEGORIZER Q
		Messages Pending Routing	Number of messages that have been categorized but not routed	PENDING ROUTINGQ
		Remote Queue Length	Number of messages in the remote queue	REMOTEQ
		Local Retry Queue Length	Number of messages in the local retry queue	LOCALRETRY Q

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
EXSPI_ASYNC - This policy uses embedded script. No id is associated with this policy.	EXSPI_ASYNC - This policy uses embedded script. No id is associated with this policy. Policy Name: EXSPI-6.5 Dc-ActiveSync	Total Sync Commands	Number of Sync commands processed by Microsoft Exchange ActiveSync.	ASYNCCMDS
Policy Name: EXSPI-6.5 Dc-ActiveSync		Outstanding Exchange Mailbox Server Connection Requests	Number of pending connection requests from Microsoft Exchange ActiveSync to one or more Microsoft Exchange mailbox servers	ASYNC CONNECT
		Total Client Sync Items	Number of client item adds, changes, and deletes (within the sync command) sent from the client	ASYNC CLIENTITEMS
		Total SendMail Commands	Number of SendMail commands processed by Microsoft Exchange ActiveSync. The SendMail command is called when a user sends mail from the client	ASYNC SENDMAIL
		Total Users	Number of users who have accessed Microsoft Exchange ActiveSync.	ASYNCUSERS

Data Store Table Name	Performance Object	Metrics / Performance Counter	Metric Description	Metrics in the Table
		Current Active Directory Requests	Specifies the current outstanding requests to the Microsoft Active Directory.	ASYNCAD
		Total Exchange Mailbox Server Sync Items	Number of Microsoft Exchange mailbox server adds, changes, and deletes (within the sync command) sent to the client	ASYNC SERVERITEMS
		Outstanding Exchange Mailbox Server I/O Requests	Number of pending input/ output requests from Microsoft Exchange ActiveSync to one or more Microsoft Exchange mailbox servers	ASYNC PENDING

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_ FTIDATA Policy Name: EXSPI-6.X Dc-Full Text Index Metric used: 74	Not applicable	Not applicable	Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME
			Specifies the instance in the server for which the data is collected	INSTANCE_ NAME
			Specifies the location of the full text index.	FTILOCATION
			Specifies the size of the full text index (in MB)	FTISIZE
			Specifies the free space (in MB) available on the logical drive on which the full text index is stored	FTIFREE
			Specifies the total size (in MB) of the logical drive on which the full text index is stored	FTITOTAL
			Specifies the percentage free space available on the logical drive on which the full text index is stored	FTIFP

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_MULTI Policy Name: Metric Used: 614 and 815	Not applicable	Not applicable	A unique key that is used for identifying the instance. It is a combination of the metric number and the instance	INSTANCE_ KEY
			Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME
			Specifies the metric id that is used for collecting this data	METRIC_ID
			Specifies the instance of Mailbox for which data is collected	INSTANCE
	MSExchange IS Mailbox	Single Instance Ratio	Average number of references to each message in the mailbox store	VALUE
	Not applicable	Not applicable	Specifies the time interval at which data was collected.	INTERVAL_ KEY

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_ SINGLE Policy Name: EXSPI-6.X Dc-Mailbox Data Metric Used: 614	Not applicable	Not applicable	Specifies the version of Exchange Server that is installed.	VERSION
	MSExchange IS Mailbox	Single Instance Ratio	Average number of references to each message in the mailbox store. The value for _Total instance alone is collected and stored in the CODA \ Data Store table	PRIV_IS_INST_ RATIO
			Specifies the Microsoft Exchange server name for which the data is collected.	SERVER_ NAME

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_ MBDETAIL - This table contains mailbox data. Policy Name: EXSPI-6X-Dc-M ailbox Data	Not applicable		A unique key that is used for identifying the instance. It is a combination of the mailbox name, name of the data store and the name of the storage group	INSTANCE_ KEY
Metric Used: 815			Specifies the time interval at which data was collected	INTERVAL_ KEY
			Specifies the name of the mailbox for which the data is collected	MAILBOX_ NAME
		Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME	
			Specifies the storage group to which the mailbox belongs	STORAGE GROUP_NAME
			Specifies the name of the data store that contains the mailbox	DATABASE_ NAME
			Specifies the size of the mailbox (in KB)	MAILBOX_SIZE

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
			Specifies the status of the mailbox storage quota.	MAILBOX_ QUOTA
			0 => Not Available	
			1 => Below Limit	
			2 => Issue Warning	
			4 => Prohibit Send	
			8 => No Checking	
			16 => Mailbox Disabled	
			Specifies the number of items in the mailbox	MAILBOX_ MSGCNT
			Specifies the last logon time (in Microsoft Exchange time format) for the mailbox user	MAILBOX_ LASTACCESS

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_ MBSUMMARY Policy Name: EXSPI-6.X Dc-Mailbox IS Sum. Data Metric Used:71	Not applicable	Not applicable	A unique key that is used for identifying the instance. It is a combination of the name of the storage group, the name of the data store and the server name	INSTANCE_ KEY
			Specifies the storage group to which the data store belongs	STORAGE GROUP_NAME
			Specifies the name of the data store (containing mailboxes) for which data is collected	DATABASE_ NAME
			Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME
			Specifies the administrative group to which the data store belongs	ADMINGROUP
			Specifies the location of the .edb file associated with the data store	EDBPATH
			Specifies the location of the .stm file associated with the data store	STMPATH

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
			Specifies the size of the .edb file associated with the data store.	EDBSIZE
			Specifies the size of the .stm file associated with the data store	STMSIZE
			Specifies the free space (in MB) available on the logical drive on which the .edb file is stored	EDBFREE
			Specifies the free space (in MB) available on the logical drive on which the .stm file is stored	STMFREE
			Specifies the total size (in MB) of the logical drive on which the .edb file is stored	EDBTOTAL
			Specifies the total size (in MB) of the logical drive on which the .stm file is stored	STMTOTAL

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
			Specifies the logical size of the data store. The logical size of the database equals the physical size of the .edb file and the .stm file minus the logical free space in each	MBLOGICAL SIZE
			Specifies the number of users who have mailboxes in that data store	MAILBOX_ USRCNT
			Specifies the total number of messages in all the mailboxes in the data store	MAILBOX_ MSGCNT
			Specifies the time interval at which data was collected	INTERVAL_ KEY
Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
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EXSPI_ MTLDATANot applicablePolicy Name: EXSPI-6.X Dc-Message Tracking Log Space Usage	Not applicable	Not applicable	Specifies the Microsoft Exchange server name for which the data is collected	SERVER_NAM E
		Metric DescriptionMetrics in t TableSpecifies the Microsoft Exchange server name for which the data is collectedSERVER_NA ESpecifies the path to the log directory. The logs in this directory are related to message tracking.MTLPATHSpecifies the size of the log directory (in MB)MTLSIZESpecifies the number of log files present in the log directory existsMTLCNTSpecifies the 	MTLPATH	
			Specifies the size of the log directory (in MB)	MTLSIZE
		Specifies the number of log files present in the log directory	MTLCNT	
			Specifies the free space (in MB) available on the logical drive on which the log directory exists	MTLFREE
			Specifies the total size (in MB) of the logical drive on which the log directory exists	MTLTOTAL
			Specifies the percentage free space available on the logical drive on which the log directory exists	MTLFP

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_MULTI Policy Name: EXSPI-6.X Dc-Public Folder Data	Not applicable	Not applicable	A unique key that is used for identifying the instance. It is a combination of the metric number and the instance	INSTANCE_ KEY
Metric Used: 624			Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME
			Specifies the metric id that is used for collecting this data	METRIC_ID
			Specifies the instance of public folder for which data is collected	INSTANCE
	MSExchangeIS Public	Single Instance Ratio	Average number of references to each message in the public store	VALUE
	Not applicable	Not applicable	Specifies the time interval at which data was collected	INTERVAL_ KEY
EXSPI_ SINGLE Policy Name: EXSPI-6.X Dc-Public Folder Data Metric Used: 624	Not applicable	Not applicable	Specifies the version of Exchange Server that is installed	VERSION

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
	MSExchange IS	Single Instance Ratio	Average number of references to each message in the public store. The value for _Total instance alone is collected and stored in the CODA \ Data Store table	PUB_IS_INST_ RATIO
	Not applicable	Not applicable	Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME
EXSPI_ PFDETAIL Policy Name: EXSPI-6.X Dc-Public Folder Data	Not applicable	Not applicable	A unique key that is used for identifying the instance. The public folder name is used as the instance key	INSTANCE_ KEY
Metric Used: 816			Specifies the time interval at which data was collected	INTERVAL_ KEY

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
			Specifies the name of the public folder for which data is collected	FOLDER_ NAME
			Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME
			Specifies the storage group to which the public folder belongs.	STORAGE GROUP_NAME
			Specifies the name of the data store that contains the public folder	DATABASE_ NAME
			Specifies the size of the public folder (in KB)	FOLDER_SIZE
			Specifies the number of items in the public folder	FOLDER_ MSGCNT
			Specifies the time (in Microsoft Exchange time format) at which the public folder was last accessed.	FOLDER_ LASTACCESS

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_ PFSUMMARY Policy Name: EXSPI-6.X Dc-Public IS Sum. Data Metric Used: 73	Not applicable	Not applicable	A unique key that is used for identifying the instance. It is a combination of the name of the storage group, the name of the public folder store and the server name.	INSTANCE_ KEY
			Specifies the storage group to which the data store belongs.	STORAGE GROUP_NAME

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
	Not applicable	Not applicable	Specifies the name of the data store (containing public folders) for which data is collected	DATABASE_ NAME
			Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME
			Specifies the administrative group to which the data store belongs	ADMINGROUP
			Specifies the location of the .edb file associated with the data store	EDBPATH
			Specifies the location of the .stm file associated with the data store.	STMPATH
			Specifies the size of the .edb file associated with the data store	EDBSIZE
			Specifies the size of the .stm file associated with the data store	STMSIZE

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
			Specifies the free space (in MB) available on the logical drive on which the .edb file is stored	EDBFREE
			Specifies the free space (in MB) available on the logical drive on which the .stm file is stored	STMFREE
			Specifies the total size (in MB) of the logical drive on which the .edb file is stored	EDBTOTAL

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
			Specifies the total size (in MB) of the logical drive on which the .stm file is stored.	STMTOTAL
			Specifies the logical size of the public store. The logical size of the database equals the physical size of the .edb file and the .stm file minus the logical free space in each	PFLOGICAL SIZE
			Specifies the number of public folders in the data store.	FOLDER_ COUNT
			Specifies the number of messages in all the public folders in the data store	FOLDER_ MSGCNT
			Specifies the time interval at which data was collected	INTERVAL_ KEY

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_ SMTPDATA Policy Name: EXSPI-6.X Dc-SMTP Virtual Server	Not applicable	Not applicable Specifies the Microsoft Exchange server name for which the data is collected.	Specifies the Microsoft Exchange server name for which the data is collected.	SERVER_ NAME
Storage Metric Used: 82			Specifies the instance in the server for which the data is collectedINSTAN NAMESpecifies the location where badmail (e-mail messages contained in the BadMail folder) is stored on the file systemSMTP BADMA	INSTANCE_ NAME
				SMTP BADMAILDIR
		Specifies the siz of the BadMail folder Specifies the number of messages in th BadMail folder	Specifies the size of the BadMail folder	SMTP BADMAILSIZE
			Specifies the number of messages in the BadMail folder	SMTP BADMAILCNT
		Specifies the free space (in MB) available on the logical drive where the BadMail folder exists	SMTP BADMAILFREE	
			Specifies the total size (in MB) of the logical drive where the BadMail folder exists	SMTP BADMAIL TOTAL

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
	Not aplicable	Not aplicable	Specifies the percentage free space available on the logical drive where the BadMail folder exists.	SMTP BADMAILFP
			Specifies the directory from which mail messages are obtained	SMTP PICKUPDIR
			Specifies the size of the PickUp folder	SMTP PICKUPSIZE
			Specifies the number of messages obtained from the PickUp folder	SMTP PICKUPCNT
			Specifies the free space (in MB) available on the logical drive where the PickUp folder exists	SMTP PICKUPFREE
			Specifies the total size (in MB) of the logical drive where the PickUp folder exists.	SMTP PICKUPTOTAL

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
			Specifies the percentage free space available on the logical drive where the PickUp folder exists.	SMTP PICKUPFP
			Specifies the directory from which mail messages are queued	SMTP QUEUEDIR
			Specifies the size of the Queue folder	SMTP QUEUESIZE
			Specifies the number of messages in the Queue folder	SMTP QUEUECNT
			Specifies the free space (in MB) available on the logical drive where the Queue folder exists	SMTP QUEUEFREE
			Specifies the total size (in MB) of the logical drive where the Queue folder exists.	SMTP QUEUETOTAL
			Specifies the percentage free space available on the logical drive where the Queue folder exists	SMTP QUEUEFP

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_M0660 Policy Name: EXSPI-6.X Dc-TrackLog Data	Not applicable	Not applicable	A unique key that is used for identifying the instance. The instance name is used as the instance key	INSTANCE_ KEY
<i>Metric Used:</i> 660			Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME
			Specifies the Top Sender instance for which the data is collected	INSTANCE_ 0660
			Specifies the number of bytes sent by the top sender instance	NUM_BYTES_ 0660
			Specifies the number of bytes sent by the top sender instance	NUM_MSGS_ 0660
			Specifies that this metric collects information about email senders.	COUNTER_ 0660

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_M0661P olicy Name: EXSPI-6.X Dc-TrackLog Data	Not applicable	Not applicable	A unique key that is used for identifying the instance. The instance name is used as the instance key.	INSTANCE_ KEY
Metric Used: 661			Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME
			Specifies the Top Recipient instance for which the data is collected	INSTANCE_ 0661
			Specifies the number of bytes received by the top recipient instance	NUM_BYTES_ 0661
			Specifies the number of messages received by the top recipient instance	NUM_MSGS_ 0661
			Specifies that this metric collects information about email recipients.	COUNTER_ 0661

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_M0662 <i>Policy Name:</i> EXSPI-6.X Dc-TrackLog Data	Not applicable	Not applicable	A unique key that is used for identifying the instance. The instance name is used as the instance key	INSTANCE_ KEY
Metric Used: 662			Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
			Specifies the Top Destination instance for which the data is collected	INSTANCE_ 0662
			Specifies the number of bytes received by the top destination instance	NUM_BYTES_ 0662
			Specifies the number of messages received by the top destination instance	NUM_MSGS_ 0662
			Specifies the destination type - for example: internet address, another Microsoft Exchange server, gateway. A destination type is a combination of a location type and location address	DEST_TYPE_ 0662
			Specifies the time interval at which data was collected	COUNTER_066 2

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_M0663 <i>Policy Name:</i> EXSPI-6.X Dc-TrackLog Data	Not applicable	Not applicable	A unique key that is used for identifying the instance. The instance name is used as the instance key.	INSTANCE_ KEY
<i>Metric Used:</i> 663			Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME
			Specifies the Top Source instance for which the data is collected	INSTANCE_ 0663
			Specifies the number of bytes sent from the top source instance	NUM_BYTES_ 0663
			Specifies the number of messages sent from the top source instance	NUM_MSGS_ 0663
			Specifies the source type - for example: internet address, another Microsoft Exchange server, gateway. A source type is a combination of a location type and location address	SRC_TYPE_ 0663
			Specifies the time interval at which data was collected	COUNTER_ 0663

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_DELIV This policy does not use embedded script. It calls other scripts which collect data.	Not applicable	Not applicableA unique key that is used for identifying the instance. The server name is used as the instance key.Specifies the Microsoft Exchange server name for which the data is collected	A unique key that is used for identifying the instance. The server name is used as the instance key.	INSTANCE_ KEY
Policy Name: EXSPI-6.X Dc-X.400 Service MTA Queue			Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME
Collects data from binary.			Denotes if the required percentage of messages (specified in SLAP PERCENT) has passed the SLA. 1 - indicates that the required percentage of messages have passed the SLA and 0 - indicates that the required percentage of messages have not passed the SLA	DELIVSTATUS

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
			Amount of time within which a message must be delivered to pass the SLA	SLATIME
			Percentage of messages which must pass the given SLA value	SLAPERCENT
			Denotes the total number of messages that were delivered	DELIVTOTAL
			Percentage of messages that were delivered within the SLA	PERCENTMET
			Number of messages that were not delivered within the specified SLA	TOTALMISSED SLA
			Denotes the average time taken to deliver a message	AVERAGE DELIV
			Specifies the exchange server from where the message has originated	ORIGSVR
			Specifies the time interval at which data was collected	INTERVAL_ KEY

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_ MTADATA Policy Name: EXSPI-6.X Dc-X.400 Service MTA Queue	Not applicable	Not applicable	Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME
Metric Used: 75		Specifies MTA inst the serve which the is collected Indicates path to the database directory Specifies of the MT database MB) Specifies free spac MB) avait the logica on which MTA data stored Specifies total size MB) of the logical dr which the database stored	Specifies the MTA instance in the server for which the data is collected	INSTANCE_ NAME
			Indicates the path to the MTA database directory	MTA DATABASE PATH
			Specifies the size of the MTA database (in MB)	MTA DATABASE SIZE
			Specifies the free space (in MB) available on the logical drive on which the MTA database is stored	MTA DATABASE FREE
			Specifies the total size (in MB) of the logical drive on which the MTA database is stored	MTA DATABASE TOTAL
			Specifies the percentage free space available on the logical drive on which the MTA database is stored	MTA DATABASEFP

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_ TRANSLOG Policy Name: EXSPI-6.X Transaction Log	G 2: 1 Log	Not applicable	Specifies the storage group name for which the data is collected	STORAGE GROUP_NAME
Space Usage Metric Used: 7		Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME	
			Specifies the path to the directory where transaction logs for this storage group is stored	TRANSLOG FILEPATH
			Specifies the total size of all the transaction log files present in the directory	TRANSLOG FILESIZE
	S fr M th ou tr a:	Specifies the free space (in MB) available on the logical drive on which the transaction logs are stored	TRANSLOG FILEFREE	
			Specifies the total size (in MB) of the logical drive on which the transaction logs are stored	TRANSLOG FILETOTAL

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
			Specifies the percentage free space available on the logical drive on which the transaction logs are stored	TRANSLOG FILEFP
			Specifies the time interval at which data was collected	INTERVAL_ KEY

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_PORTS Policy Name: EXSPI-6.X SMTP Port Response	Not applicable	applicable Not applicable	Specifies the target Microsoft Exchange server name on which the port is monitored	SERVER_ NAME
<i>Metric Used:</i> 1006			Specifies the name of the port that is being monitored	PORT_NAME
			Specifies the port number that is being monitored	PORT_ NUMBER
			Specifies the provider of the daemon listening to the port	SERVICE_ PROVIDER
			Specifies the number of bytes that have been sent to the port	SENT_BYTE
			Specifies the number of bytes that have been received from the port.	RECV_BYTE
			Specifies the time taken (in seconds) by the port to respond to the request	RESP_TIME

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
			Specifies the timeout (in seconds) set for availability checking. The port will be considered not available if no response has been received from the port before the	CONFIG_ TIMEOUT
			timeout.	

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_SRS - This table contains information about the SRS data space usage. Policy Name: EXSPI-6X-05m- SRS Data Space Usage			Specifies the path to the Site Replication Service directory (directory where SRS service maintains copy of legacy contents to be replicated with Microsoft Active Directory. This is present only if there is a	SRSDIRPATH
Metric Used:114			Microsoft Exchange 5.5 in the organization).	

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
			Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME
			Specifies the size (in MB) of the contents to be replicated	SRSDIRSIZE
			Specifies the free space (in MB) available on the logical drive on which the SRS directory is present	SRSDIRFREE
			Specifies the total size (in MB) of the logical drive on which the SRS directory is present	SRSDIRTOTAL
			Specifies the percentage free space available on the logical drive on which the SRS directory is present	SRSDIRPF
			Specifies the time interval at which data was collected	INTERVAL_ KEY

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
EXSPI_1002 Policy Name: EXSPI-6.X End to End Message	2 Not applicable End age	Not applicable	A unique key that is used for identifying the instance	INSTANCE_ KEY
Ping Metric Used:1002			Specifies the time interval at which data was collected	INTERVAL_ KEY
			Specifies the Microsoft Exchange server name for which the data is collected	SERVER_ NAME
			Specifies the site from which the ping message is sent	MSE_ORIG_ SITE
			Specifies the site to which the ping message is sent	MSE_DEST_ SITE
			Specifies the time at which a ping message was sent	PING TIMESTAMP
			Specifies the system name from which a ping message was sent	FROMSYSTEM
			Specifies the system to which a ping message was sent	TOSYSTEM

Data Store Table Name	Performance Object	Metrics/ Performance Counter	Metric Description	Metrics in the Table
			Specifies the status of the ping message. 0 => SLA has been met, 1 => SLA has been met within a short additional time 2 => SLA has been exceeded 3 => Request has failed to meet the SLA 4 => SLA is not available	INSTANCEVAL
			Specifies the SLA that has to be met by the ping request	SLA
			Specifies the additional time that the system should wait for the response before it can indicate that the SLA has been exceeded	SLA APPROACH
			Specifies the maximum time the system should wait for a response for the ping request before it can indicate that the request has failed	TIMEOUT
			Specifies the actual time taken for the ping response	MEASURED TIME

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