Spotlight® on Exchange Enterprise Edition

Quick Start Guide

Version 5.0.1

QUEST SOFTWARE

World Headquarters
8001 Irvine Center Drive
Irvine, CA 92618
www.quest.com
email: info@quest.com
U.S. and Canada: 949.754.8000

Please refer to our Web site for regional and international office information.

Spotlight on Exchange Enterprise Edition Quick Start Guide
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About This Guide

This document has been prepared to assist you in becoming familiar with Spotlight® on Exchange Enterprise Edition. The Quick Start Guide contains the information required to install and use Spotlight on Exchange Enterprise Edition, and is intended for network administrators, consultants, analysts, and any other IT professionals evaluating or using the product.

Conventions

In order to help you get the most out of this guide, we have used specific formatting conventions. These conventions apply to procedures, icons, keystrokes and cross-references.

ELEMENT	CONVENTION
Select	This word refers to actions such as choosing or highlighting various interface elements, such as files and radio buttons.
Bolded text	Interface elements that appear in Quest products, such as menus and commands.
Italic text	Used for comments.
Bold Italic text	Used for emphasis.
Blue text	Indicates a cross-reference. When viewed in Adobe Acrobat, this format can be used as a hyperlink.
	Used to highlight additional information pertinent to the process being described.
	Used to provide Best Practice information. A best practice details the recommended course of action for the best result.
	Used to highlight processes that should be performed with care.
	Used to direct the user to more information about a particular topic.
+	A plus sign between two keystrokes means that you must press them at the same time.
|	A pipe sign between elements means that you must select the elements in that particular sequence.

About Quest Software, Inc.

Quest Software, Inc. provides software to simplify IT management for 18,000 customers worldwide, including 75 percent of the Fortune 500. Quest products for application, database and Windows management help customers develop, deploy, manage and maintain the IT enterprise without expensive downtime or business interruption. Headquartered in Irvine, Calif., Quest Software can be found in offices around the globe at www.quest.com <http://www.quest.com>.

Contacting Quest Software

Phone	949.754.8000 (United States and Canada)
Email	info@quest.com
Mail	Quest Software, Inc. World Headquarters 8001 Irvine Center Drive Irvine, CA 92618 USA
Web site	www.quest.com

Please refer to our Web site for regional and international office information.

Contacting Customer Support

Quest Software's world-class support team is dedicated to ensuring successful product installation and use for all Quest Software solutions.

SupportLink	www.quest.com/support
E-mail	support@quest.com.

You can use SupportLink to do the following:

- Create, update, or view support requests
- Search the knowledge base
- Access FAQs
- Download patches

Product Overview

Spotlight on Exchange Enterprise Edition graphically displays, in real-time, the actual flow of data in an Exchange server providing Exchange administrators with the tools required to simplify and automate Exchange diagnostics and resolution. Unlike monitoring solutions that simply detect a problem, Spotlight on Exchange Enterprise Edition gives administrators the tools to understand exactly where the problem is and the quickest, most effective way to resolve the problem.

Key Features

Spotlight on Exchange Enterprise Edition displays the most current activity of your Exchange environment from a single interface and provides an easy-to-use conduit to the core subsystems that relate to Exchange functionality. Its real-time graphical counters and flows clearly indicate the current health of Exchange and allows for rapid resolution of trouble spots and performance bottlenecks. The following is a list of the key features of Spotlight on Exchange Enterprise Edition:

- Provides a high-level view of your Exchange environment in the Spotlight on Exchange Topology Viewer — an entry point into diagnosing your Exchange environment
- Allows you to collect counter values from specific Exchange servers without deploying agents
- Allows you to test the store responsiveness; mailbox logon time; external message transfer, OWA (Outlook Web Access) availability; and message delivery and delivery time of servers located anywhere in your organization
- Allows you to zero-in on specific servers using the Spotlight on Exchange Diagnostic Console, which shows actual email and operating system activity in real-time through its unique visual representation of process flows within Exchange server
- Allows you to reboot an Exchange server, and freeze or unfreeze queues without switching to other tools
- Tells you about problems — you do not have to ask about current server status. Audio or visual alarms are presented, and appropriate notifications can be sent if any Exchange server component exceeds specified thresholds
- Allows you to see all critical components on one screen
- Interprets raw data, draws conclusions, and recommends solutions
- Combines data from incompatible sources to make conclusions that are not possible using built-in tools
- Frees you from having to write your own diagnostic Exchange scripts
- Allows you to address server problems in the Topology Viewer by allowing you to start, stop or restart a service, or freeze, unfreeze or perform a force retry on a particular queue
- Allows integration with Microsoft Operations Manager (MOM) 2005 and MOM 2000, providing end-to-end discovery, diagnosis, and resolution of Exchange issues from a single console
- Automatically connects the Spotlight on Exchange console to the diagnostic services and applies a default template to each Exchange server during first launch of Spotlight on Exchange
- Allows you to apply default data collection templates to quickly get you up and running with data collection in your Exchange organization
- Allows you to modify an existing data collection template, and to stop all data collection in your current Exchange organization

Benefits

Empowers Administrators

As an administrator, ensuring that your Exchange servers are running smoothly is critical. Spotlight on Exchange Enterprise Edition provides a visual representation of your Exchange architecture, allowing you to respond quickly to performance problems before they become a major concern.

After identifying performance bottlenecks, Spotlight on Exchange Enterprise Edition assists you in improving server performance by providing data and follow-up knowledge in the form of Expert Help and drilldowns. If you are a junior administrator, Spotlight on Exchange Enterprise Edition helps you to understand the architecture and component relationships of an Exchange server.

Improved System Performance

Spotlight on Exchange Enterprise Edition allows you to analyze server performance against known baselines. When Exchange servers are operating below performance thresholds, you can quickly identify the source of the problem and take immediate steps to resolve it.

Touchless Architecture

Spotlight on Exchange Enterprise Edition uses an agentless architecture that increases the speed and ease of server deployment and reduces maintenance costs. This architecture requires no server-side agent software, so it reduces compatibility issues without impacting server performance. In addition, Spotlight on Exchange Enterprise Edition features an intuitive user interface, which can be accessed from any Windows 2000 workstation.

Real-Time Display of Server Availability

Messaging systems fail for many reasons that are not obvious. There may be network failures, application bugs, resource overload caused by a surge in network traffic, poor backend database performance, or a number of other events preventing Exchange network availability. Spotlight on Exchange Enterprise Edition tests the success, availability, and performance of the Exchange messaging environment, including the messaging server and all backend application support processes. In turn, you can receive early warnings to reduce system downtime and disruption. Graphs and tables allow you to track trends and determine when a greater investment in hardware and resources is needed to improve performance.

Minimized Downtime

Spotlight on Exchange Enterprise Edition minimizes downtime through proactive and predictive management. The majority of system failures have symptoms that can be identified prior to a major breakdown. Since Spotlight on Exchange Enterprise Edition collects data regularly and can be configured to consider all relevant subsystems affecting the performance of an Exchange server, it can identify and act upon these symptoms before they seriously impact users. The spending of resources on redundant hardware is reduced and valuable time is saved.

Spotlight on Exchange Enterprise Edition in Motion

You can fully appreciate the unique capabilities of Spotlight on Exchange Enterprise Edition when you see it in motion.

View an Entire Exchange Organization

Discover an Exchange server and watch as the entire Exchange server organization layout appears in the Spotlight on Exchange Topology Viewer. This is a tool that rapidly discovers and presents your Exchange server organization in a meaningful manner, offering a logical entry point for Exchange diagnostics. The Topology Viewer allows you to visually present your Exchange environment to suit your needs.

Collect Counter Values from Specific Exchange Servers

Click on a server displayed in the Spotlight on Exchange Topology Viewer and configure data collection for that server. The data collection feature allows you to collect Exchange server counter values without deploying agents. You can set thresholds and when counter values become critical, specified groups or individuals receive notification by email or pager.

Powerful Diagnostic Tests

Click on a server displayed in the Spotlight on Exchange Topology Viewer and configure a diagnostic test to run once locally or several times during a scheduled time frame. Spotlight on Exchange Enterprise Edition provides diagnostic tests to help administrators address common user complaints regarding email delivery and performance. The Store Responsiveness Test, the Message Delivery Test, the Mailbox Logon Test, the External Message Transfer Test, and the OWA Availability Test provide help desk administrators with quick, powerful methods to determine if further diagnostic action is required.

Display the Actual Flow of a Message

Submit a message with a large attachment to a recipient on another server and watch the Spotlight on Exchange Diagnostic Console show the message as it flows through Exchange. You can see the load while the message transfers to the information store. Watch the store pass the message on to the message transfer agent. The message is queued for delivery. View the MTA open a connection to the remote MTA and transfer the message.

Display Message Traffic in the Topology View

Select either the Server Message Flow view or the Connector Message Flow view from the Topology View list and see the total number of messages for a defined period that are currently moving from server to server, or routing group to routing group. These views give administrators an accurate, up to the minute view of the volume of messages that are flowing within their Exchange organization. Various links brighten as the volume of messages increase allowing administrators to quickly and easily identify routing bottlenecks, and over, and under-utilized servers.

Identify Client Access Patterns

Click the IMAP4 or POP3 buttons and drill down to view graphs that show the activity of users. Select the Connections tab to see the number of connections across each of the protocols. In one quick view you can see how users are accessing your server.

Identify Database Efficiency

Spotlight on Exchange Enterprise Edition identifies memory shortages. If the % Cache Hit flow on the Spotlight on Exchange 5.5 home page is green most of the time, the Exchange 5.5 server is probably fine. You can see the history by clicking the % Cache Hit flow to drill down to the Memory graph.

Identify Performance Bottlenecks Caused by Insufficient Memory

Look at the Store Memory component on the Information Store panel of the Spotlight on Exchange 2000/2003 Main home page. If the number appears high, you can click the component to view the Health tab of the Information Store drilldown. The Memory Usage graph shows the amount of virtual and physical memory used over time.

Identify Messages Stuck in Exchange Queues

For Exchange 5.5 servers hosting an Internet Mail Service (IMS), Spotlight on Exchange Enterprise Edition displays IMS queue content including originator, recipient, arrival date, subject, and file name. Now you can pinpoint a specific message on disk.

Click  on the Spotlight on Exchange 5.5 toolbar and select the Queued Contents tabs of the IMS drilldown to view the queues.

For Exchange 2000 or Exchange 2003 servers, you can click  on the Spotlight on Exchange 2000/2003 toolbar to access the Queue Management drilldown and see all messages in the SMTP queues.

Simplify Exchange Disk Management

Click  on the Spotlight on Exchange 5.5 toolbar and select the Disk Space Usage tab to see how Exchange is using disk space. Click on the System Disk component on the OS Subsystem panel of the Spotlight on Exchange 2000/2003 home pages to view the Disk Summary drilldown. This helps you verify that Exchange is partitioned properly and helps you see potential disk space problems developing. If there is a problem, you can quickly determine where sufficient free space exists.

Balance SMTP Load

Are you considering dedicated IMS for inbound or outbound? If so, click the IMS drilldown button in Spotlight on Exchange 5.5 and select the Statistics tab. This shows you exactly what your IMS has been doing since it was started. The SMTP component on the Main home page of Spotlight on Exchange 2000/2003 shows the total number of SMTP connections established by other SMTP hosts.

Balance Users per Mailbox Store

Look at the Storage Groups home page in Spotlight on Exchange 2000/2003 and see the number of mailboxes per store, the number of active and connected users, and the total number of mailboxes per storage group on an Exchange 2000 or Exchange 2003 server. There is no easy way to determine this with native tools.

Total Storage and Free Space

See the total storage and free space for all Exchange databases as well as the breakdown per Storage Group and Mailbox Store.

Directory Services

Fine-tune your Directory Access Cache using Spotlight on Exchange 2000/2003. You can also check core dependencies such as DNS and Global Catalog servers.

Data Collection

Apply a default data collection template, modify an existing template or stop all data collection in your Exchange organization as necessary.

Configure MOM Integration

Integrate with Microsoft Operations Manager (MOM) 2005 and MOM 2000 to provide end-to-end discovery, diagnosis and resolution of Exchange issues from a single console.

System Requirements

Before you install Spotlight on Exchange Enterprise Edition, ensure that your system meets the following hardware and software requirements:

Hardware Requirements

TYPE	MINIMUM	RECOMMENDED
Processor	• Pentium 3 or greater, running at a minimum speed of 800 MHz	• Pentium 4 running at a minimum speed of 1 GHz
RAM	• 256 MB	• 512 MB or more for computers running the data collection engine or the Microsoft SQL Server or MSDE database
Disk	• 100 MB of free disk space for the application. This space should exist on a local disk drive rather than a network drive. The space requirement varies depending on the size of the database.	
Other	• Monitor capable of supporting a resolution of 1024 by 768 pixels or greater. Spotlight on Exchange Enterprise Edition is designed to run on a desktop area of 1024 by 768 pixels or greater. • Pointer device must be available to access all Spotlight on Exchange Enterprise Edition features.	

Installation Components

The following table describes the installation components of Spotlight on Exchange Enterprise Edition:

<table>
<tr><th>COMPONENT</th><th>DESCRIPTION</th><th>PREREQUISITE SOFTWARE</th></tr>
<tr><td>Spotlight on Exchange Enterprise Edition Setup.exe
• Console</td><td>Diagnostic Console:
• Provides full diagnostic capability for Exchange 5.5 and Exchange 2000/2003 servers.
Topology Viewer:
• These components can be installed on any computers in the Exchange organization.
• You can use these components without installing the Data Collection components.</td><td>Required:
• Exchange System Manager (ESM) 2000 or 2003. We recommend ESM 2000 SP3 or later and ESM 2003 SP1 or later.
• Microsoft Data Access Component (MDAC) V2.6 or later.
Note: You can install MDAC from the Spotlight on Exchange Enterprise Edition Setup.exe.
Note: If you are running in an Exchange 5.5 environment and you do not have Exchange System Manager (ESM) installed, you must have Exchange 5.5 Administrator SP4 installed in order to avoid receiving error messages when you run Mailbox Logon and Message Delivery diagnostic tests.
Recommended:
• IIS Management Console</td></tr>
<tr><td>• Database</td><td>• Installs the database schema required to store configuration data, collected data, and diagnostic services data.</td><td>• Microsoft SQL Server 2000 or MSDE
• MDAC V2.6 or later
Note: You can install MSDE and MDAC from the Spotlight on Exchange Enterprise Edition Setup.exe.</td></tr>
<tr><td>Diagnostic Services</td><td>• Installs the diagnostic test and data collection services.
• Installs the components required to collect data and diagnose from Exchange servers.
• Stores the data to your Microsoft SQL Server 2000/MSDE database.
• Installs the notification engine required to accept email and pager notifications.
• Provides the ability to create and implement counter and threshold templates to collect data from Exchange servers.</td><td>• The Database Schema must be installed before the diagnostic services
• MDAC V2.6 or later
Note: You can install MDAC from the Spotlight on Exchange Enterprise Edition Setup.exe.
• ESM 2000/2003
Note: It is recommended that ESM 2000 users upgrade to the August 2004 Post SP3 Rollup.</td></tr>
<tr><td>Spotlight on Exchange Web Reports.exe</td><td>• Installs the components required to perform reporting against the collected data and diagnostic test results.</td><td>• The database and diagnostic services must be installed before Web Reports.
• IIS 5.0 or 6.0
• MDAC V2.6 or later
Note: MDAC is automatically installed if it is not already present on the computer.</td></tr>
</table>

Software Requirements

TYPE	MINIMUM
Operating Systems	• Microsoft Windows 2000 (Server or Professional) SP3 – OR – • Microsoft Windows 2000 Advanced Server SP3 – OR – • Microsoft Windows XP Professional SP1 – OR – • Microsoft Windows 2003 Server
Web Server	• IIS 5.0 or 6.0 (Windows 2003 Server only). • Manually enable ASP pages for Windows 2003 Server. • When you install Windows 2000 Server, IIS 5.0 is automatically installed. • If you use Windows 2000 Professional, or Windows XP Professional, you must manually add IIS 5.0 using the Add/Remove Programs facility. • You can install IIS on the same computer as Spotlight on Exchange Enterprise Edition or you can install IIS on a separate computer for enhanced performance and scalability.
Database Access	• MDAC (Microsoft Data Access Components) 2.6 or later.
Database Server	• Microsoft SQL Server 2000 SP3 – OR – • MSDE 2000 SP3
Browser	• Internet Explorer 5.5 – OR – • Internet Explorer 6.0
Other	• Local Windows Administrator privileges are required on the Spotlight on Exchange Enterprise Edition Console client. • Exchange 5.5 Administrator SP4 and Exchange System Manager privileges. • For a distributed install, MDAC must be installed on the Console client, diagnostic services computer, and IIS Server.

Supported Environments and Best Practices

The following table describes the environments that Spotlight on Exchange Enterprise Edition supports:

TYPE OF ENVIRONMENT	SUPPORTED ENVIRONMENT
Application Platform	• Windows 2000 Professional SP3 • Windows 2000 Server SP3 • Windows 2000 Advanced Server SP3 • Windows 2003 All editions • Windows XP Professional SP1 **Note:** Spotlight on Exchange Enterprise Edition supports French and German Exchange servers running on French and German versions of Windows operating systems.
Database Server **Note:** This server is where the Spotlight on Exchange Database Schema resides.	• Microsoft SQL Server 2000 SP3 • MSDE (SP3)
Web Server **Note:** This server is where the Spotlight on Exchange Web Reports Web site resides.	• IIS 5.0 • IIS 6.0
Client Browsers	• Internet Explorer 5.5 • Internet Explorer 6.0
Microsoft Exchange Version	• Exchange 5.5 • Exchange 2000 • Exchange 2003

Getting Started

The following sections are designed to help you start using Spotlight on Exchange Enterprise Edition to detect, diagnose, and resolve Exchange server problems as quickly and efficiently as possible.

For more detailed information about all features, see the Online Help and the user guides: Spotlight on Exchange Enterprise Edition User Guide and Spotlight on Exchange 5.5 Diagnostic Console User Guide.

Installing Spotlight on Exchange Enterprise Edition

The following diagram depicts the two installation setup files and the components that each setup file installs:

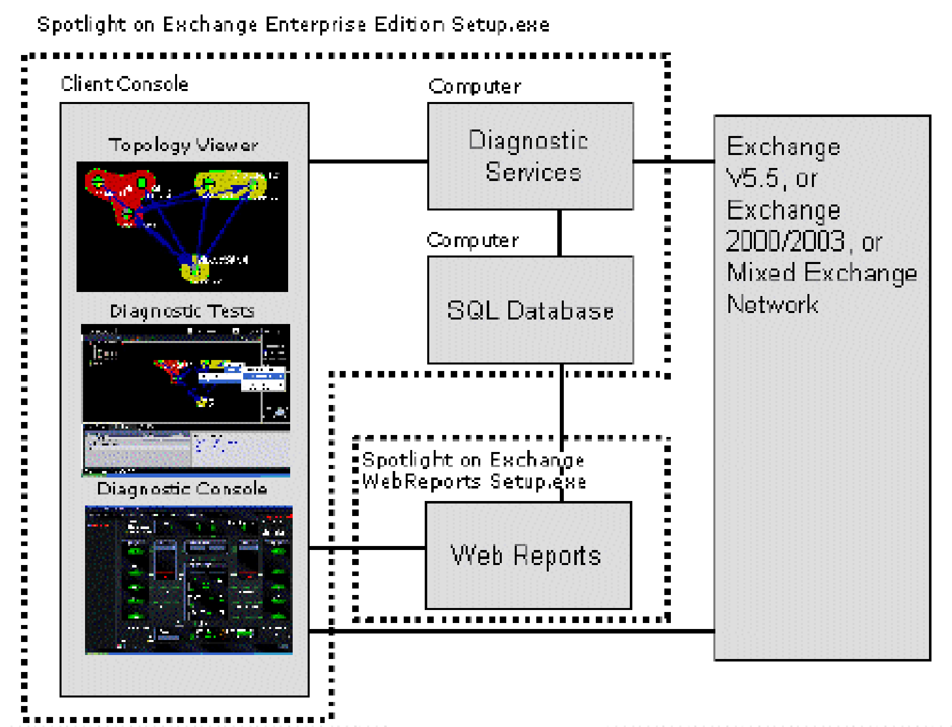

Figure 1: Diagram of installation setup files and components

Installation Setup Files

Spotlight on Exchange Enterprise Edition contains the following two installation setup files:

- Spotlight on Exchange Enterprise Edition Setup.exe
- Spotlight on Exchange Web Reports Setup.exe

Spotlight on Exchange Enterprise Edition must be installed before Spotlight on Exchange Web Reports.

Spotlight on Exchange Enterprise Edition Setup.exe

Spotlight on Exchange Enterprise Edition Setup.exe installs the following components:

COMPONENT	DESCRIPTION
Console	Includes the following: • Spotlight on Exchange Topology Viewer • Diagnostic Console components
Database	Installs the database schema.
Diagnostic services	Installs the data collection and diagnostic test components. Server status is reported directly to the Spotlight on Exchange Topology Viewer. You can store the server counter values and diagnostic test results in the database.

The Console, Database, Diagnostic Services, and Spotlight on Exchange Web Reports features can be installed on the same computer or individually on separate computers.

Spotlight on Exchange Web Reports Setup.exe

Spotlight on Exchange Web Reports Setup.exe installs components to perform reporting against the collected data and diagnostic test results.

Installation and Performance Considerations

You should consider the following best practice information when installing and using Spotlight on Exchange Enterprise Edition:

- All components of the Spotlight on Exchange Enterprise Edition application can reside on a single computer or on four separate computers. Quest Software recommends that large enterprises dedicate individual servers for each component. By placing the four components on four separate servers, you have dedicated server resources for each component, which minimizes contention for system resources.
- If you are planning to run all of the components of Spotlight on Exchange Enterprise Edition on a small network, you can install all of the components on one computer.
- Multiple Spotlight on Exchange Topology Viewer Consoles, installed on separate computers, can connect and receive server status from the diagnostic services. This configuration is recommended if you have more than 20 Exchange servers.

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- If you want to monitor more than 30 servers with a polling cycle of five minutes or less, Quest Software recommends that you install the diagnostic services on a different computer than the Console, the database and Web Reports components. The database and Web Reports can exist on the same server.
- If you have 60 or more Exchange servers, Quest Software recommends you install each of the four Spotlight on Exchange Enterprise Edition components on separate computers.
- You should install the Spotlight on Exchange Enterprise Edition components on non-Exchange servers. You do not have to run agents on your Exchange servers to use Spotlight on Exchange Enterprise Edition.
- Quest Software recommends that system administrators follow Microsoft best practices for Exchange, SQL Server, and IIS management including operational procedures and performing regular backups.

Spotlight on Exchange Enterprise Edition provides two installation types:

TYPE	DESCRIPTION
Complete	All Spotlight on Exchange Enterprise Edition components are installed on one computer. This installation type is best if you have less than 30 Exchange servers.
Custom	Spotlight on Exchange Enterprise Edition components can be installed on one or more computers. This installation type is best if you have a large Exchange server organization, or you intend to install Spotlight on Exchange Enterprise Edition on a non-default disk drive. **Note:** Quest Software recommends that if you have more than 30 Exchange servers, you install the console on one computer, and the diagnostic services and database on another computer. Spotlight on Exchange Web Reports can also be installed on the same computer as the diagnostic services and the database components. If you have more than 60 Exchange servers, Quest Software recommends that you install each component on a separate computer.

Installing Console and Data Collection Components on One Computer

To perform a complete installation

1. Log on to your computer using an account that has local administrative privileges.

   The local administrator account must be a member of the local administrator group or Domain Admin group.
2. Double-click the Spotlight on Exchange Enterprise Edition Setup.exe file.
3. Click **Next** in the Welcome dialog box.
4. Read the license agreement and select **I accept the license agreement**.

   *You must accept the license agreement to activate **Next**.*
5. Click **Next** to view the User Information dialog box.
6. Enter your full name and your organization name and select the **Anyone who uses this computer** or **Only for me** option.
7. Click **Next** to proceed to the Destination Folder dialog box.
8. Ensure that the Destination folder is correct and click **Next**.
9. Click **Next** to accept the default installation drive and path settings.
10. Select the Complete installation option and click **Next**.

    *A dialog box lists the prerequisite applications that have not been installed. If required, exit the installation wizard, install the required software, and relaunch the installation wizard, or click **Next** to continue with the installation.*

11. Indicate whether you want to start the SQL Server Agent Service.

    You should enable the automatic agent service if you have limited space on your hard disk; after the user-specified database retention period is over, the agent service automatically purges the database.

12. Identify the service account and password that you intend to use to start the Data Collection Engine and click **Next**.
13. Click **Next** on the Ready to Install the Application dialog box.
14. Click **Finish**.

Installing Components on Multiple Computers

You can install the Spotlight on Exchange Enterprise Edition Console and Data Collection components on separate computers. This is recommended if you have a large Exchange server organization. The components must be installed in the following order:

- Spotlight on Exchange Console
- Spotlight on Exchange Database Schema
- Spotlight on Exchange Diagnostic Services

You can install two components on one computer. The two components must be installed at the same time. If you install one component and then try to add another component to that computer, Spotlight on Exchange Enterprise Edition uninstalls the first component.

The following table illustrates the installation options available for each component:

OPTION	DESCRIPTION	ICON
Will be installed on local hard drive	All components of the selected feature are installed.	
Entire feature will be installed on local hard drive	All components of the selected feature are installed. **Note:** This option performs the same as the Will be installed on local hard drive option. It is recommended that you use the Will be installed on local hard drive option.	
Entire feature will be unavailable	The selected feature will not be available on the local computer.	

To perform a custom installation

1. Log on to your computer using an account that has local administrative privileges.

   The local administrator account must be a member of the local administrator group or Domain Admin group.

2. Double-click the Spotlight on Exchange Enterprise Edition Setup.exe file.
3. Click **Next** in the Welcome dialog box.
4. Read the license agreement and select **I accept the license agreement**.

   *You must accept the license agreement to activate **Next**.*

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5. Click **Next** to view the User Information dialog box.
6. Enter your full name and your organization name and select the **Anyone who uses this computer** or **Only for me** option.
7. Click **Next** to proceed to the Destination Folder dialog box.
8. Ensure that the Destination folder is correct and click **Next**.
9. Click **Next** to accept the default installation drive and path settings.
10. Select the Custom installation option and click **Next**.
11. Indicate the features you want to install on the local hard drive.

    You cannot remotely install Spotlight on Exchange Enterprise Edition components. You must manually install the components on different computers.

12. Click **Next**.

    The following table identifies the different pages that appear, depending on the features that you have selected for the local computer:

IF YOU SELECT	THIS PAGE APPEARS
Console	Recommendations This page lists the required or recommended software. When all the software is present, click **Next** to continue with the installation. **Note:** This page appears in the installation for each feature if one or more of the software prerequisites or recommendations are not present.
Database	Start SQL Server Agent Service This page appears if all software prerequisites are present. Click Yes if you want to enable the automatic agent service, **Note:** You should enable the automatic agent service if you have limited space on your hard disk; after the user-specified database retention period is over, the agent service automatically purges the database.
Diagnostic services	Select SQL Server Location Enter the server where the database is located and click Next; then supply the username and password for the account that will start the diagnostic services.

13. Click **Next** in the Ready to Install the Application dialog box.
14. Click **Finish** in the Spotlight on Exchange Enterprise Edition has been successfully installed dialog box.

Removing Spotlight on Exchange Enterprise Edition

To remove Spotlight on Exchange Enterprise Edition

1. Select **Start | Settings | Control Panel**.
2. Double-click **Add/Remove Programs** on the Control Panel.
3. Select **Spotlight on Exchange Enterprise Edition** and click **Remove**.
4. Click **Yes**.
5. Click **Remove** to remove Spotlight on Exchange Web Reports.
6. Click **Yes**.

Licensing Spotlight on Exchange Enterprise Edition

Spotlight on Exchange Enterprise Edition has an embedded 30-day trial key that is activated when you install the product.

If you wish to purchase a full production version of Spotlight on Exchange Enterprise Edition, contact your local Quest Software sales representative, or send an email to license@quest.com. When you send an email, please provide the following:

- Your contact information, including your name, company name and address, business phone number
- Product name including version number

Entering a Valid Authorization Key and Site Message

You can enter a valid authorization key and site message in the Spotlight on Exchange Topology Viewer.

To enter a valid authorization key and site message

1. Select **Help | About** in the Spotlight on Exchange Topology Viewer.
2. Click **Edit License**.
3. Enter the new authorization key and site message and click **OK**.
4. Click **OK**.

Diagnostic Console Template Migration

You can calibrate dataflows and change, enable, or disable thresholds when using the Spotlight on Exchange Diagnostic Console. The changes you make can be saved in custom template files. When you upgrade to a new version of Spotlight on Exchange, you can use the Quest Template Migration tool to merge the thresholds and metrics from the customized template to a new custom template file in the upgraded version.

You can access the Quest Template Migration tool from the following location: Program Files | Quest Software | Spotlight | Plug-ins | SpotlightonExchange | Unsupported | TemplateMigration.

To migrate a customized template to a new version of Spotlight on Exchange

1. Install the new version of Spotlight on Exchange Enterprise Edition.
2. Double-click **TemplateMigration**.
3. In the Input section, enter the path or browse to the location of the customized template file defined in the previous version of Spotlight on Exchange.
4. Enter the path of or browse to the location of the template file supplied by the new version of Spotlight on Exchange.
5. In the Output section, enter a name and the location of the migrated template to use in the new version of Spotlight on Exchange.

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6. Click **Migrate**.

Diagnostic Console template files, supplied when you install Spotlight on Exchange Enterprise Edition, have a default file name. When you customize the default template file, you should save the file with a new name. If you do not save the file with a new name, the file and all template settings are overwritten when you install the new version of Spotlight on Exchange Enterprise Edition.

The Spotlight on Exchange Topology Viewer

The Spotlight on Exchange Topology Viewer is the entry point to Spotlight on Exchange Enterprise Edition, showing your entire Exchange server organization at its highest level.

To launch the Spotlight on Exchange Topology Viewer

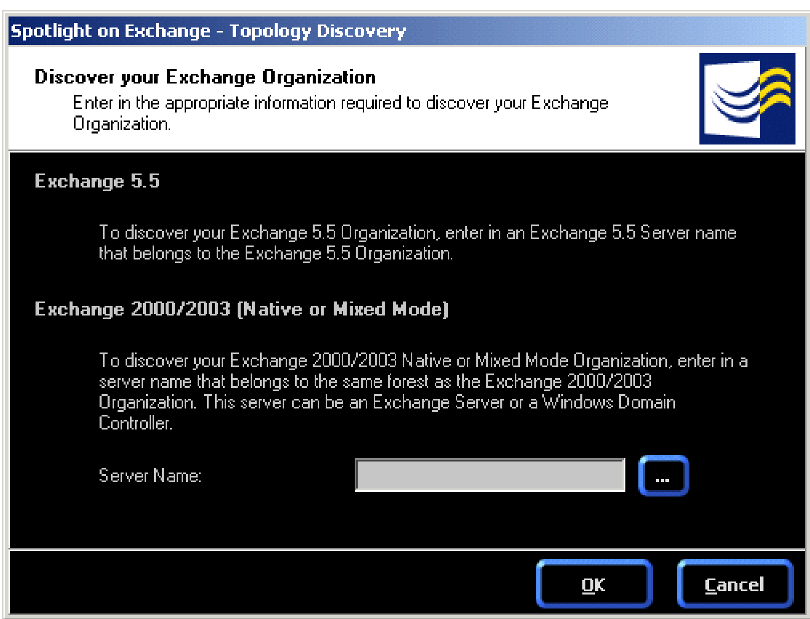
- Click  on the desktop.

  – OR –

  Select **Start | Programs | Quest Software | Spotlight on Exchange | Spotlight on Exchange Topology Viewer**.

Discovering the Exchange Server Organization

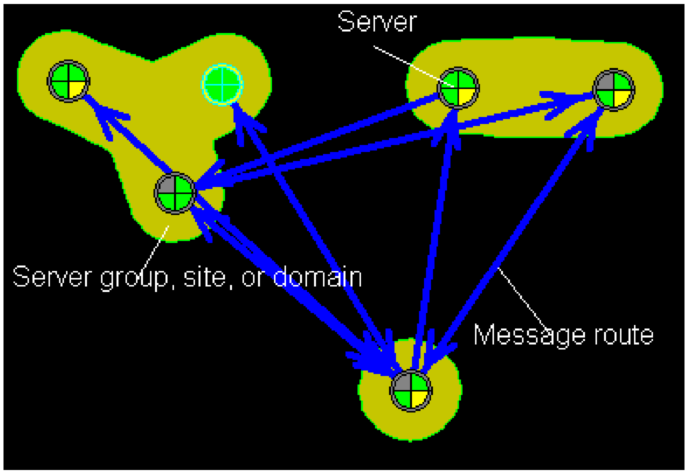
To discover a specific Exchange server organization, you must enter the name of a server that belongs to that organization into the Spotlight on Exchange Topology Discovery dialog box, shown in the following image:



To access the Spotlight on Exchange Topology Discovery box

- Select **File | Discover Topology**.

During the first part of the discovery process, the layout of the Exchange server organization is quickly drawn in the Topology View section of the Topology Viewer, shown in the following image:

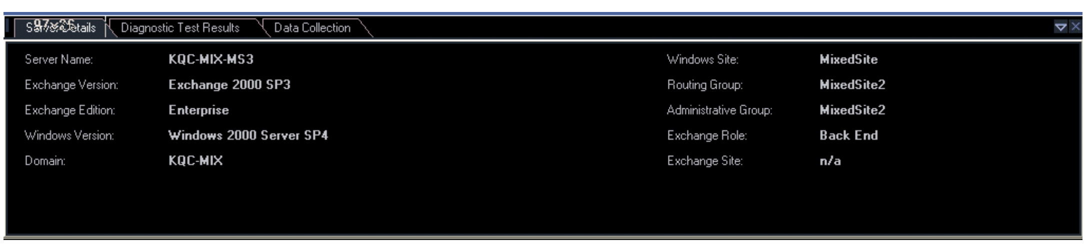


The Topology View is the largest section and the main visual and administrative focus of the Spotlight on Exchange Topology Viewer console. It is where the complete configuration of a specified Microsoft Exchange server organization is displayed, data collection is configured, Exchange server diagnostic tests are performed, and server status is viewed.

Individual servers within the organization are represented by nodes; which are shown within their current routing and administrative groups; Windows 2003 and Exchange 5.5 sites; or domains. Message routes between servers are indicated by blue lines and arrows.

You can fine tune the display by clicking buttons on the Topology View toolbar and by selecting commands from the menus.

Details are then collected about each Exchange server in the organization. You can view information about a server by first selecting (clicking) the server in the Topology View and then looking at the Server Details tab, shown in the following image. Some of the server details appear quickly. For the details that take longer to collect, "Loading" appears in the field until the information is available. If the information is not relevant to the server, "n/a" displays in the field. The Server Details tab is located in the Topology Summary panel in the bottom section of the Spotlight on Exchange Topology Viewer Console.



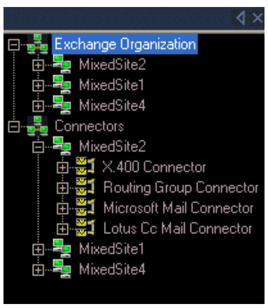
If a detail about a server is not available, the Server Details tab shows a message indicating that the detail is unavailable. The message appears in yellow text and does not mean that there is a problem with the server.

The data collected from each Exchange server in your organization is stored so that you do not have to rediscover the organization each time you open the Spotlight on Exchange Topology Viewer. However, if server configurations change, you can rediscover the organization or choose to discover a new organization.

To rediscover your Exchange server organization

1. Select **File | Discover Topology**.
2. Enter the name of a server belonging to the organization type you want to view and click **OK**.

The Topology Navigation View



The Topology Navigation View shows your Exchange server organization in a tree structure, which you can expand or collapse. The Topology Navigation View reflects the current server grouping displayed in the Topology View. For example, if you are viewing routing groups in the Topology View, the Topology Navigation View lists Exchange servers and connectors in their current routing groups.

Server status icons turn red to indicate critical monitored counter levels and failed Exchange server diagnostic tests. This critical server status is also shown at the group and organization level of the tree structure.

You can right-click a server name to configure the Exchange server diagnostic tests and data collection using shortcut menus.

The Topology Summary Panel

The Topology Summary panel is located in the bottom section of the Spotlight on Exchange Topology Viewer console. It is a dynamic panel that shows information about selected servers, diagnostic tests, and collected server data in the following three tabs:

- Server Details
- Diagnostic Test Results
- Data Collection

Saving and Loading the Topology Layout

You can save the layout of your Exchange server organization as it appears in the Spotlight on Exchange Topology Viewer. Only the visual layout of the Exchange server organization is saved and not the server details collected during the process of discovering your Exchange server organization. This feature is similar to a Back button because you can return to a previous layout after moving the servers and server groups in the Topology View.

You can return to the saved Topology Viewer layout by loading the saved Topology layout file.

To save the Topology layout

1. Select **File | Save Topology Layout**.
2. Browse to the location where you want to save the Topology Viewer layout.
3. Enter a name for the Topology Viewer layout.
4. Select the TXT file type.
5. Click **Save**.

To load the Topology Viewer layout

1. Select **File | Load Topology Layout**.
2. Browse to the location of the saved Topology Viewer layout file.
3. Select the saved topology layout file and click **Open**.

Viewing Multiple Exchange Server Organizations

You can use the Spotlight on Exchange Topology Viewer to connect to multiple Exchange server organizations. You can use the Current Exchange Org list on the main toolbar to switch your view of organizations you have discovered.

Changing the Topology View

You can change the topology view by selecting from four different views in the Topology View list. Select from the following views to display the message routing paths and message flow paths that you want to display:

- Server Routing
- Connector Routing
- Server Message Flow
- Connector Message Flow

The following table lists the selected view and the corresponding description:

VIEW	DESCRIPTION
Server Routing	Displays the potential message routing paths between servers.
Connector Routing	Displays the potential message routing paths between connectors.
Server Message Flow	Displays actual message flow paths used between servers.
Connector Message Flow	Displays actual message flow paths used between connectors.

Current Server Grouping

The Spotlight on Exchange Topology Viewer displays Exchange 5.5, 2000, and 2003 servers as they currently exist within Exchange server groupings in your Exchange server organization. Exchange server groupings are represented by the labelled and colored area that surrounds the servers. The current grouping color reflects the highest server severity in the group. To allow more space between them, you can select and drag server groupings to new locations in the display.

You can view the following server groupings in the Spotlight on Exchange Topology Viewer:

- Routing Group (Exchange 2000/2003 servers only)
- Administrative Group (Exchange 2000/2003 servers only)
- Windows 2000 Site (Exchange 2000/2003 servers only)
- Exchange 5.5 Site (Exchange 5.5 servers only)
- Domain

To change the view of current server groupings

- Select an option from the Current Grouping list.

Highlighting Server Types

You can quickly highlight all Exchange servers displayed in the Spotlight on Exchange Topology Viewer by making selections from the Highlight list, shown below. When you choose from the Highlight list, the servers are not only highlighted; they are also selected; you can right-click the highlighted servers to perform Exchange server diagnostic tests or configure data collection and notification.

To highlight servers

- Select one of the following options from the Highlight list:
  - None
  - All Servers
  - All Exchange 2000 Servers
  - All Exchange 2003 Servers
  - All Exchange 5.5 Servers

Configuring MOM Integration

Spotlight on Exchange Topology Viewer offers integration with Microsoft Operations Manager (MOM) 2000 and MOM 2005, providing end-to-end discovery, diagnosis, and resolution of Exchange issues from a single console. When you highlight a domain controller (DC) alert in the MOM console, you can right-click and launch the Spotlight Diagnostic Console to view the problem DC in real-time, determine the root cause of the issue, and resolve it.

In order for MOM integration to work, you must also install Spotlight Launcher. Copy the following two files to the directory where both MOM and Spotlight are installed.

- SpotlightLauncher.exe
- Spotlights.xml

To configure MOM 2005 integration

1. Select **Start | Programs | Microsoft Operations Manager 2005 | Administrator Console**.
2. Right-click the **Tasks** folder in the treeview and select **Create Task** to open the Create Task Wizard.
3. Click **Next**.
4. Select **Operator Console** as the run location and click **Next**.
5. Select **Events** as the view type.
6. Enter the path to SpotlightLauncher.exe in the Task Command Line box. For example: "C:\Program Files\Quest Software|Spotlight\MOM Launcher|SpotlightLauncher.exe".

   SpotlightLauncher.exe is provided with Spotlight on Exchange Topology Viewer.
7. Click the arrow on the right side of the Command box and add the MOM database server name after the Computer Name.
8. Click **Next**.
9. Enter **Diagnose using Spotlight** in the name box.
10. Click **Finish**.

To configure MOM 2000 integration

1. Open the Microsoft Operations Manager Console.
2. Right-click **Monitor** in the left pane treeview.
3. Select **New | Custom Task**.
4. Select the Microsoft Operations Manager users who can use this task from the Task available to list.
5. Select alert items from the Task available for list.
6. Click **Add**, then enter a name and description for the custom action.
7. Enter the path to SpotlightLauncher.exe in the Command box.
8. Click the arrow on the right side of the Command box and select **Computer** from the list.
9. Click **OK**.
10. Click **OK**.

To launch Spotlight from a MOM alert view

1. Right-click an alert in an alert view.
2. Select **Custom Tasks**.
3. Select the Diagnose using Spotlight name.

Exchange Server Diagnostic Tests

The diagnostic tests provide in-depth information about

- Store responsiveness
- Message delivery and delivery time
- Mailbox logon and responsiveness
- OWA availability
- External message transfer

You can configure each diagnostic test to run once locally or you can schedule the tests to run several times during a specified time period. The following table describes options available for scheduled and unscheduled diagnostic tests:

TEST TYPE	OPTIONS
Scheduled	• Test configuration and test results are saved to the diagnostic services database; you do not have to reconfigure to rerun the test. • Advanced options such as scheduling, notification, and impersonation are available.
Unscheduled (run once locally)	• Test configuration and test results are not saved to the diagnostic services database; if you want to rerun the test, you must reconfigure the test. • Advanced options such as scheduling, notification, and impersonation are not available.

For more information, see “Scheduling Diagnostic Tests” on page 31. For more detailed information about scheduling diagnostic tests and managing scheduled diagnostic tests, see the Spotlight on Exchange Enterprise Edition 5.0.1 User Guide or the Online Help.

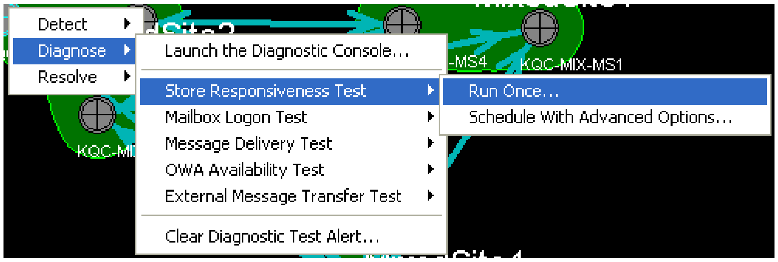
The following table describes the Exchange server diagnostic tests:

TEST	DESCRIPTION
Store Responsiveness	• You can use the Store Responsiveness Test to determine whether the information store on the target Exchange server (or servers) is capable of processing mailbox requests. • The functionality of the information store directly impacts the functionality of mail clients such as Microsoft® Outlook®, and as a result, this test can provide answers to questions frequently sent to Help Desk personnel regarding mail client inefficiency. **Note:** You must have local Microsoft Windows operating system administration rights to use the Store Responsiveness Test.

TEST	DESCRIPTION
Mailbox Logon	• You can use the Mailbox Logon Test to determine mailbox logon time and mailbox responsiveness for a specific Exchange server mailbox. **Note:** You must have full mailbox access rights to the Exchange server mailbox in order to perform the Mailbox Logon Test. **Note:** The Mailbox Logon Test enumerates server mailboxes by sending an LDAP query to the target servers. The test fails if the LDAP port number is changed on a Exchange 5.5 server.
Message Delivery	• You can use the Message Delivery Test to determine if messages are delivered between selected mailboxes on any two servers in your Exchange server organization within a configured amount of time. • The test message can be sent between servers regardless of whether or not they exist in the same routing group. **Note:** You must have full mailbox access rights to both the originating and target Exchange server mailboxes in order to perform the Message Delivery Test. If you do not have the appropriate administrative rights to the servers, you cannot log on to the selected mailboxes to determine if the test message has been sent or received.
OWA Availability	• You can use the OWA Availability Test to determine if Outlook Web Access is available on the Exchange server, allowing users to remotely access their email. **Note:** You must have full mailbox access rights to the target Exchange server mailbox in order to perform the OWA Availability Test on a specific mailbox. You must also be connected to Diagnostic Services with write access in order to schedule diagnostic tests.
External Message Transfer	• You can use the External Message Transfer Test to send and track a message from any mailbox on any server to any SMTP destination. **Note:** You must have full mailbox access rights to the originating Exchange server mailbox in order to perform the External Message Transfer Test. If you do not have the appropriate administrative rights to the servers, you cannot log on to the selected mailboxes to determine if the test message has been sent. You must also be connected to Diagnostic Services with write access in order to schedule diagnostic tests

To perform Exchange server diagnostic tests

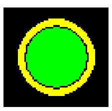
1. Right-click a server in the Topology View.
2. Select **Diagnose** and choose from one of the available tests.
3. Choose to run the test once locally or schedule the test using advanced options.



Viewing Exchange Server Diagnostic Test Results

You can view Exchange server diagnostic test results in the outside ring of servers and in the Diagnostic Test Results tab of the Spotlight on Exchange Topology Viewer. You can clear the server ring of the alert color after viewing the test results.

Outside Ring



You can view Exchange server diagnostic test results in the outside ring of the Exchange server on which the test is performed. The following table shows the colors used to indicate test results:

RING COLOR	TEST RESULT
Green	Exchange server passed the test
Yellow	Exchange server diagnostic test failed to run
Red	Exchange server failed the test

To clear the diagnostic test alert

- Right-click the server and select **Diagnose | Clear Diagnostic Test Alert**.

The Diagnostic Test Results tab

The Diagnostic Test Results tab is divided into two panels, each providing Exchange server diagnostic test status and results. The Diagnostic Test results tab does not provide test details until you run an Exchange server diagnostic test. You can view details for the tests that run once locally and for scheduled tests.

The following table describes the Exchange server diagnostic test information shown in the Diagnostic Tests tab:

TAB SECTION	DESCRIPTION
Tree structure (left section of Diagnostic Test Results tab)	Results and status of Exchange server diagnostic tests are presented in a tree structure, which you can expand and collapse. At the highest level, diagnostic tests are organized in the tree structure by the following test types: • Store Responsiveness • Message Delivery • Mailbox Logon Under the top level, individual diagnostic tests of that type are listed along with the date and time of test initialization. If you expand the individual tests, you can see the names of servers and mailboxes used for the test. You can also see: • The test progression details • The date and time that test results were updated in the tree structure (Last Update) • The last test result (Last Result) You can click on the root of individual diagnostic tests to view the corresponding information in the details panel on the right side of the Diagnostic Test Results tab.
The diagnostic test result details panel	Details about Exchange server diagnostic tests are presented with text in the right section of the Diagnostic Test Results tab. The details are shown when you select the top level of an individual test in the tree structure. In the text view, each test is introduced by the name of the diagnostic test, test start time, and a statement to indicate whether or not the test completed successfully. The information that follows indicates final test results and specific server or mailbox details.

Scheduling Diagnostic Tests

You can schedule Exchange server diagnostic tests to proactively check the status of Exchange servers at the application level before problems occur, or after you fix an issue to make sure the problem has been resolved. You can use advanced options to configure a test to run only once, or at several intervals during a specified time period. Once configured, scheduled diagnostic tests can run whether the Topology Viewer user interface is open or closed.

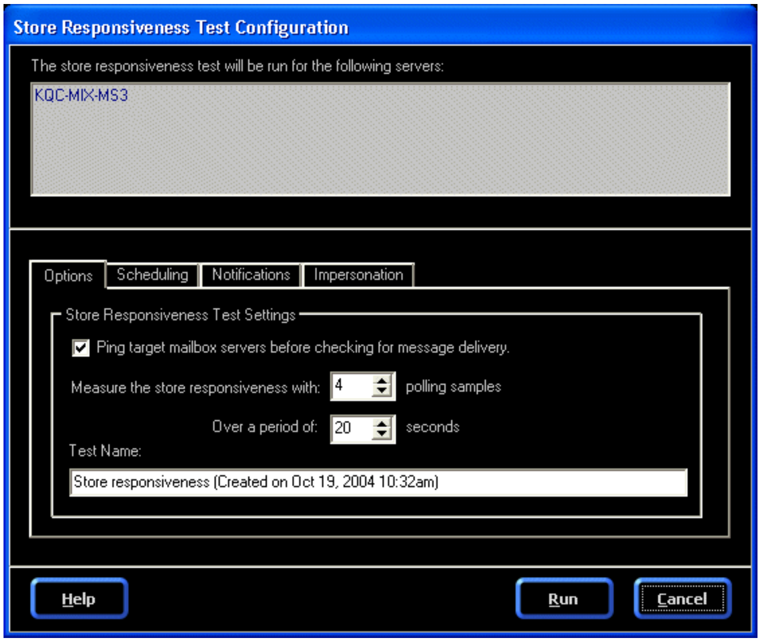
You have to install and connect to the diagnostic services in order to access the advanced diagnostic test options, which include scheduling, notification, and impersonation. Diagnostic services are automatically installed during the Standard Installation process.

To schedule diagnostic tests

1. Right-click a server in the Topology View.
2. Select **Diagnose** and choose from one of the available tests.
3. Choose **Schedule with Advanced Options**.

cont'd...

4. Enter test configurations into the Test Configuration dialog box.



For more detailed information about diagnostic test advanced options available in the Test Configuration dialog box, see the Spotlight on Exchange Enterprise Edition 5.0.1 User Guide or the Online Help.

Data Collection

The data collection feature allows you to collect values from Exchange server counters without deploying agents.

For Exchange 5.5 servers, values can be collected for the following counter categories:

- Performance
- Service status
- Network status

For Exchange 2000/2003 servers, values can be collected for the following counter categories:

- Performance
- Service status
- SMTP queues
- Network status

You can set thresholds and if counter values enter configured critical thresholds, Spotlight on Exchange can notify you using the following methods:

- Sending email
- Sending a message to a pager
- Launching a command line application

For more information, see “Data Collection Templates” on page 38.

Using Data Collection

The following sections describe how to start collecting counter values from Exchange servers displayed in the Spotlight on Exchange Topology Viewer. Configuring data collection includes the following:

- Connecting to the diagnostic services
- Configuring data collection
- Setting data collection options
- Configuring notification groups

Connecting to the Diagnostic Services

To start collecting data from Exchange servers displayed in the Spotlight on Exchange Topology Viewer, you must first connect to the diagnostic services. The diagnostic services are automatically installed during the Standard Installation process.

When you disconnect from the diagnostic services, data continues to be collected and stored to the database.

The diagnostic services run under an account, which must have sufficient administrative privileges to collect Exchange server data. The following table lists the required administrative privileges:

DATA CATEGORY	ADMINISTRATIVE PRIVILEGE
Perfmon	Read-only access to server registry
Services	Read-only access to server service control manager
SMTP Queues	Exchange administrator
Network	No privileges required

When connecting to the diagnostic services, you are asked to enter the address of the computer on which the diagnostic services are installed.

The following address formats are supported:

- IP address
- NetBIOS name
- Fully-qualified name of computer

To connect to the diagnostic services

1. Select **File | Connect to Diagnostic Services**.
2. Enter the address of the computer on which the data collection engine resides.
3. Click **OK**.

Configuring Data Collection

The quickest way to start collecting data from your Exchange servers is to use the Highlight list to select the type of server you want to collect counter values from and apply one of the templates supplied by Spotlight on Exchange Enterprise Edition. A data collection template is a set of predefined counters and thresholds.

Server counters, from which you are currently collected data, are cleared when you apply a template to the server. You can only collect data from the counters specified in the template after the template is applied.

To collect data from all Exchange 5.5 servers using the Exchange 5.5 template

1. Select **All Exchange 5.5 Servers** from the Highlight list.

2. Right-click one of the highlighted servers and select **Detect | Apply Template**.
3. Select **Exchange 5.5 Template**.
4. Click **OK**.
5. Click **OK**.

To collect data from all Exchange 2000 servers using the Exchange 2000 template

1. Select **All Exchange 2000 Servers** from the Highlight list.
2. Right-click one of the highlighted servers and select **Detect | Apply Template**.
3. Select **Exchange 2000 Template**.
4. Click **OK**.
5. Click **OK**.

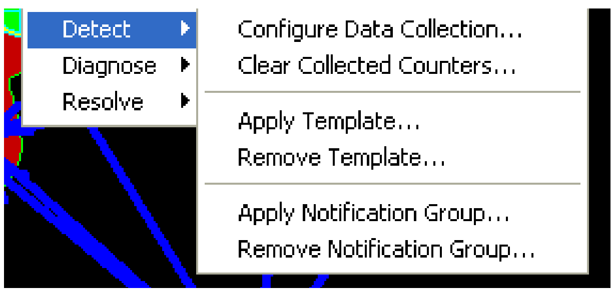
Selecting Counters

If you do not want to use a template, you can select the counters from which you want to collect values. The diagnostic services retrieve all available counters from the selected server and provide a list in the Available Counters section of the Configure Data Collection dialog box. The counters are arranged under counter categories in a treeview, which you can expand and collapse. The available counter categories include the following:

- Performance
- Services
- Network
- SMTP Message Queues (Exchange 2000/2003 servers only)

To select counters

1. Right-click a server in the Topology View and select **Detect |Configure Data Collection.**



2. Select a counter in the Available Counters section and click **Add**.
3. Click **OK**.

Configuring Counter Threshold Values

Selected counters are added to the Selected Counters section where you can define counter thresholds. You can enter critical and warning threshold counter values. Some of the warning and critical threshold values shown in the edit box lists are numerical while other values are textual. The value shown depends on the type of counter.

The edit box appears when you click in the counter table row under the column heading.

The following symbols are listed under Condition:

- <> (Not equal to)
- > (Greater than)
- < (Less than)
- = (Equal to)

To configure counter threshold values

1. Right-click a server in the Topology View and select **Detect | Configure Data Collection**.
2. Select a counter instance in the Selected Counters section.

cont'd...

3. Click in the Condition column and select a condition from the list.
4. Click in the Warning Threshold column to enter a value.
5. Click in the Critical Threshold column to enter a value.
6. Click **Yes** in the Notify? column if you want to enable notification.
7. Click **OK**.

You can create your own template by clicking **Save** after selecting counters and configuring counter threshold values.

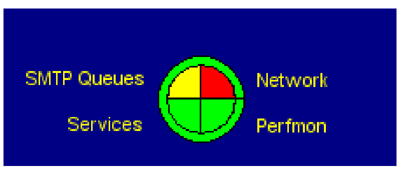
Viewing Server Status

You can view the status of collected counters in the pie chart, which is located in the center of the servers displayed in the Topology View. Counter status is indicated by the following color scheme:

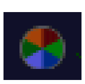
- Green indicates that the counter values are normal
- Yellow indicates that counter values in the data category are approaching the critical threshold
- Red indicates that counter values in the data category have entered the critical threshold

The nodes appear grey when you first start the Topology Viewer and remain grey until you connect to the diagnostic services, apply a template or configure data collection, and begin collecting server data.

If you cannot see the pie chart, you can click the pie chart button on the toolbar to enable it.

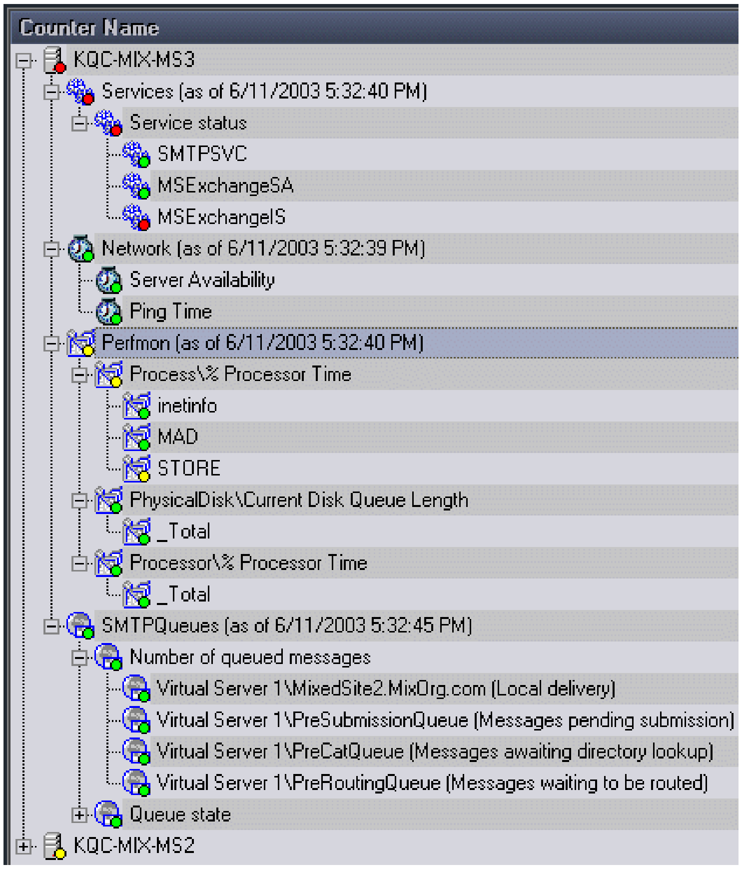


To hide or show the pie chart

- Click  on the toolbar.

Servers appear grey when you are not collecting server data.

You can find out more about collected counter values in the Data Collection tab.



The date and time of data collection is shown beside the name of each counter category. The colors on counter icons indicate counter status. The following table describes the counter status represented by the icon color:

COLOR	STATUS
Green	The counter icon is green if the counter value is OK.
Yellow	The counter icon is yellow if the counter value has entered the warning threshold or if the counter value is unavailable.
Red	The counter icon is red if the counter value has entered the critical threshold.

You cannot edit the information displayed in the Data Collection tab.

Data Collection Templates

A data collection template is a set of predefined counters and thresholds. You must have at least one counter configured before attempting to create a template. The template is saved in the data collection database allowing multiple users to access templates.

All currently monitored counters on the server are cleared when you apply a template to a server. Only the counters specified in the template are monitored after the template is applied.

To create data collection templates

1. Right-click a server in the Topology View or the Topology Navigation View.
2. Select **Detect | Configure Data Collection** to view previously configured counters or to configure counters.
3. Click **Save**.
4. Enter a template name.
5. Enter a template description (optional).
6. Click **OK** to save the template.

Automatically Applying Default Templates

Spotlight on Exchange Topology Viewer contains a feature that automatically connects the Spotlight on Exchange console to the diagnostic services and applies a default template to each Exchange server during first launch of the product.

Diagnostic Services and the Spotlight on Exchange Topology Viewer Console must be installed on the same computer for this feature to be available.

The first time that you launch Spotlight on Exchange Topology Viewer you are automatically connected to the diagnostic servers and the default data collection templates are applied to the appropriate servers. This allows you to easily view the data collection status of all servers in the topology view.

Spotlight on Exchange automatically performs the following tasks the first time you launch the Topology Viewer:

- The Spotlight on Exchange Topology Viewer is launched after installation.
- Spotlight on Exchange Topology Viewer attempts to discover the Exchange organization.

  If the discovery of the Exchange organization is unsuccessful no connection to diagnostic services is attempted.

After discovery, Spotlight on Exchange Topology Viewer attempts a connection to the local diagnostic services.

If the connection is unsuccessful, an error message is displayed and the normal Topology Viewer behavior continues.

The following table identifies the default templates that are applied to the appropriate versions of Exchange server:

EXCHANGE SERVERS	DEFAULT TEMPLATE
Exchange 5.5	Exchange 5.5
Exchange 2000 Back End	Exchange 2000
Exchange 2000 Front End	Exchange 2000 Front End
Exchange 2003 Back End	Exchange 2003
Exchange 2003 Front End	Exchange 2003 Front End

The following two scenarios occur when Spotlight on Exchange Topology Viewer is launched after installation, and no attempt is made at connecting to the diagnostic services:

- the diagnostic services are installed on another computer
- Spotlight on Exchange is installed as an upgrade from a previous version and data collection was previously configured

Manually Applying the Default Templates

Spotlight on Exchange Topology Viewer allows you to quickly get up and running with data collection in your Exchange organization by applying default data collection templates.

The Spotlight on Exchange Topology Viewer must be started, an Exchange organization must be discovered, and the console must be connected to the diagnostic services.

To apply a default template

1. Launch **Spotlight on Exchange Topology Viewer**.
2. Discover the necessary Exchange organization and connect to diagnostic services.
3. Select **Actions | Apply Default Data Collection** to apply a default data collection template.

   A dialog box warns you that selecting this action will remove any previously configured data collection counters.
4. Select **Yes** to apply a default template for each server in the current Exchange organization.

   – OR –

   Select **No** if you do not want to apply a default template for each server.

   If you select Yes, any existing data collection will be replaced by the data collection counters on the default templates.

Modifying an Existing Data Collection Template

Spotlight on Exchange Topology Viewer allows you to modify an existing data collection template. This is useful if you want to customize an existing template, for example, by adjusting a threshold or adding or removing a counter.

The Spotlight on Exchange Topology Viewer must be started, an Exchange organization must be discovered and connected to the diagnostic services, and at least one data collection template must exist.

Using this feature after the template has been modified does not change any previous data collection that was configured on servers using this template.

To modify an existing data collection template

1. Launch **Spotlight on Exchange Topology Viewer**.
2. Discover the necessary Exchange organization and connect to diagnostic services.
3. Apply an existing template to one or more servers in the Exchange organization.
4. Right-click a server in the Topology View and select **Detect | Configure Data Collection**.
5. Make changes to the counter configuration as necessary.
6. Click **Save**.
7. Select an existing template name from the list and enter it into the New Template Name box.
8. Enter an appropriate template description into the New Template Description box.
9. Click **OK**.
10. Select **Yes** in the Overwrite existing templates dialog box to overwrite the existing template.

    – OR –

    Select **No** if you do not want to make any changes to the existing template.

    If you select Yes, the existing template with the same name is replaced with the counter configuration that you have modified.

Clearing all Existing Data Collection

Spotlight on Exchange Topology Viewer allows you to quickly stop all data collection in your current Exchange organization. This action clears any existing configured counters from each server in that Exchange organization.

The Spotlight on Exchange Topology Viewer must be started, an Exchange organization must be discovered, and the console must be connected to the diagnostic services.

To clear existing data collection

1. Launch **Spotlight on Exchange Topology Viewer**.
2. Discover the necessary Exchange organization and connect to diagnostic services.
3. Select **Actions | Clear All Existing Data Collection**.

4. Select **Yes** in the Clear All Existing Collected Counters dialog box to clear data collection in your Exchange organization.

   – OR –

   Select **No** if you do not want to clear any existing configured counters from each server.

   If you select Yes, any existing configured counters are cleared from the servers in your Exchange organization.

As a result of this action the colors of the pie slices on the server's nodes appear gray to indicate that there is currently no data collection being performed.

The Actions | Clear All Existing Data Collection menu item is unavailable if you are not connected to diagnostic services.

Notification

You can configure the diagnostic services to email or page designated groups and group members if:

- Exchange server counters, configured to generate notifications, enter critical thresholds
- Exchange servers fail diagnostic tests

You can use the same notification groups for data collection and diagnostic tests.

Configuring Notification for Data Collection

There are some important points to remember when configuring notification for data collection:

Data Collection

- Notification groups must be created before they can be applied to servers.
- You must enable notification for individual counters on servers.
- You must enter the name of the SMTP server before email notification can be sent.
- The modem you use for sending notification by pager must be installed on the same computer as the diagnostic services.

Configuring notification for data collection includes the following steps:

- Creating notification groups
- Setting notification options
- Enabling notification
- Applying and removing notification groups

To create notification groups

1. Select **Edit | Notification Groups** to view the Notification Groups dialog box.
2. Click **New** in the Notification Groups section.
3. Enter a name for the group you are creating in the Group Name column.
4. Enter a subject line for the notification email in the Subject Line column.
5. Enter an originating email address for the notification email in the From Address column.
6. Click **OK** to save the notification group information.

To add group members

1. Select **Edit | Notification Groups** to view the Notification Groups dialog box.
2. Enter an SMTP server for mail notification sending.
3. Click **New** in the Group Members section.
4. Enter the first name of the person to receive the email notification in the First Name column.
5. Enter the last name of the person to receive the email notification in the Last Name column.
6. Select **Yes** or **No** in the Enabled? column to enable or disable the recipient.
7. Click **OK** to save the notification group information.

To enable notification by pager

1. Select **Edit | Notification Groups** to view the Notification Groups dialog box.
2. After creating the notification group and adding group members, click the **Pager** tab.

   You must enter the name of an SMTP server for mail notification sending before you can enter pager information.

3. Click **New**.
4. Enter the pager number in the Pager# column.
5. Enter the pager identification number in the Pager PIN column.

   You can leave the Pager PIN column blank if the pager identification number is not required.

6. Click **OK** to save the notification group information.

To set notification options

1. Select **View | Diagnostic Services Options**.
2. Click **Global Notifications** in the Options panel.
3. Enter data into the following fields in the Global Notifications panel:
   - SMTP server for sending email notifications
   - Modem to use for paging
   - Application to run on alert
   - Parameters for the application

For more detailed information about setting notification options, see the Spotlight on Exchange Enterprise Edition 5.0.1 User Guide or the online Help.

To enable notification for counters

1. Right-click a server in the Topology View and select **Detect | Configure Data Collection** to open the Configure Data Collection dialog box.
2. Select a counter in the Selected Counters section.
3. Click in the Notify? column and select **Yes**.
4. Click **OK**.

To apply a notification group

1. Right-click a server in the Topology View and select **Detect | Apply Notification Group**.
2. Select a notification group.
3. Click **OK**.

To view the notification group applied to a server

- Right-click a server in the Topology View and select **Detect | Apply Notification Group**.

  The notification group applied to the server is shown in the Select a notification group dialog box.

To remove a notification group

1. Right-click a monitored server in the Topology View for which a notification group has been applied.
2. Select **Detect | Remove Notification Group**.

Configuring Notification for Diagnostic Tests

You can use the notification groups currently configured for data collection when you configure notification for the diagnostic tests. If the data collection notification groups are not yet set up, or if you want to edit data collection notification groups to use for diagnostic tests, you can follow the same procedures for setting them up as shown in the previous section. For more information, see the following procedures:

- “To create notification groups” on page 42
- “To add group members” on page 42
- “To enable notification by pager” on page 42
- “To set notification options” on page 42

There are some important points to remember when configuring notification for diagnostic tests:

- Notification groups must be created before they can be selected during diagnostic test configuration.
- You must install the diagnostic services and connect to the database with write access.
- You must enter the name of the SMTP server before email notification can be sent.
- The modem you use for sending notification by pager must be installed on the same computer as the diagnostic services.

To select a notification group

1. Right-click an Exchange server in the Topology Viewer and select **Diagnose**.
2. Select a diagnostic test and then select **Schedule with Advanced Options**.
3. Configure the test by specifying the appropriate servers and mailboxes and then select the **Notifications** tab in the Advanced Options section.
4. Select a preconfigured notification group from the list and click **Run**.

Spotlight on Exchange Web Reports

Spotlight on Exchange Enterprise Edition stores all collected counter data to an SQL Server/MSDE database. Spotlight on Exchange Web Reports gives you the ability to create reports for the collected data. You can use the sample report provided or, using Web Reports custom reporting options, you can create reports specific to your requirements.

You can install the Spotlight on Exchange Web Reports feature using the SpotlightonExchangeWebReports.exe file.

Once the Spotlight on Exchange Web Reports feature is installed, you can use the Spotlight on Exchange Topology Viewer View menu to start using the reports.

To access Web Reports from the Spotlight on Exchange Topology Viewer

1. Select **View | Web Reports**.
2. Enter the location of the server on which Web Reports is installed.

Monitored Counters

The Monitored Counters report allows you to view the values of performance and network counters that have been selected to be monitored by the data collection engine over time. You can use the data to locate server performance problems and server down time. Using this report, you can also graph multiple counters across multiple servers over time. This allows you to easily compare performance across multiple servers at once and identify busier than expected servers.

Service Status Counters

The Service Status Counters report allows you to view the status of the services that have been selected to be monitored by the data collection engine over time. This report allows you to examine the availability of key Microsoft Exchange services such as the Information Store and System Attendant. It also examines the availability of other services such as the backup agent and anti-virus software.

SMTP Queues Status Counters

The SMTP Queues Status Counters report allows you to view the SMTP queue status and size over time. The report provides information about queue growth, which could directly affect mail delivery times. You can also compare queue sizes across multiple servers over time. This report is only applicable to Exchange 2000/2003 servers.

Mailbox Logon Tests

The Mailbox Logon Tests report allows you to view the mailbox logon test results over time. Use this report to determine mailbox logon time and mailbox responsiveness for a specific Exchange server mailbox.

Message Delivery Tests

The Message Delivery Tests report allows you to view the message delivery test results over time. Use this report to determine if messages are delivered between selected mailboxes on any two servers in your Exchange server organization within a configured amount of time. The test message can be sent between servers regardless of whether or not they exist in the same routing group.

Store Responsiveness Tests

The Store Responsiveness Tests report allows you to view the store responsiveness test results over time. Use this test to determine whether the information store on the target Exchange server is capable of processing mailbox requests. The functionality of the information store directly impacts the functionality of mail clients such as Microsoft Outlook, and as a result, this test can provide answers to questions frequently sent to Help Desk personnel regarding mail client inefficiency.

External Message Transfer Tests

The External Message Transfer Tests report allows you to view the external message transfer test results over time. Use this test to send and track a message from any mailbox on any server to any SMTP destination. The test is successful if the message is delivered outside of your organization within a specified, configurable delivery time frame.

OWA Availability Tests

The OWA Availability Tests report allows you to view the OWA availability test results over time. Use this test to ensure that Outlook Web Access is available on the Exchange server so that users can remotely access their email through a web browser.

The Spotlight on Exchange Diagnostic Console

The Spotlight on Exchange Diagnostic Console displays the details of the current Exchange server connections. There are two Diagnostic Console components: Spotlight on Exchange 5.5 and Spotlight on Exchange 2000/2003, which display the status of a connected server at a glance either in the home pages or in drilldowns.

Launching the Diagnostic Console

- Click  on the Desktop.

  – OR –

  Select **Start | Programs | Quest Software | Spotlight | Spotlight**.

Connecting to an Exchange Server

You can connect to an Exchange 5.5, 2000, or 2003 server using the Spotlight Connection Manager.

To connect to a server

1. Select **File | Connect**.
2. In the Connections bar on the left, click on the type of connection you want to make.

   The following table describes the types of connections you can make:

CONNECTION TYPE	DESCRIPTION
All connections	Click to display all the Spotlight connections currently defined.
Recent Connections	Click to display the connections that have been opened recently.
Specified connection type	Click to display a specific connection type, for example Spotlight on Exchange 5.5 or Spotlight on Exchange 2000/2003.

To make a new connection

1. Select **File | Connect**.
2. In the Connections bar on the left, click on the type of connection you want to make.
3. Click the **New connection** icon in the panel on the right side of the Spotlight Connection Manager dialog box.
4. Select the type of connection from the Select Connection Type list.
5. Enter connection name in the New Connection Name box.
6. Enter the server address in the Address box.
7. Click **OK**.
8. Double-click the new server connection icon.

Visual Diagnostics

The Spotlight on Exchange home pages consist of the following elements:

ELEMENT	DESCRIPTION
Components	Are buttons, gauges, queues, and other visual objects that display the status of major features in the current system (You can view and edit component properties.)
Panels	Are grouped related components
Labels	Describes, on the home pages, what the component represents
Standard Menu	Gives you access to various functions and is located in the upper left corner of the main window
Shortcut Menu	Appears when you right-click a component on the home page or in a drilldown. (It helps you perform various configurations for that particular component.)
Toolbar	Is located in the upper left corner and provides various tools, including drilldowns
Connection Identifier	Shows the system to which you are connected and is located in the upper right corner of the home pages

ELEMENT	DESCRIPTION
Connection List	Provides a list of all current server connections

Main Window

The main window depicts how messages flow through an Exchange server and provides a quick method to isolate potential problems.

Panels

The panels represent the most significant components of an Exchange server.

Dataflow

The dataflow between the panels provides the statistics of how data is moving inside an Exchange server. Colors and pulse rates are used to indicate the current status of each dataflow object. The faster a dataflow object is flowing, the more data the two components are exchanging.

Console Options

You can change the appearance and behavior of various components on the home page using the console Options window.

To access the console options window

1. Select **View | Options**.
2. Select **Spotlight Console**.

Drilldowns

The hierarchical design of the Spotlight on Exchange Diagnostic Console lets you observe a server at different levels of detail. When a component or dataflow is in alarm state, it changes color, it flashes, or it makes a sound. You can display a detailed breakdown of the underlying statistics (drilldowns) by clicking the component or dataflow. Each drilldown contains a series of reports and graphs that provide you with specific information about the components of your system. The available statistics help you identify and anticipate performance problems. Drilldowns can be accessed by clicking on any component or dataflow on the home pages or by clicking the drilldown buttons on the toolbar.

Spotlight on Exchange 5.5 Drilldowns

You can access the following drilldowns to identify specific problems in your Exchange 5.5 server:

- Protocols
- Message Transfer Agent
- Internet Mail Service
- Information Store
- Directory

cont'd...

- Processes
- CPU
- Memory
- Disks
- Network
- Activity Summary

To access Spotlight on Exchange 5.5 drilldowns

1. Click any component or dataflow within the main window.

   The series of graphs assists in identifying specific problems within your system.

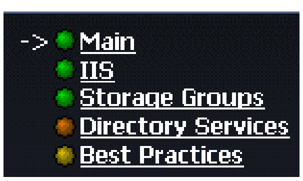
2. Review the different tabs within each drilldown to assist in advanced diagnostics.

Spotlight on Exchange 2000/2003 Home Pages

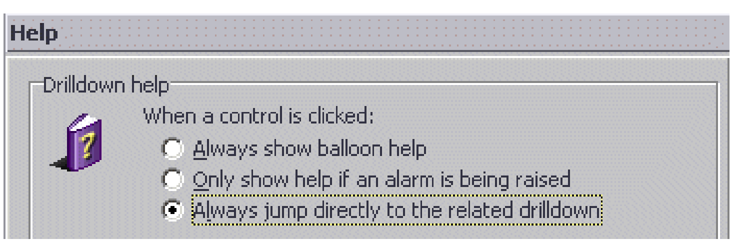
The following home pages are available in Spotlight on Exchange 2000/2003:

HOME PAGE	DESCRIPTION
Main	Operational summary of your Exchange 2000 or Exchange 2003 server
IIS	Detailed information about the Exchange 2000 or Exchange 2003 IIS and SMTP subsystems
Storage Groups	Detailed information about the Exchange 2000 or Exchange 2003 storage subsystem
Directory Services	Detailed information about how your Exchange 2000 or Exchange 2003 server is interacting with Active Directory (Global Catalog, Domain Controller, and DNS servers)
Best Practices	Detailed information about how you can maximize the performance of your Exchange 2000 or Exchange 2003 server

You can switch between home page views by clicking on the titles displayed in the upper left corner of Spotlight on Exchange 2000/2003 home pages, as shown below. The color of the status ball beside each link indicates the collective status of all of the components on that home page. The white arrow indicates the current home page view.



When you click a home page link, you can go directly to the home page if you select the **Always jump directly to the related drilldown** option in the Help dialog box as shown in the following graphic:



To access the Help Options window

- Select **Help | Help Options**.

After viewing the five home pages, you can access the following drilldowns to identify specific problems in your Exchange 2000 or Exchange 2003 server:

- Protocols
- Internet Information Server (IIS)
- Information Store
- Directory Services
- Queue Management
- DNS Servers
- Active Directory Servers
- Recipient Update Servers
- Known Exchange Problematic Events
- Exchange Configuration
- Oldest Transaction Log
- Manage Diagnostic Logging Levels
- Updates
- Security Configuration

To access Spotlight on Exchange 2000/2003 drilldowns

1. Click any component or dataflow on the home pages.
2. Review the tabs within each drilldown.

When you click the components in the OS Subsystem panel (the lower panel that appears on all Spotlight on Exchange 2000/2003 home pages), you are accessing a Spotlight on Windows drilldown.

Metrics, Thresholds, and Severities

A metric is a single piece of information that Spotlight on Exchange Enterprise Edition collects about the performance of a system. Every time a window is refreshed, the latest value of the metric is retrieved and displayed on the home page or in a drilldown. For each numeric metric, you can define a number of thresholds that indicates levels of severity for that metric.

Customization

You can use the Metric Editor window to customize the default thresholds for all components and dataflow objects and the Options window to customize your preferences for the Spotlight on Exchange Diagnostic Consoles.

Properties Editor

You can set a number of options that affect the behavior and display of the Spotlight on Exchange Diagnostic Console components and drilldowns.

To access the Properties Editor

1. Right-click the component or drilldown.
2. Select **Properties** from the shortcut menu.

Metric Editor Window

You can click each of the tabs in the Metric Editor window to view information on one aspect of metric behavior. The tabs are General, Metric, Threshold, and Alarm Help. The Data Source tab is available when you access the Metric Editor from a drilldown graph.

To access the Metric Editor

1. Right-click a component in the main window.
2. Select **Metrics** from the shortcut menu.

To enable/disable collection of metrics

1. Open the Metrics Editor window.

   The left pane shows a list of metrics for collection for the component.
2. Select a check box to enable collection of the corresponding metric.
3. Clear a check box to disable collection of the corresponding metric.

General Tab

The Spotlight on Exchange Diagnostic Consoles give you the ability to edit the metric tips. Metric tips are displayed when the mouse pointer hovers over the component in an alarm state.

Metric Tab

The options on the Metrics tab allow you to change the averaging methods used when collecting the performance data from a system.

Thresholds Tab

The options on the Threshold tab allow you to define and edit the thresholds and severities used to indicate when a metric enters an alarm state.

To set a threshold

1. Open the Metric Editor.
2. Select the **Threshold** tab.
3. Select the metric from the left side of the Thresholds page.
4. Click a metric in the Metric Name window to choose it, and ensure that the associated check box is selected.

5. In the table on the right side of the page, select all the check boxes that correspond to the severities that you want to use with the current metric.

   – OR –

   If you want all thresholds to be specified in terms of the maximum value of the current metric, select the **All thresholds are percentages of the maximum control value** check box.
6. Set the threshold range for every severity you have selected either by entering values in the table or by moving thresholds in the colored bar above the table.

Alarm Help Tab

This page allows you to view the Alarm help that is displayed for a component in an alarm state.

Data Source Tab

This page allows you to change and display properties, such as color, of the data source from which a metric is derived.

The Data Source page is only available for drilldown graphs.

Viewing Historical Data

To view historical data

1. In the main window, right-click a component.
2. From the shortcut menu, select **Show History**.

   This displays a graph of the metric of that component over time. You can also set the period of time for which historical data is stored.

Alarms

Alarms provide advanced troubleshooting advice. They serve as a warning when a metric falls outside its normal range of values, which is defined by setting thresholds and severities for the metric. Once these thresholds are exceeded, Alarm Help is available to provide suggestions and tips to assist in the process of problem resolution. When alarms are generated, the component or dataflow object changes color according to the severity level. The alarm is also logged as a new entry into the Alarm Log drilldown.

Alarm Log Options

You can set a number of options that affect the behavior and display of the Alarm Log. You can make changes using the Alarm Log Options window.

To modify Alarm Log settings

1. Click on the toolbar, right-click the table and select **Filter Settings**.

   – OR –

   Select **View | Options | Alarm Log**.

   Each page within the Alarm Log Options window (General options, Filter rules, and Action rules) covers one aspect of Alarm Log behavior.

2. Click the icons on the Options bar and change the corresponding settings.

Calibrating an Exchange Server

Calibration is the process of determining maximum and minimum values of all dataflow objects—the components that show the rate of data transfer over time. Spotlight on Exchange Enterprise Edition comes with a calibration tool that calculates the normal range of values for a server. You can also manually set the range of values.

You are prompted to start calibration and to enter a time period for calibration when you first connect to a server. If there is no activity on one or more dataflow components during this calibration period, the maximum component value is set to 0 and all alarm thresholds for that component will not be active. In this case, one or more dataflow components always appear green and do not go into alarm mode regardless of their current data value. Under certain conditions, the dataflow components can also alarm incorrectly. Recalibrating during a period of activity for these dataflow components sets an appropriate maximum value and restores the alarm capabilities.

To run calibration

1. Select **File | Calibration**.
2. Set the calibration period by choosing a period of time from the list.
3. Click **Start** to begin the calibration process.