

HP OpenView Operations for Windows

Smart Plug-in for Microsoft® Exchange Server

Configuration Guide



i n v e n t

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HP OpenView Operations for Windows Smart Plug-in for Microsoft® Exchange Server Configuration Guide

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Introducing the Smart Plug-in for Exchange

This chapter introduces you to some basic Smart Plug-in for Microsoft® Exchange Server (Exchange SPI) concepts and offers an overview of the components that appear in the OpenView for Windows console when Exchange SPI is installed. The chapter includes the following sections:

- What the Exchange SPI does
- How the Exchange SPI works with OpenView Operations for Windows
- Service Discovery and the Service Map
- Policy setup, display and deployment

What the Exchange SPI Does

The Smart Plug-in for Microsoft® Exchange Server (Exchange SPI) adds Exchange 2000 and Exchange 5.5 server-monitoring capabilities to OpenView Operations for Windows. It provides mission critical monitoring and management of the enterprise Exchange environment through predefined yet customizable policies, the monitoring of message delivery times, and predefined service level reporting.

With the Exchange SPI configured and deployed to Exchange server systems you will find that you can increase Exchange availability and

performance, lower the support costs associated with the Exchange service, and improve capacity management and planning.

After setup, the Exchange SPI will monitor critical Exchange application/database resources including:

- Process Monitor (for monitoring the amount of CPU time being used by core Exchange processes)
- Inactive Process Monitor (for monitoring core MS Exchange process for activity and status)
- Exchange Service Monitor (for monitoring Exchange Server process for activity levels)
- Data of message processes by Message Transfer Agent and SMTP
- MTA Work Queue and SMTP Queues
- IS Public Average Delivery Time
- IS Private Average Delivery Time

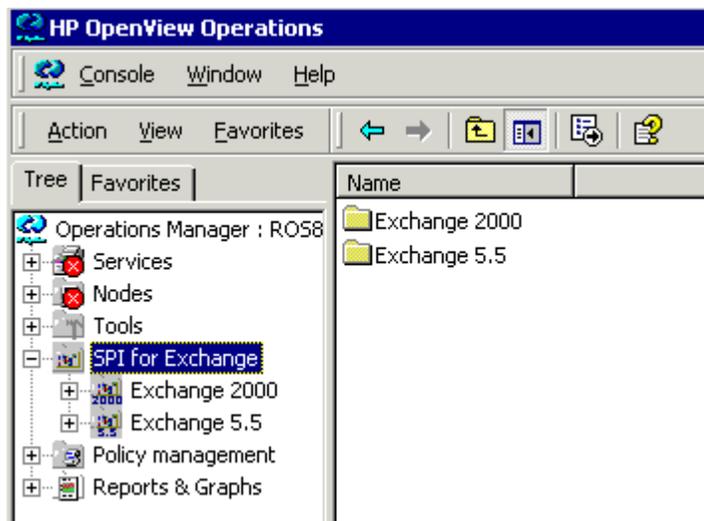
This information comes to you through the OpenView Operations console, in the form of service and organization maps and views, messages, alerts, reports and graphs.

How the Exchange SPI Works

Like other Smart Plug-ins, the Exchange SPI collects data that is targeted and gathered according to rules and schedule specifications contained within the Exchange SPI policies.

After selecting nodes to be managed by the Exchange SPI, Service Discovery policies discover your Exchange environment. Through deploying and modifying policies you can monitor your Exchange servers according to your particular needs.

Figure 1 SPI for Exchange folder located in the OVO console



Auto Discovery and the Service Map

The Exchange SPI has an auto discovery function which discovers Exchange topology. The discovery process is done by Service Discovery Policies. The policy of this type for Exchange 5.5 is automatically deployed when a node becomes an OVO managed node. The Service Discovery policy for Exchange 2000 must be modified to include a domain admin user and password to deploy successfully. (For details on this procedure see [“Modifying Exchange 2000 Service Discovery policy” on page 43](#)).

The Exchange environment information discovered by the Service Discovery policies is displayed in Exchange Organization Service maps, and the Exchange Messaging and Organization views.

Service Maps

Service maps are created from the topology discovered on your network by the Exchange Service Discovery policies.

In the console, display the service map in the details pane by selecting **Services > Applications** and then selecting any level of the Exchange

organization. Your Exchange organization and its activity can be looked at either in the console tree or in the Service Map display.

Figure 2 Discovered Exchange 2000 “Auburn” Administrative Group services, in the Console Tree

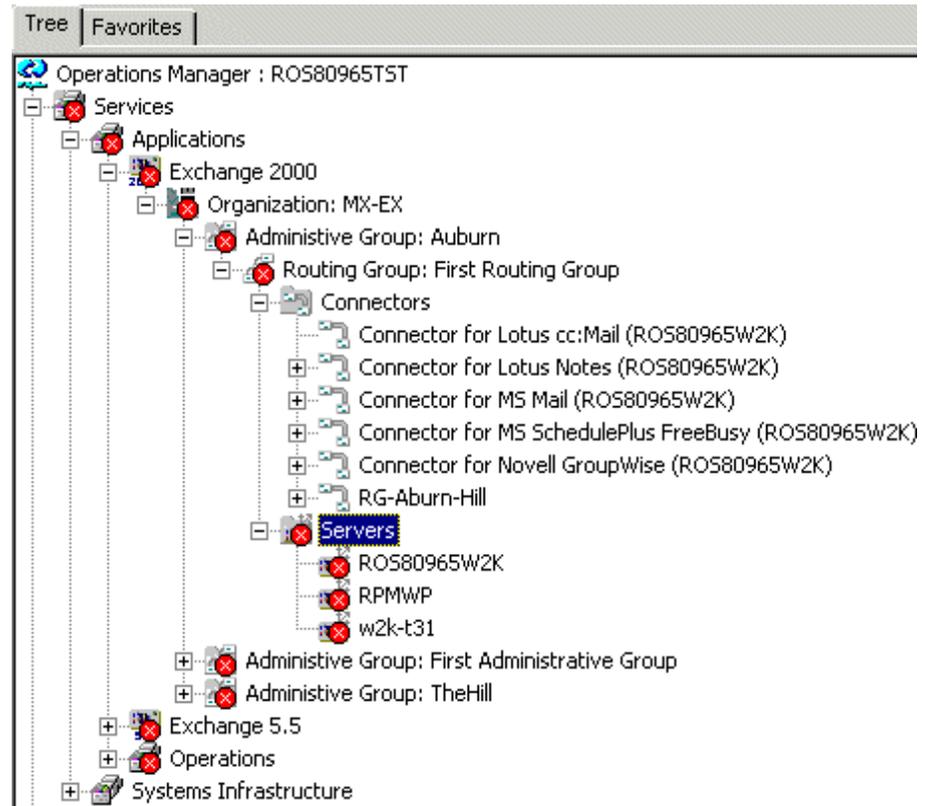
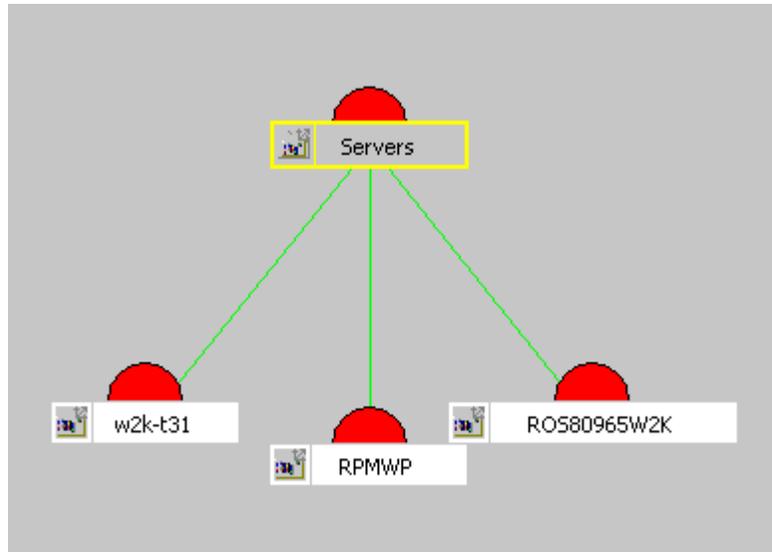
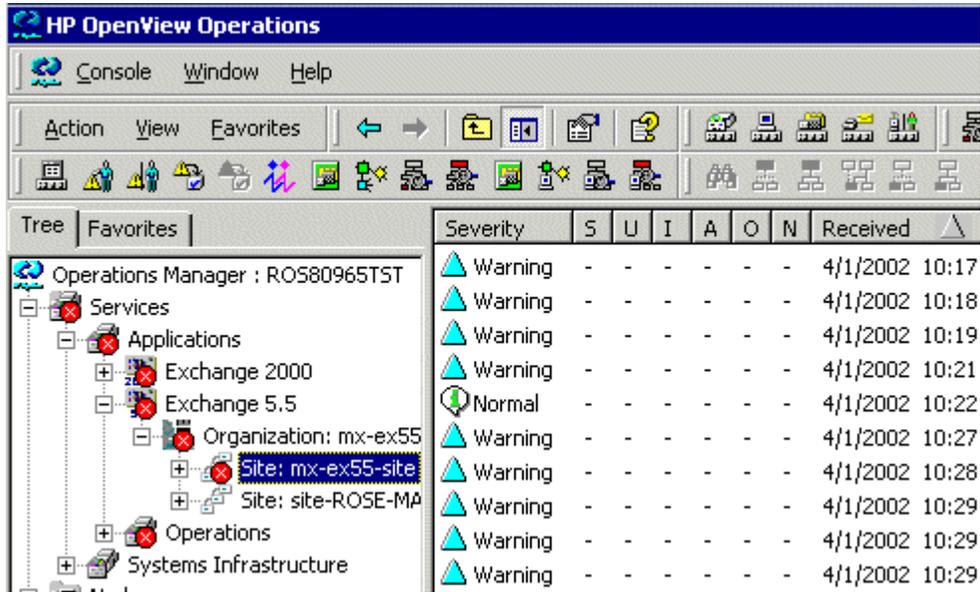


Figure 3 Service Map of “Auburn” Administrative Group Servers



Problems in the Exchange Organization are indicated in the Service Map and console tree by colors that illustrate severity level. They are also indicated by critical, major, minor or warning messages displayed in the Message Browser. Hovering the cursor over any entry in the message browser will display descriptive details, double-click a message to see details.

Figure 4 Partial view of Active Message Browser, for an Exchange 5.5 Site



The buttons in the OpenView toolbar give you easy access to the various ways of viewing Exchange activity:



From left to right: Impacted Services, Root Cause, Service Map, Active Message Browser, Acknowledged Message Browser.

Figure 5 Impacted Services from a Server problem

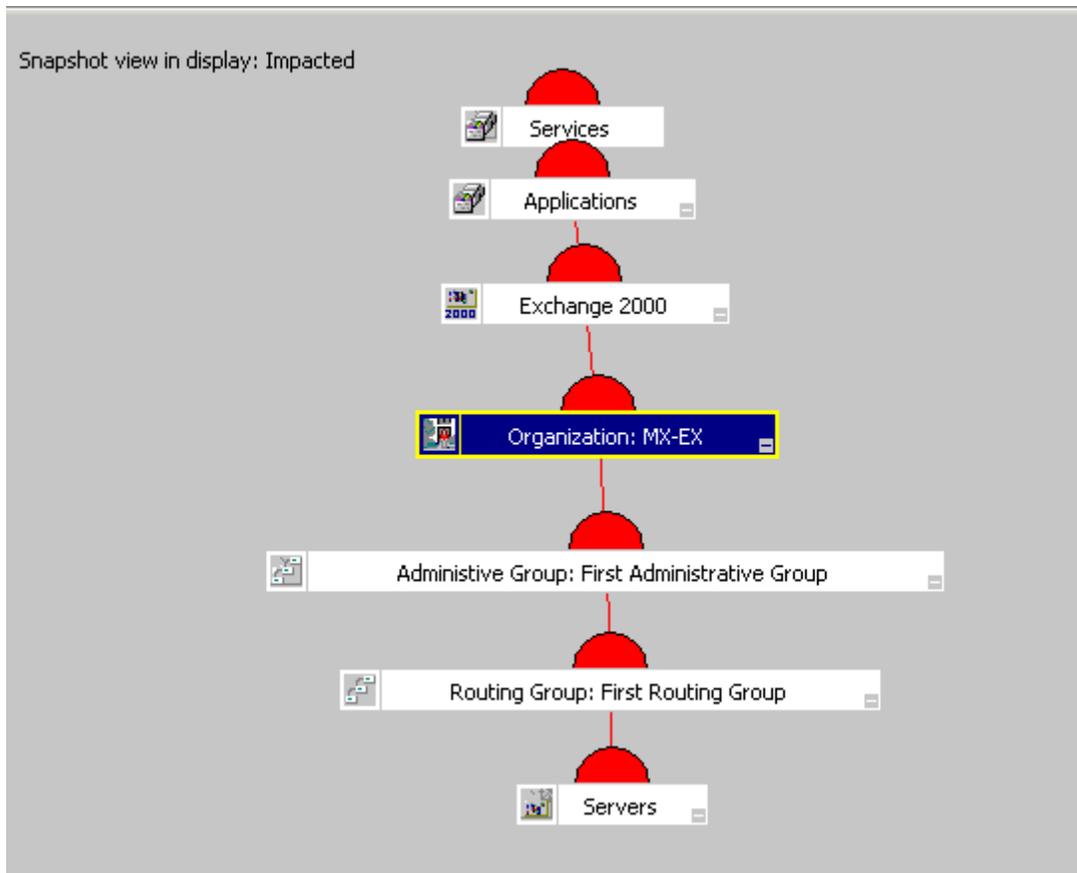
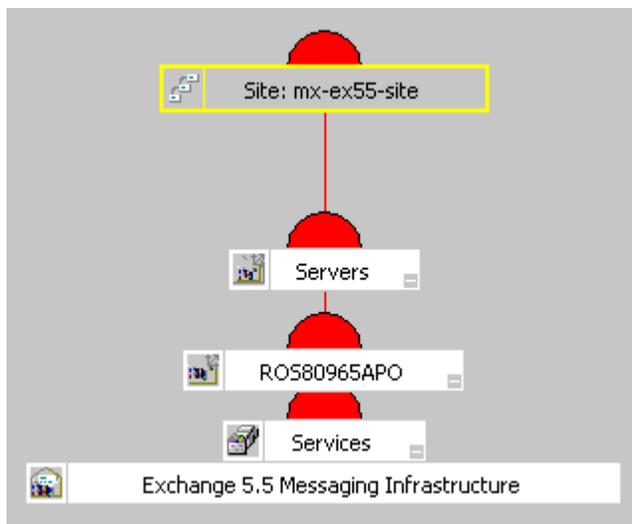


Figure 6 Root Cause view of an Exchange 5.5 site problem

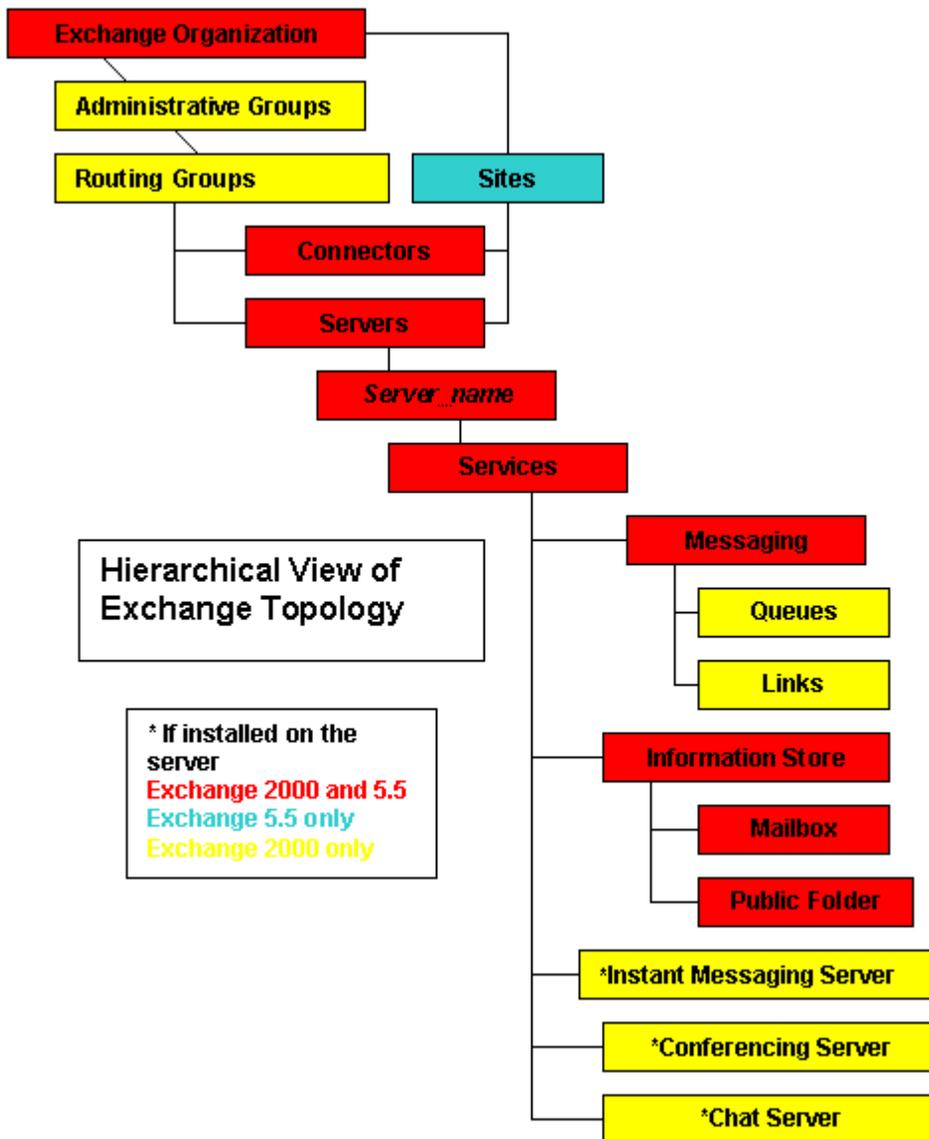


Exchange Organization

After Exchange topology is discovered, the organization of your Exchange environment is available for display in the console tree, the dynamic service maps and the snapshot service views. The Exchange organization

in an enterprise can be extremely complex, these views help in visualizing the organization from the overview down to the details.

Figure 7 Hierarchical View of Exchange Organization

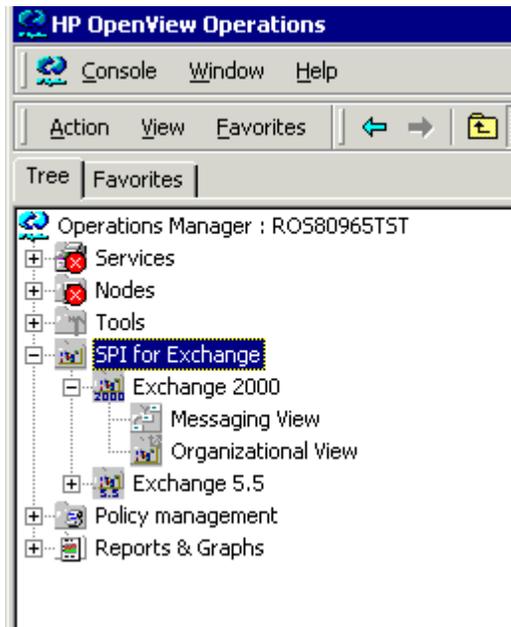


Snapshot Views of the Exchange Environment

To see the Exchange Messaging View or Organizational View:

- 1 Open the SPI for Exchange folder on the console tree,
- 2 Select the Exchange version: Exchange 5.5 or Exchange 2000.
- 3 Open either the **Messaging View** or **Organizational View**.

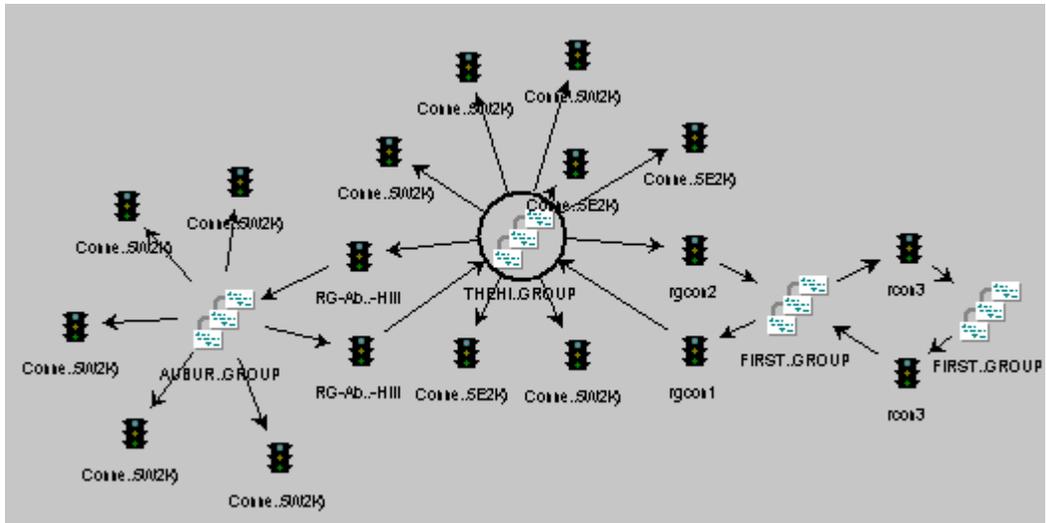
Figure 8 Location on console tree of Exchange SPI Views



Messaging View

The Messaging View gives a view of the Exchange network, showing all Exchange Servers and Connectors, and the connections between them

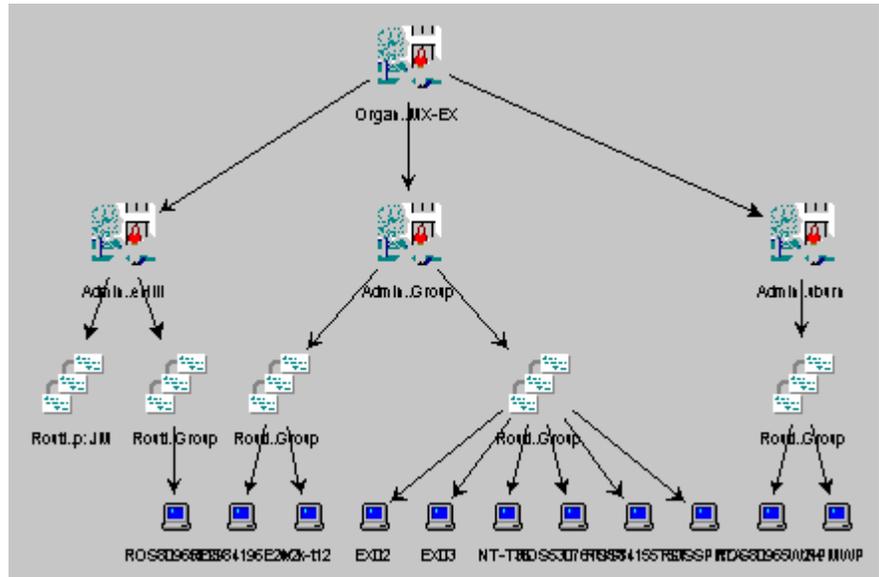
Figure 9 SPI for Exchange Messaging View:



Organizational View

This hierarchical view shows your Exchange Organization sites or administrative/routing groups along with servers.

Figure 10 SPI for Exchange Organizational View:

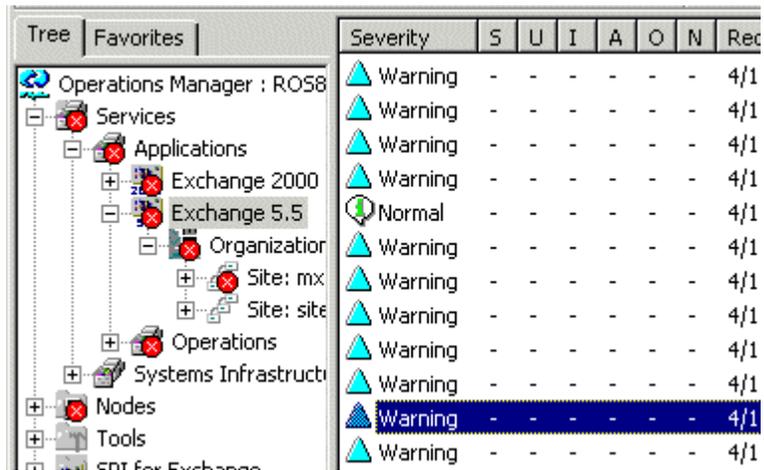


Messages

Policies generate messages and alerts that are displayed in the OpenView message browser. They are also forwarded to the appropriate service category and are displayed in the Service Maps.

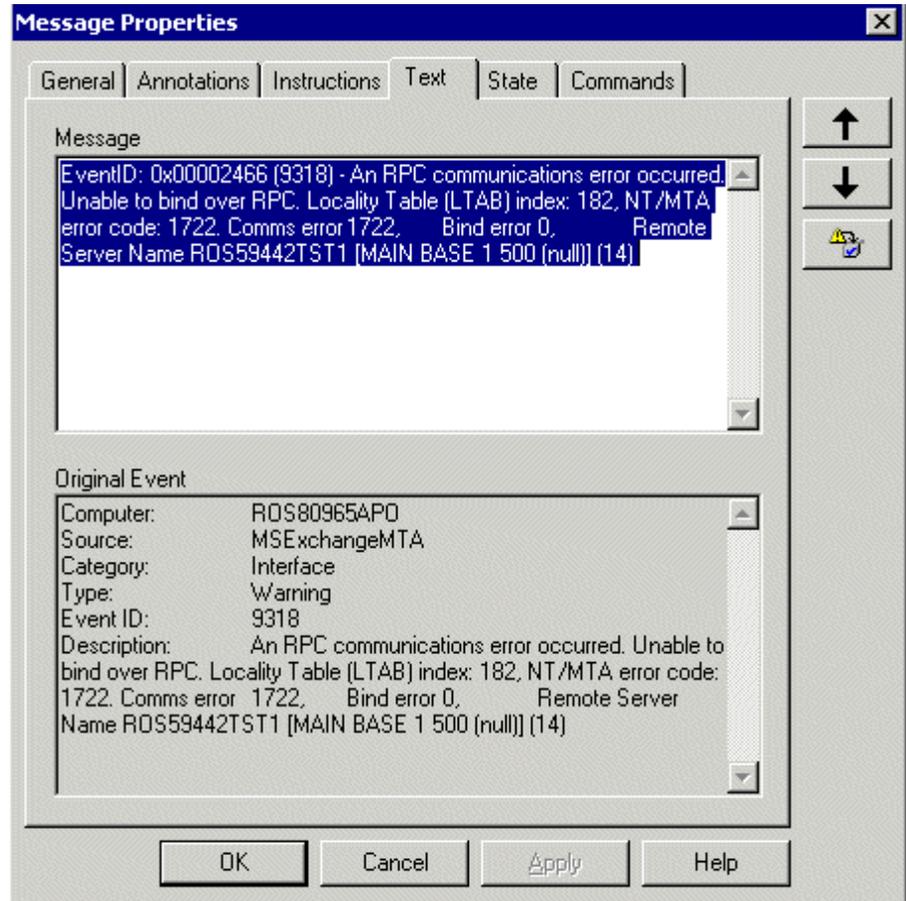
Double-click messages in the message browser to view the details of any message:

Figure 11 Selecting a warning message in the Active Message Browser



Messages include suggestions for corrective actions.

Figure 12 Message Properties with explanatory text



Policy Setup and Deployment

Exchange SPI policies are organized in the following categories:

- The **EXSPI Discovery** policy group for Exchange 5.5 and Exchange 2000, contains EXSPI-5.5 Exchange Service Discovery and EXSPI-6.0 Exchange Service Discovery. These policies perform the Exchange service discovery on Exchange 5.5 and Exchange 2000 servers respectively.
- There is an **EXSPI Quick Start** policy group for Exchange 2000, and one for Exchange 5.5. These policy groups contain the basic policies for monitoring Exchange servers that most administrators will wish to deploy, like policies to monitor key Exchange services, forward application errors and warnings, and monitor messaging queues. These policies need no user name or password to configure, and no special customization to run.
- **EXSPI Add-Ons** policies require no customization, although some do require a user name and password. They are determined by the applications/programs being used by your Exchange server and are available to select, modify and deploy.
- The **EXSPI Advanced** policy group is available after some additional setup. Once deployed to the Exchange server nodes, advanced policies enable the Exchange SPI to target specific data and measure this data against predefined rules, generating the particular information set you need.

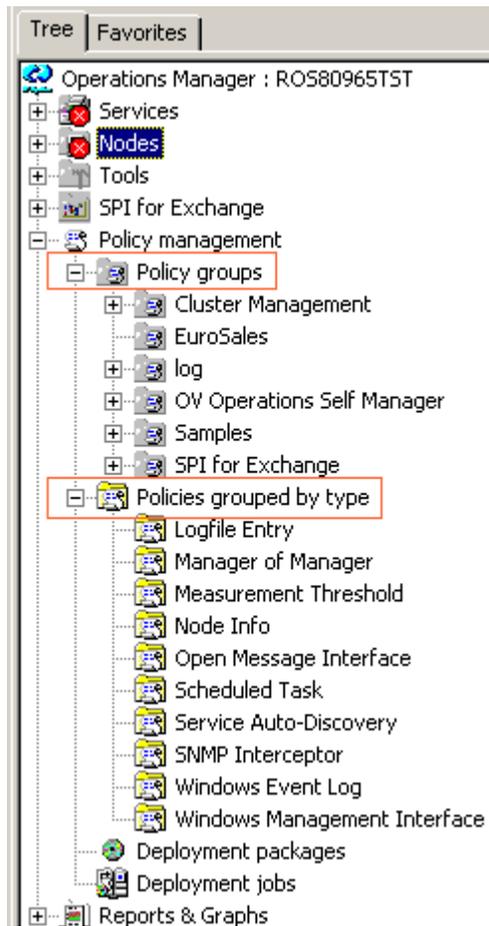
User Privileges and the Exchange SPI

There are 3 levels of user privileges needed for full usage of the Exchange SPI product. For more information on user privileges and the procedures required for modifying policies and creating user accounts with the required privileges, see Chapter 3 “Exchange SPI and User Privileges” on page 41.

Policy Display

Exchange SPI policies are displayed in the OVO console in two places: by group under the **Policy groups** folder, and by type under the **Policies grouped by type** folder. These groupings are for your convenience, when an Exchange SPI policy is edited in either of these locations it will appear updated in both. See the Exchange SPI on-line Help for detailed information on policy groups, policy types, and policy prerequisites.

Figure 13 Console tree showing Policy groups and Policies grouped by type

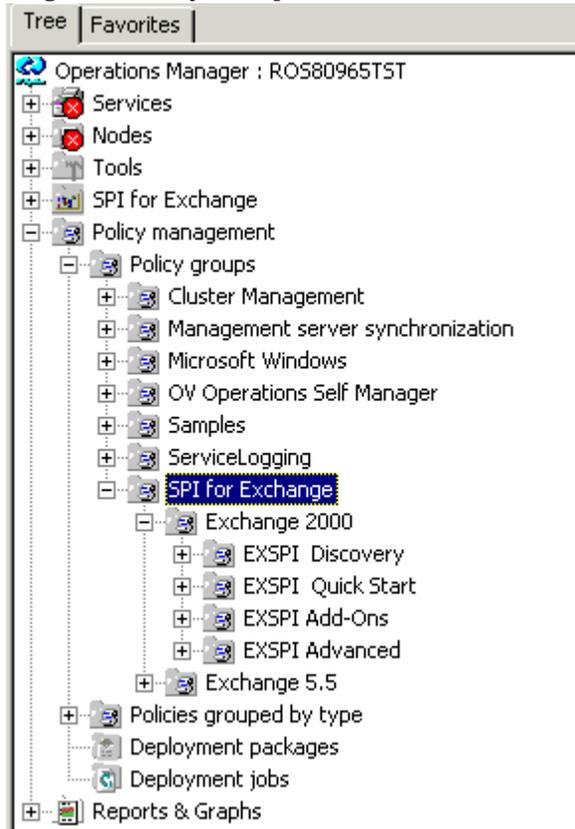


Policy groups

Under Policy Groups policies are organized according to how you might want to deploy them. Discovery and Quick Start contain policies that deploy automatically after installation of Exchange SPI and do not need a domain admin user name or password (with the exception of the Exchange Service Discovery policy for Exchange 2000). The Quick Start group contains most of the policies you need to get started; Add-Ons contains policies that monitor applications compatible with but not a part of Exchange, such as cc:Mail and Chat. Some of the Add-Ons policies require modifying to contain a standard Windows domain admin user with password. Advanced contains policies that require some advanced configuration, either a User account with special Exchange privileges and/or a mailbox.

For information on user privileges and the procedures required for modifying policies and creating user accounts with the required privileges, see Chapter 3 “Exchange SPI and User Privileges” on page 41.

Figure 14 Exchange SPI Policy Groups on the console tree

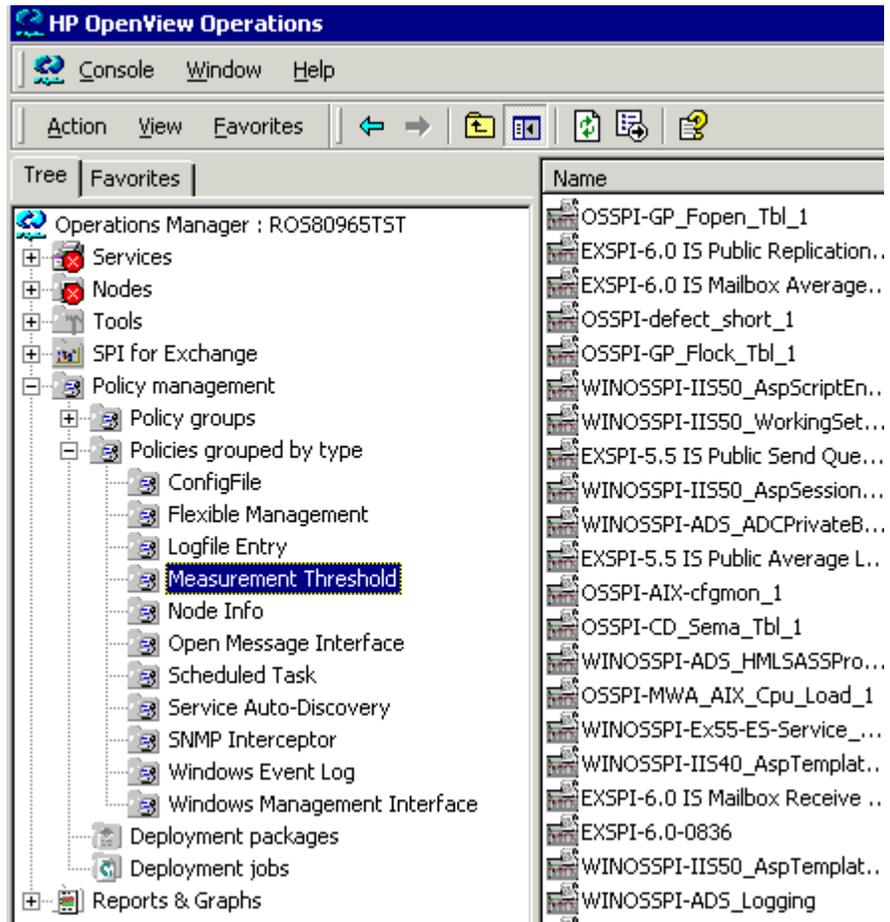


Policies grouped by type

Policies grouped by type displays policies organized according to their function, for example, you can find data collection scheduling in Scheduled

Task policies; threshold settings in Measurement Threshold policies, etc. Further information on policy types is available in the OVO on-line Help.

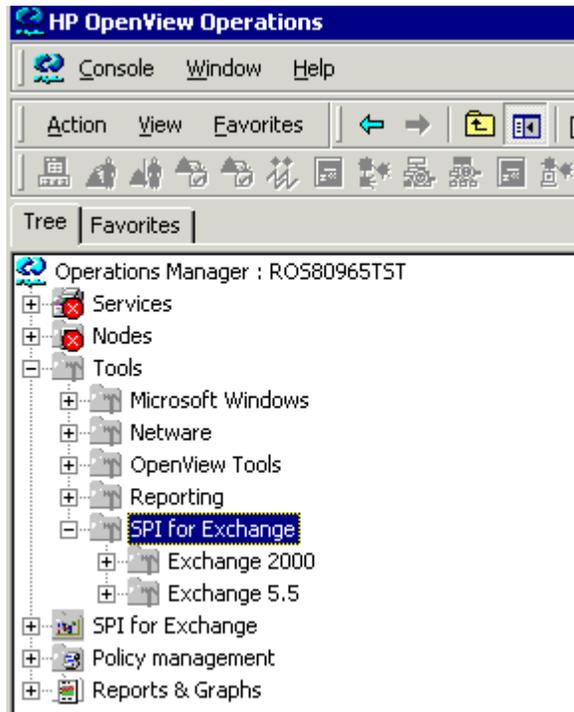
Figure 15 Measurement Threshold policies displayed in the details pane



Using Exchange SPI tools

There are two groups of Exchange SPI tools: **Tools > SPI for Exchange > Exchange 5.5**, and **Tools > SPI for Exchange > Exchange 2000**.

Figure 16 Location of SPI for Exchange Tools on the console tree



In each of the Exchange version folders are three tools:

Figure 17 Exchange SPI Tools for Exchange 5.5/2000

Name	Description
MBOX Config	Create mailbox on Exchange 5.5 Server
Trace On	Turn tracing on for EXSPI collector
Tracing Off	Turn tracing off for EXSPI collector

- The Exchange SPI MBOX Config tool starts the mailbox configuration program that automatically configures a mailbox.
- Tracing is enabled or disabled by these tools. The default setting is off. Tracing is generally used for troubleshooting purposes.

OVO Foundation Tools

Certain Advanced and Add-On policies require a domain admin account. To help manage those accounts, a tool called **ovpmpwutil** has been added to the OVO foundation tools. This tool is not SPI specific. Documentation for ovpmpwutil can be found in the Command-line Tools section of HP OpenView Operations for Windows online Help.

Exchange SPI Reports and Graphs

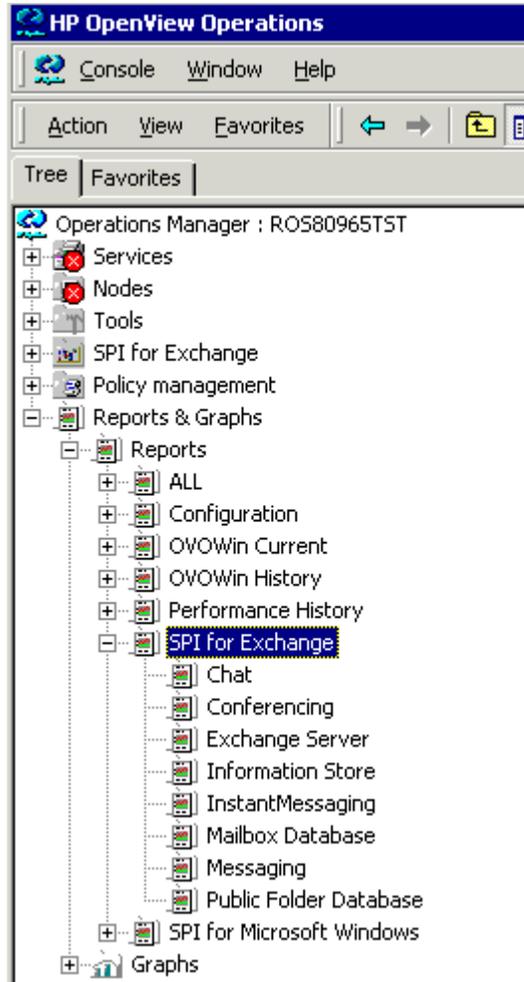
In the Exchange SPI Reports and Graphs folders are a number of pre configured reports and graphs, useful for viewing and analyzing data.

Reports and graphs are generated by the EXSPI Reporter Collection policies in the EXSPI Advanced group, that interpret collected metric values and forward the data. The information is collected nightly and is then available for reports and graphs the next day. Some data collectors run on Saturday/Sunday only and therefore related reports are available after a weekend has passed.

Exchange SPI Reports

There are two types of reports available: **Summary Reports** give information showing trends in server performance on your system, **Detail Reports** give, in addition, information system by system.

Figure 18 Location of SPI for Exchange Reports on the console tree



Reports are displayed in the console organized by type. By selecting any of the categories, the list of available reports in that category displays in the details pane, with descriptions.

Figure 19 SPI for Exchange Conferencing Reports

Name ▲	Description
 Exchange 2000 Conferencing Server Trends	Exchange 2000 Conferencing Server Trends
 Exchange 2000 MCU	Exchange 2000 MCU

For your assistance in choosing reports, the Smart Plug-in for Exchange on-line Help contains descriptions of all the preconfigured reports available within the Exchange SPI, and a table showing any policies that they require to be deployed.

Exchange SPI Graphs

SPI for Exchange Graphs are located in **Reports and Graphs > Graphs > SPI for Exchange**, displayed by type.

Figure 20 SPI for Exchange Graphs listed by type

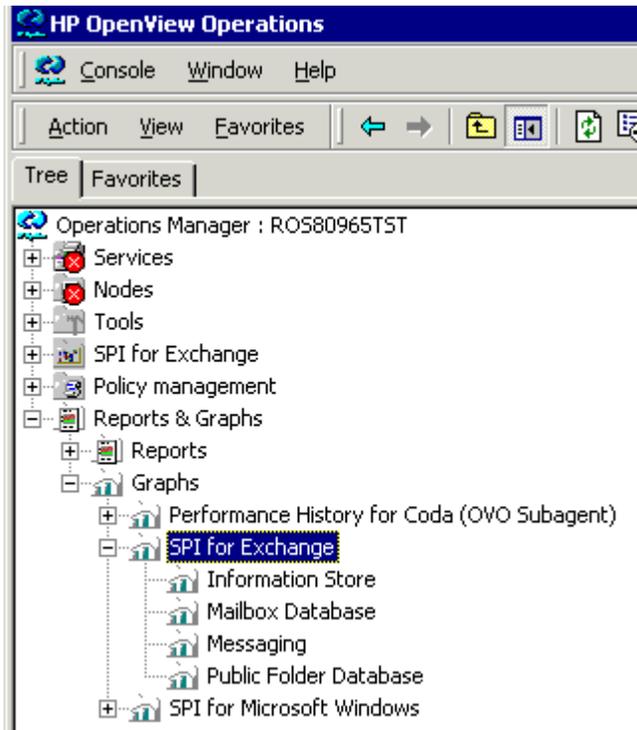
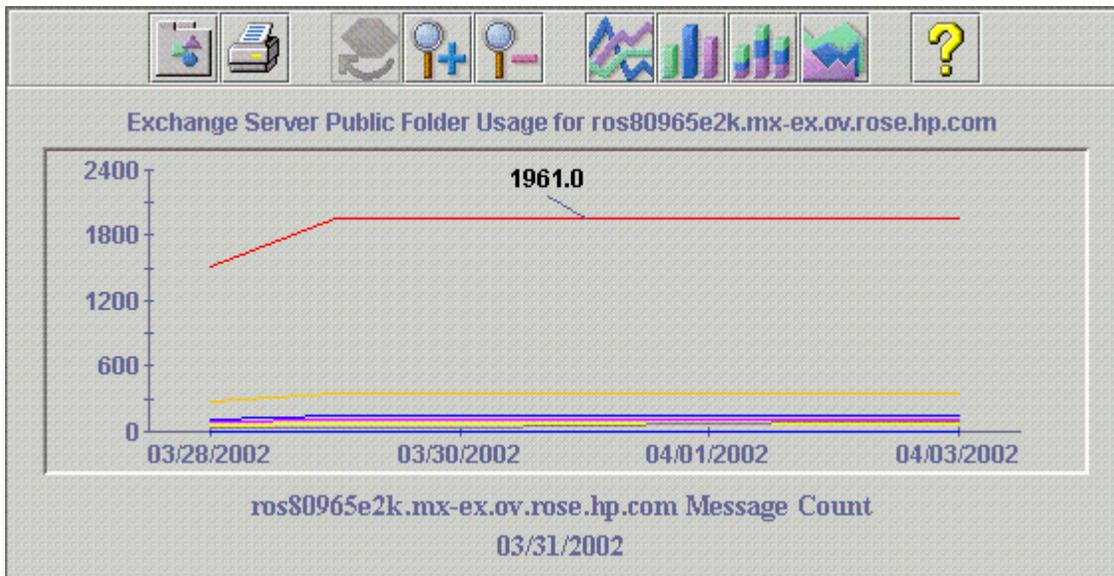


Figure 21 SPI for Exchange Messaging Graphs

Name ▲	Description
 Internet Mail Queue	This graph shows the Exchange Server Internet Mail Service
 Internet Mail Volume	This graph shows Exchange Server Internet Mail Connector
 MTA Volume	This graph shows Exchange Server Message Transfer Agent
 Newsfeed Volume	This graph shows Exchange Server newsfeed volume.
 Queues	This graph shows Exchange Server queue lengths.
 SMTP Queues	This graph shows SMTP Server queues on the Exchange Server.
 SMTP Volume	This graph shows SMTP Volume on the Exchange Server.

Figure 22 Exchange Server Public Folder Usage graph



Exchange SPI: Getting Started

Task 1: Install the Exchange SPI with OpenView Operations and Performance for Windows

When you insert the hp OpenView Operations 7.0 for Windows CD into your CD-ROM drive, the InstallShield wizard is automatically launched. In the first window the Smart Plug-in products available to install are displayed, select the OpenView Smart Plug-in for Exchange.

Please see the *HP OpenView for Windows Enterprise Management Installation Guide* included with the product. This guide offers a product overview as well as the location of the latest Exchange SPI Release Notes, which you should print and read before getting started.

Task 2: Add Exchange Servers to the Nodes folder

The servers whose services you want to discover and monitor must be included in the Nodes folder of the OVO management console. Discovered Exchange servers without discovered services are not managed nodes. To monitor servers, add them to the OVO Nodes folder now.



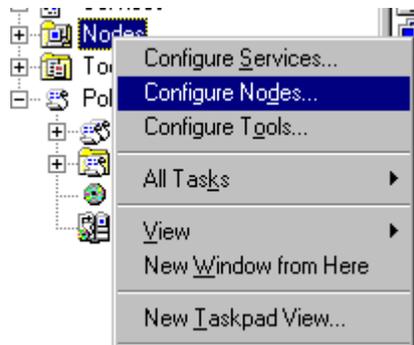
For Exchange 2000:

You must modify EXSPI-6.0 Exchange Service Discovery prior to selecting nodes to manage. It is necessary to open the policy and enter a domain admin user and password to give the user read permissions to the configuration partition of Active Directory. See [“Adding Domain Admin User and Password to a Policy”](#) on page 43.

To add an Exchange server to the Nodes folder

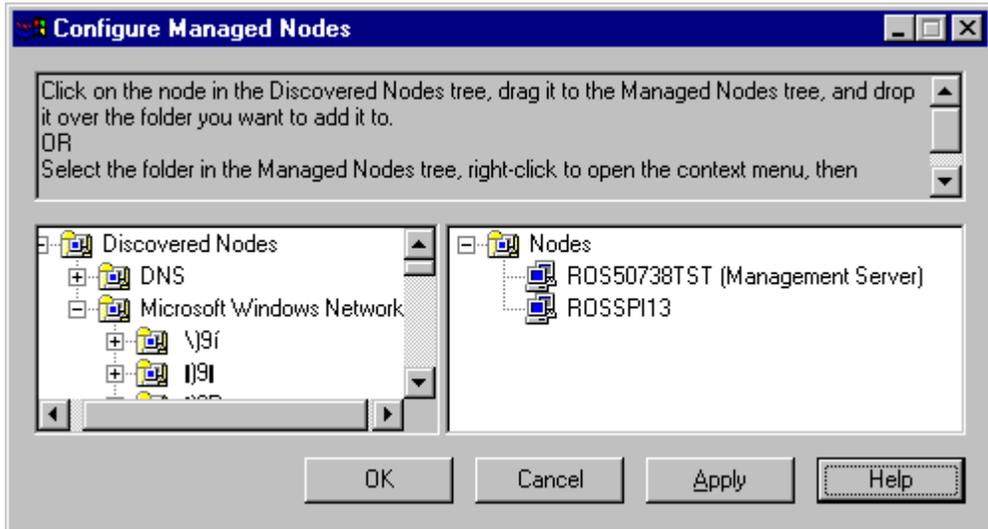
- 1 In the OVO console, right-click the **Nodes** folder, select **Configure Nodes**

Figure 23 Nodes > Configure Nodes menu.



- 2 In the Configure Managed Nodes dialog, drag and drop servers listed on the left to the OVO Nodes folder on the right.

Figure 24 Configure Managed Nodes dialog



Task 3: Discover Exchange Services

The Exchange SPI implements an LDAP based Exchange topology discovery for Exchange 2000 and Exchange 5.5. The discovered topology is maintained in the OpenView namespace on the management server or console.

- **How It Works**

Exchange topology is discovered by policies that are automatically deployed to all Windows nodes after they are selected to become OVO managed nodes.

The discovery policies are EXSPI-5.5 Exchange Service Discovery for Exchange 5.5, and EXSPI-6.0 Exchange Service Discovery for Exchange 2000. These policies are located in the EXSPI Discovery folder.



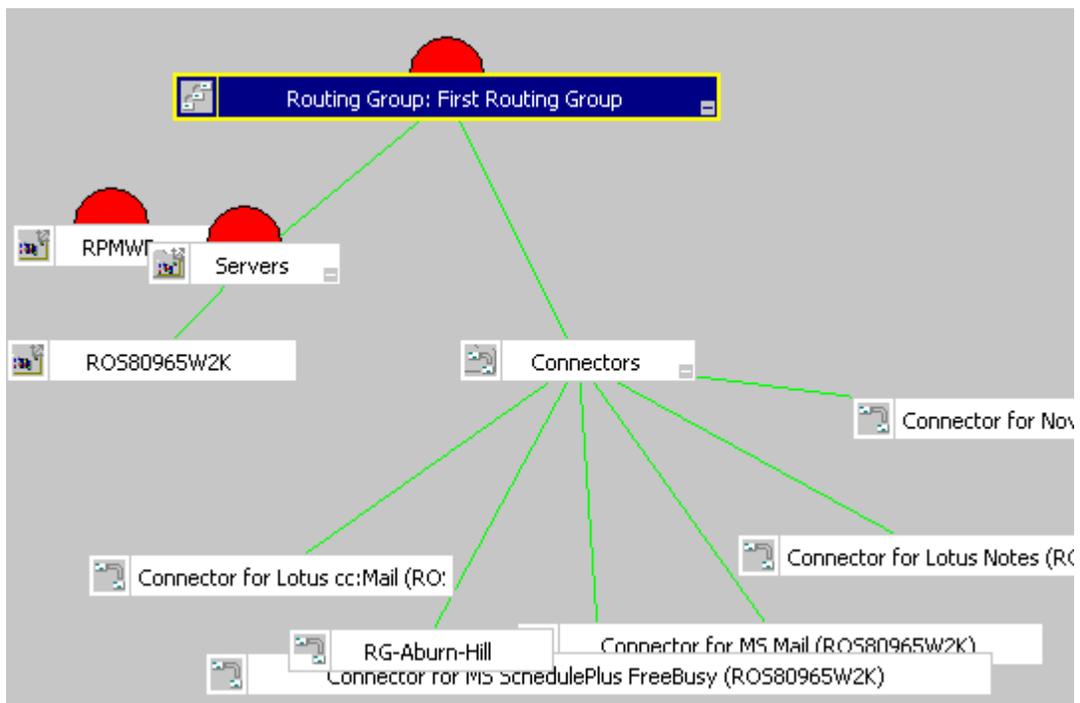
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You must modify EXSPI-6.0 Exchange Service Discovery prior to selecting nodes to manage. It is necessary to open the policy and enter a domain admin user and password to give the user read permissions to the configuration partition of Active Directory. See [“Adding Domain Admin User and Password to a Policy”](#) on page 43.

- **Service Map**

The discovered Exchange organization is displayed in the OVO details pane, in various Service Maps.

Figure 25 Service view of one Exchange 2000 Routing Group

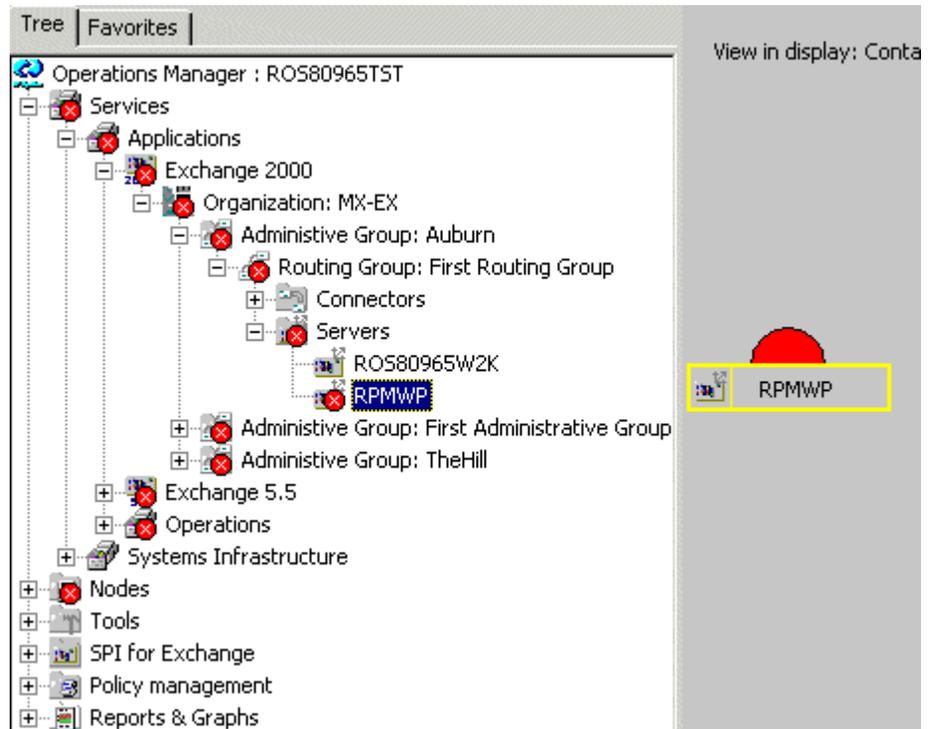


The Organization with the name given by the Exchange administrator is located beneath the Exchange folder on the OVO console tree. The hierarchical structure below the organization name are folders mirroring your Exchange organizational structure. In the case of OVO managed nodes, all services are listed by product name. Any Exchange server listed in the tree with no services under it is an unmanaged server.

Task 4: Identify Exchange Servers/Services

The Exchange topology is discovered by the Service Discovery policies and the information is visible in the folders labeled **Exchange 5.5** or **Exchange 2000**, under **Services > Applications** on the OVO console tree. By expanding the new folders, you see the organization of your Exchange services.

Figure 26 Hierarchy of an Exchange 2000 Organization



Where an Exchange server is listed in the tree with no services listed under it, it is an unmanaged server. If you wish it to be managed by OVO, perform Task 2 “[Add Exchange Servers to the Nodes folder](#)” on page 34 now.

The **SPI for Exchange** folder below the **Tools** folder on the console tree contains the Messaging and Organizational View folders, see “[Snapshot Views of the Exchange Environment](#)” on page 17.

Task 5: Exchange Service Discovery Policy Deployment, if required

After adding Exchange servers to the Nodes folder, the EXSPI Exchange Service Discovery policies will automatically deploy.



In order for the EXSPI-6.0 Exchange Service Discovery policy to deploy automatically when Exchange 2000 servers are added to the Nodes folder, it must contain a domain admin user and password. (See “[Adding Domain Admin User and Password to a Policy](#)” on page 43.) If the node is managed before the policy is modified in this way, then the customer needs to follow the procedure for manually deploying the Discovery policy.

To perform this step manually

- 1 In the OVO console tree expand the folders **Policy Management** > **Policy Groups** > **SPI for Exchange** > **Exchange 5.5 or Exchange 2000** > **EXSPI Discovery**.
- 2 In the details pane select **EXSPI-5.5 Exchange Service Discovery** for Exchange 5.5, or **EXSPI-6 Exchange Service Discovery** for Exchange 2000, and right-click.
- 3 Select **All Tasks**, then **Deploy On**. In the dialog select the nodes you wish the discovery to be deployed on.

After allowing about five minutes, it will be possible to view the structure of Exchange services.

Task 6: Policy Deployment, as required

After discovery the version specific policies in Quick Start are auto deployed.

To perform this step manually, see “[Deploying the Quick Start Policy Group](#)” on page 83.

Task 7: Verify Installation Results

- 1 In the OVO Manager console expand the **Nodes** folder.
- 2 Right-click the node on which to verify deployment and select **View > Policy Inventory**.

Suggested Daily Tasks

Areas to be routinely monitored are:

- **The OVO message browser**

Watch for warning and critical messages or multiple alarms. Read the associated instruction text for recommended actions.

If too many alarms of a particular type are occurring and servers seem to be performing correctly, you likely need to adjust the Exchange SPI measurement threshold policy that is causing the alarm. See the OVO on-line Help for instructions on how to adjust a threshold in a policy.

- **The OVO reporting and graphing functionality**

When you become aware of problems with a server, use the OVO reporting function to display additional information or view historical trends in graphs.

- **The Service Map, and Messaging and Organizational Views**

Use the Service Map View to see at a glance the extent of a particular problem indicated by a message, or its root cause, or what Services might be affected and perhaps interrupted. Stay on top of your Exchange Organization by using the Messaging and Organizational views.

Suggested Daily Tasks

Exchange SPI and User Privileges

This chapter introduces you to:

- Required User privilege levels for full usage of the Exchange SPI.
- Procedures for modifying a policy to include a standard Windows domain admin user with password.
- Procedures for creating a Domain Admin User Account with special Exchange privileges for each combination of Exchange/Windows environments.

Levels of User Privileges

There are 3 levels of user privilege needed for full usage of the Exchange SPI product.

1. Local System Account (HP ITO Account)

All Quick Start policies run under this type of account. No customization to policies is required (except threshold changes as desired).

2. Domain Admin Account

A standard Windows domain admin user with password must be entered in the following policies in order for them to perform Active Directory queries:

- EXSPI Discovery > EXSPI-6.0 Exchange Service Discovery
- EXSPI Add-Ons > EXSPI Transaction Log > EXSPI-6.0 1d-Transaction Log
- EXSPI Add-Ons > EXSPI Transaction Log > EXSPI-6.0 15m-Transaction Log
- EXSPI Add-Ons > EXSPI Instant Messaging > EXSPI-6.0 Dc-Instant Messaging Enabled Users.

See [“Adding Domain Admin User and Password to a Policy”](#) on page 43, for details on how to modify policies to add the domain admin user and password.

3. Domain Admin User with Special Exchange privileges

This type of account must be set up and applied for the following tools/policies to deploy successfully:

- Mailbox Config
- EXSPI Advanced > EXSPI End to End Message Ping > EXSPI-6.0 End to End Message Ping or EXSPI-5.5 End to End Message Ping, schedule policy access to the mailboxes created by the tool Mailbox Config.
- EXSPI Advanced > EXSPI Reporter Collection > all policies (for Exchange 5.5 and 6.0). These policies use the Mailbox created by the tool Mailbox Config to extract information from the public folder and mailbox tables via MAPI (Messaging Application Programming Interface).

See [“Creating a User Account with Proper Access Permissions”](#) on page 45 for creating the user account.

Adding Domain Admin User and Password to a Policy

When a Windows node is placed under OVO management, policies to discover Exchange topology are automatically launched. In addition, they are launched automatically whenever a server is added to the OpenView Nodes folder and becomes a managed node.

For discovery to work on Exchange 2000 nodes, you must first modify the policy EXSPI-6.0 Exchange Service Discovery by entering a domain admin user and password. This is because the user needs read permissions to the Configuration partition (also called configuration name space) of Active Directory. If nodes become managed before this modification is done, the EXSPI-6.0 Exchange Service Discovery must be manually deployed afterwards. See [“To perform this step manually” on page 38](#).

In addition, this is the case for the following three Add-Ons policies:

- EXSPI Add-Ons > EXSPI Transaction Log > EXSPI-6.0 1d-Transaction Log
- EXSPI Add-Ons > EXSPI Transaction Log > EXSPI-6.0 15m-Transaction Log
- EXSPI Add-Ons > EXSPI Instant Messaging > EXSPI-6.0 Dc-Instant Messaging Enabled Users.

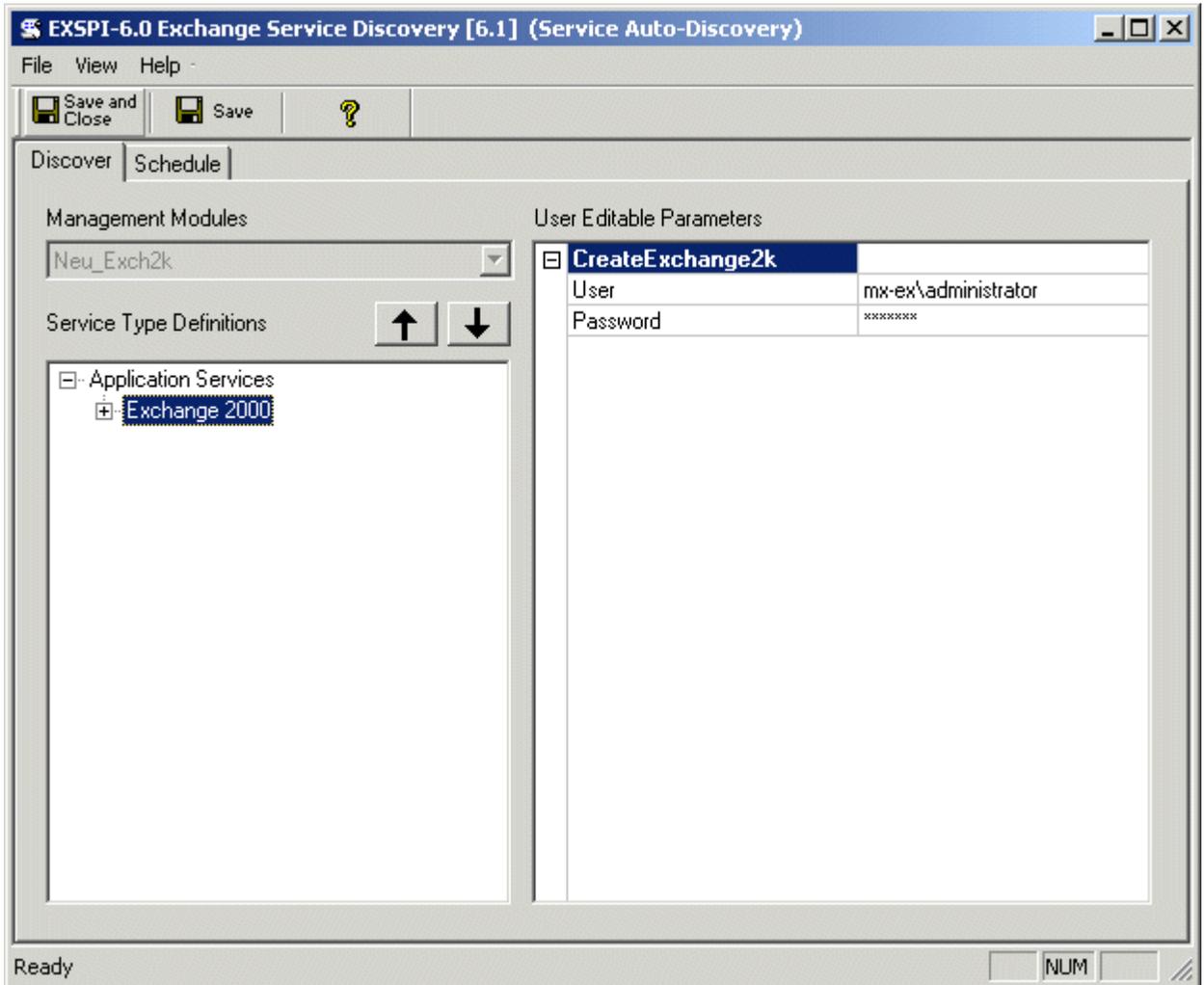
NOTE: There are three Active Directory partitions: Domain, Configuration and Schema. It is not uncommon for each to have their own security permissions. The Exchange SPI discovery process only reads the Configuration partition. A domain admin user will have read access on this Configuration partition if permissions have not been modified for the Domain Admin User group.

Modifying Exchange 2000 Service Discovery policy

- 1 Open the policy **EXSPI6.0 Exchange Service Discovery**, in the EXSPI Discovery folder.
- 2 Enter a domain admin user name and password, as below.

3 Save and close the policy.

Figure 27 Adding Domain Admin User and Password to Service Discovery Policy



Creating a User Account with Proper Access Permissions

Before you can deploy some of the Add-Ons policies, or any of the policies in the Additional policy group, you must create an account for each logon domain where Exchange servers reside, see [“Exchange SPI and User Privileges” on page 41](#). This user account enables the Exchange SPI to access information from the Exchange database.

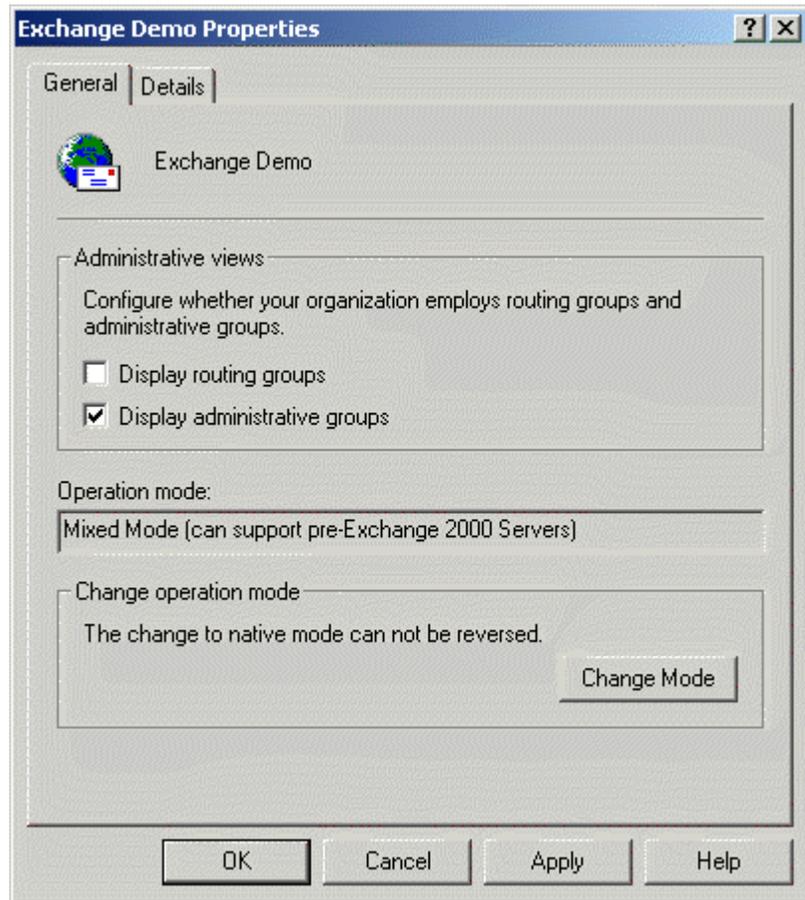
Because significant configuration differences exist between Exchange 5.5 and Exchange 2000, and configuration details depend on operating system version, detailed instructions for each of the following case scenarios are outlined in the following pages:

- Case 1: For Nodes with Exchange 5.5 in a Windows NT Domain (NT4/Ex5.5)
- Case 2: For Nodes with Exchange 5.5 in a Windows 2000 Domain (W2k/Ex5.5)
- Case 3: For Nodes with Exchange 2000 in a Windows 2000 Domain (W2k/Ex2k)



To enable viewing the administrative groups folder which is necessary for creating the user account, open the Exchange server Properties, and select **Display administrative groups**.

Figure 28 Exchange server Properties dialog



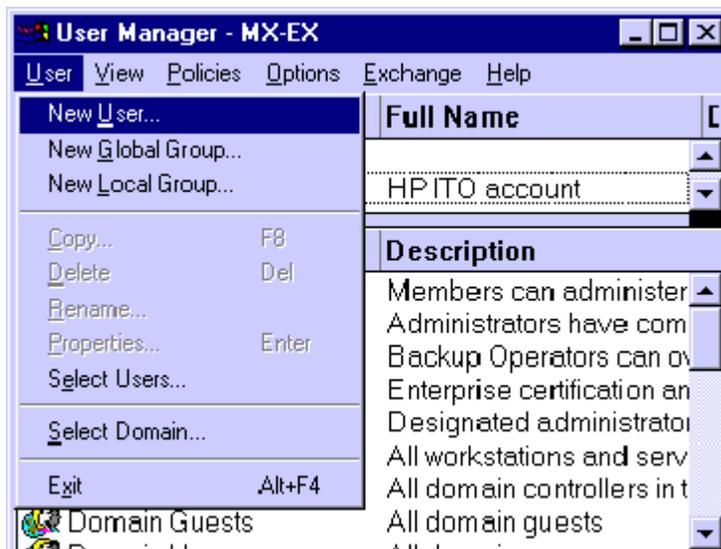
You must create an Exchange SPI user in each domain. You may use any user name you wish. Here, we are using *MSXPI* as the example for the procedures.

Case 1: Exchange 5.5 Nodes in a Windows NT Domain (NT4/EX5.5)

Task 1: Create User Account (NT4/EX5.5)

- 1 Log on as Domain Administrator of the domain to which the Exchange server belongs.
- 2 Select **Start > Programs > Administrative Tools (common) > User Manager for Domain**.
- 3 Select **User > New User**. In the dialog that appears create a new user as follows (see Case 2 below for Windows 2000 systems):

Figure 29 User Manager dialog



Username:	MSXSPI
Full Name:	OVO Exchange SPI
Description:	Exchange SPI for OVO
Password/Confirm Password:	*****

Remember this password; you will need it later to update Tools and Policies.

Figure 30 New User dialog

New User

Username: MSXSPI Add

Full Name: OVO Exchange SPI Cancel

Description: Exchange SPI for OVO Help

Password: ****

Confirm Password: ****

User Must Change Password at Next Logon

User Cannot Change Password

Password Never Expires

Account Disabled

Groups Profile Hours Logon To Account Dialin

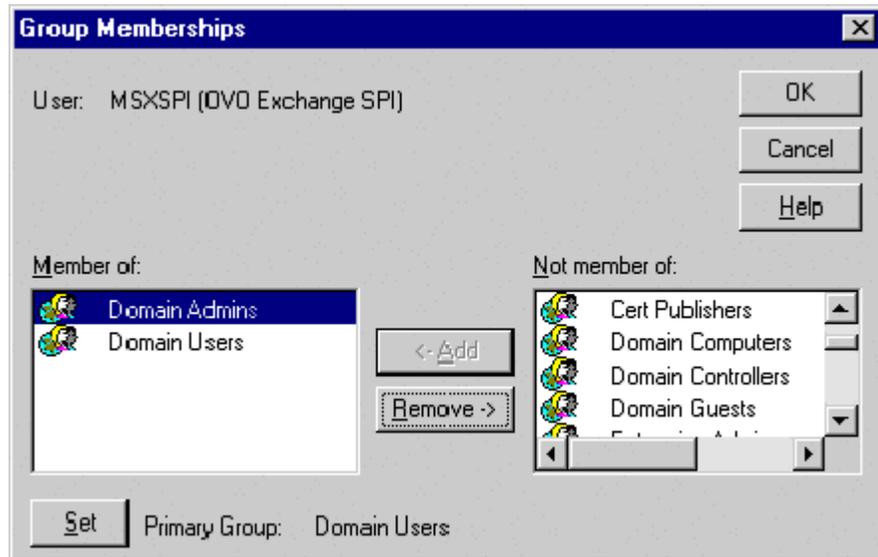


This password must be entered *but will not be authenticated later.*

- 4 Deselect **User Must Change password at Next Logon** and select **Password Never Expires.**

- 5 Click the **Groups** button to display the **Group Memberships** window.

Figure 31 Group Memberships dialog



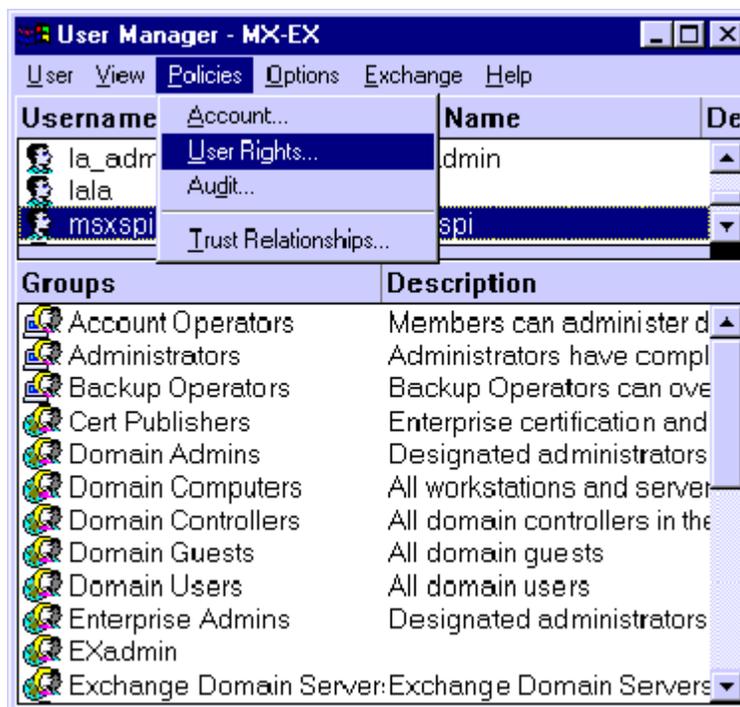
- 6 At the right, from the **Not a member of:** box select the **Domain Admins** user, click **Add**, and **OK** to close the **Group Memberships** window.
- 7 To include necessary information, click buttons in the **New User** window:



- Profile:** No User Profile should be specified.
- Hours:** All hours of the day and week should be allowed.
- Logon To:** All workstations should be specified.
- Account:** Should never expire/should be Global Account.

- 8 Click **Add** to add this user. (If the **Exchange Add Mailbox** window is displayed, select **Cancel** to close it).
- 9 Click the **Close** button to close the **New User** window.
- 10 From the **User Manager** menu bar select **Policies > User Rights...**

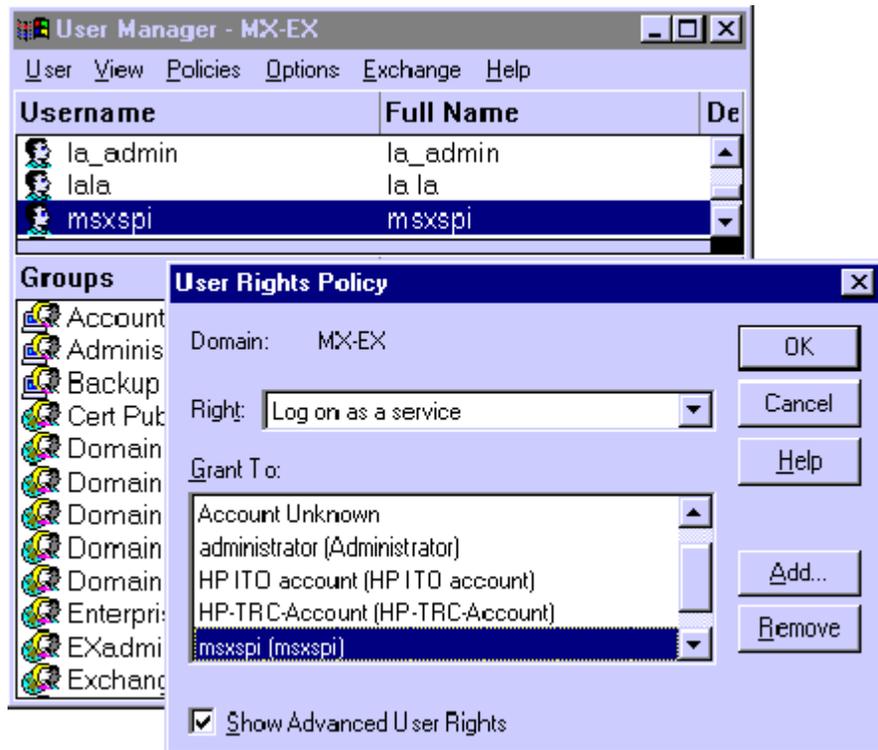
Figure 32 User Manager dialog



- 11 Check the **Show Advanced User Rights** checkbox.

- 12 From the drop-down list select **Log on as a service** in the **Right** field

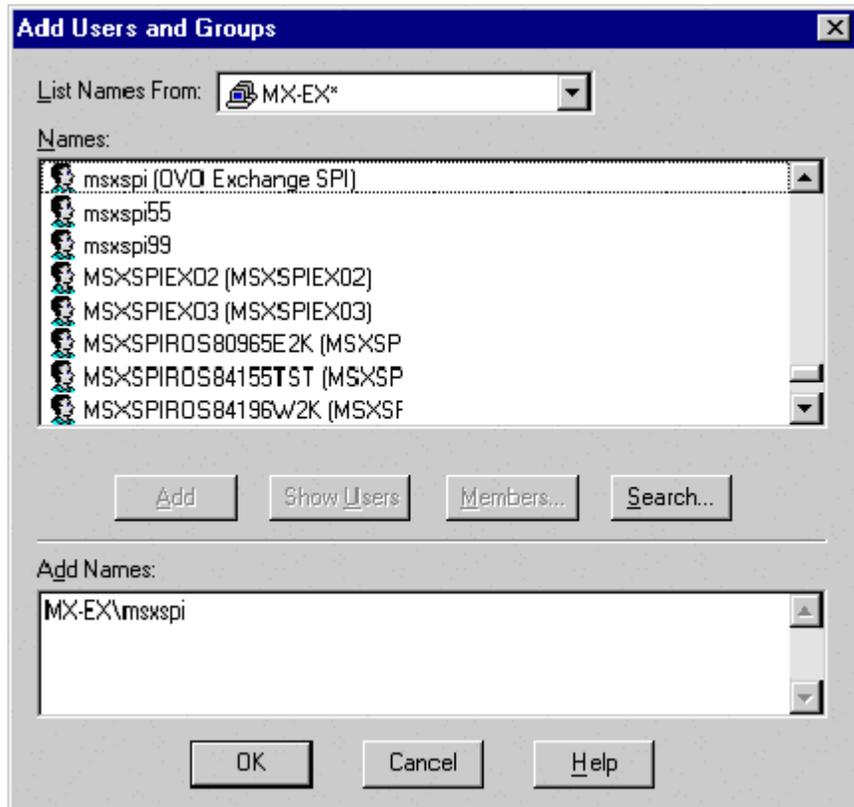
Figure 33 Selecting Log on as a service for User Rights.



- 13 Click the **Add** button to open the **Add Users and Groups** window.
- 14 Click the **Show Users** button.

- 15 Select the user account just added (*MSXSPI*), click **Add**, then **OK**.

Figure 34 Adding the new User Account



- 16 Repeat steps 12-15 to add the **Profile system performance** right.

Task 2: Grant Exchange Access Permissions to User Account (NT4/EX5.5)

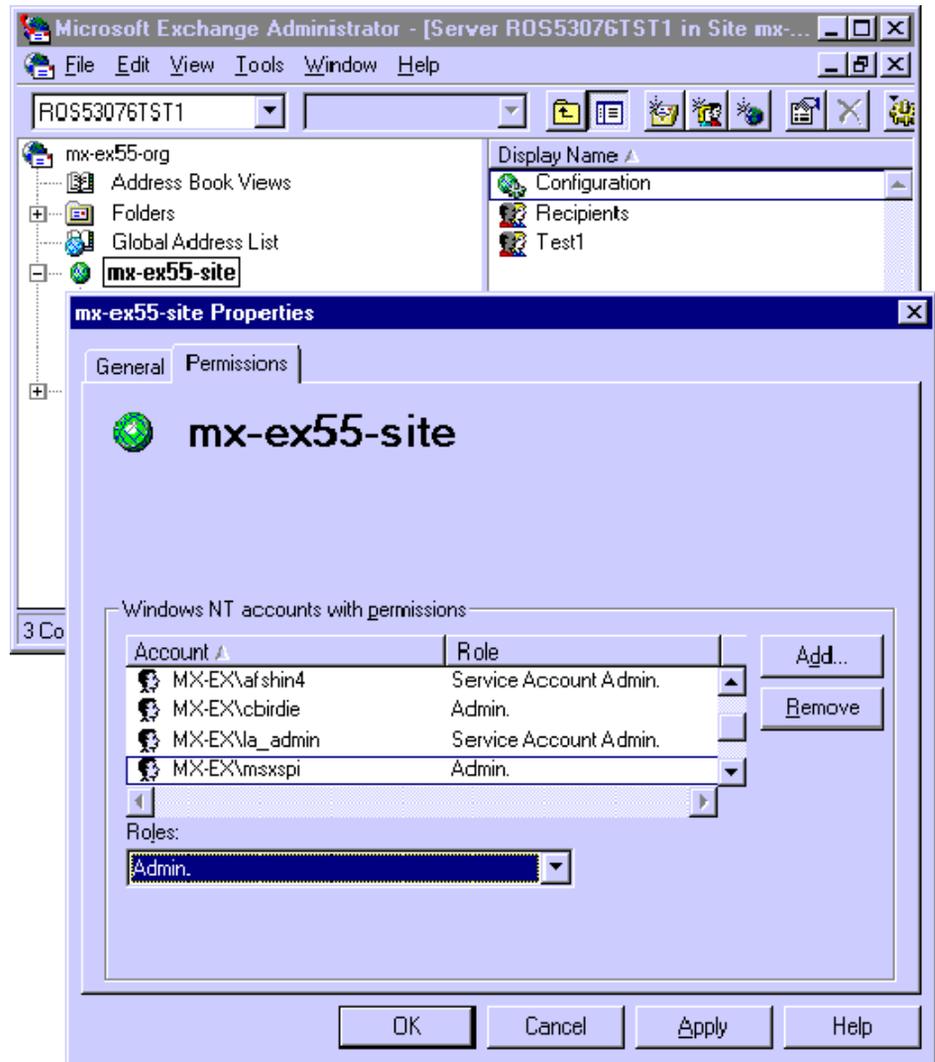
In order for the user account (in this example *MSXSPI*) to have access to a mailbox as well as the Exchange IS Public and Private databases, it must have Exchange Admin permissions. Use Exchange Administrator to grant these permissions at the site level.

- 1 Select **Start > Program > Microsoft Exchange > Microsoft Exchange Administrator**.

- 2 For each Exchange site where Advanced policies are to be deployed:
 - a In the left pane within the tree, select <site_name>.
 - b From the File menu select **Properties**.
 - c In the Properties window, select the **Permission** tab and click **Add** to open the **Add Users and Groups** window.
 - d Select the user account previously created (*MSXSPI*), and click **Add**.
 - e Click OK to add the user, and close the **Add Users and Groups** window.

- f Verify the user has the role of **Admin**.

Figure 35 Verifying the User role



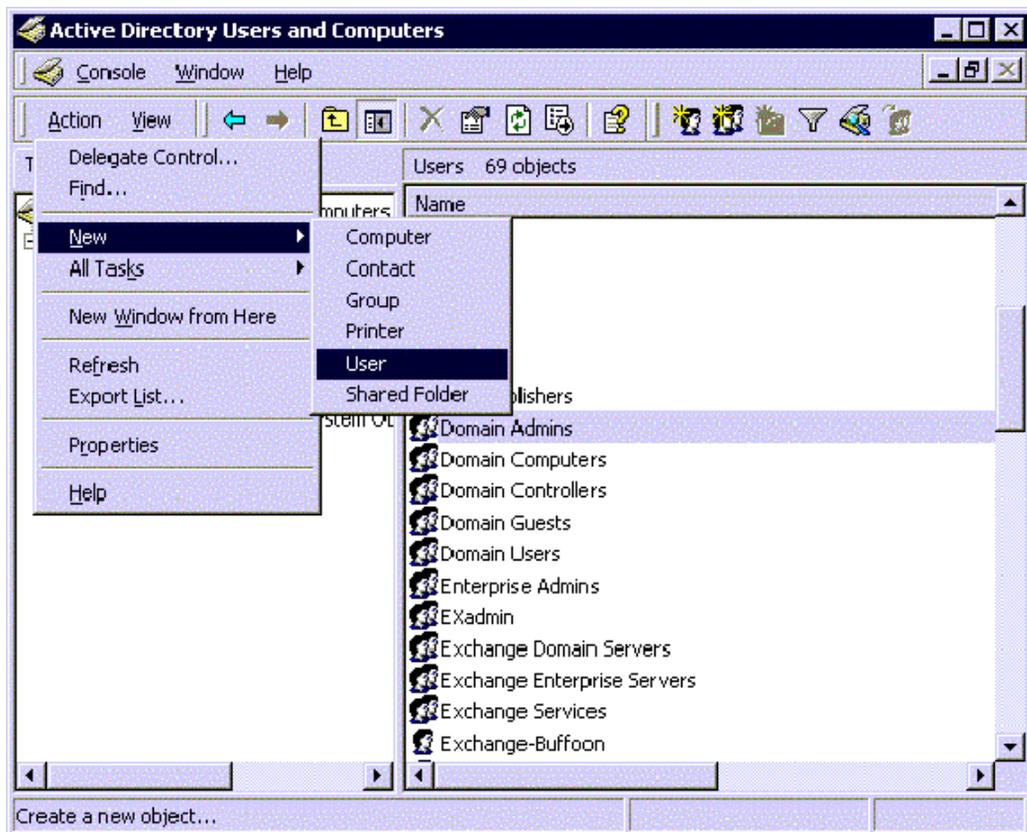
- g Click **OK** to save the changes.

Case 2: Exchange 5.5 Nodes in a Windows 2000 Domain (W2k/EX5.5)

Task 1: Create User Account (W2k/EX5.5)

- 1 Log on to the system that hosts the managed node's domain.
- 2 Select **Start > Programs > Administrative Tools > Active Directory Users and Computers**.
- 3 Expand the Active Directory of Users and Computers and right-click **Users** and select **New User**.

Figure 36 Selecting New User dialog



- 4 In the dialog box that appears, enter the user name just created (in this example *MSXSPI*) as the **First Name** and as the **User logon name**.

Figure 37 New object dialog

The screenshot shows a 'New Object - User' dialog box. At the top, it says 'Create in: mx-ex.ov.rose.hp.com/Users'. Below this, there are several input fields: 'First name:' with 'MSXSPI', 'Last name:' (empty), 'Full name:' with 'MSXSPI', 'User logon name:' with 'MSXSPI' and a dropdown menu showing '@mx-ex.ov.rose.hp.com', and 'User logon name (pre-Windows 2000):' with 'MX-EX\' and 'MSXSPI'. At the bottom, there are three buttons: '< Back', 'Next >', and 'Cancel'.

- 5 In the next window, enter **Password/Confirm Password** for the user account (in this example MSXSPI).

6 Select **Password Never Expires**. Then click **Next**

Figure 38 Setting User Privileges.

New Object - User [X]

Create in: mx-ex.ov.rose.hp.com/Users

Password: [xxxxxx]

Confirm password: [xxxxxx]

User must change password at next logon

User cannot change password

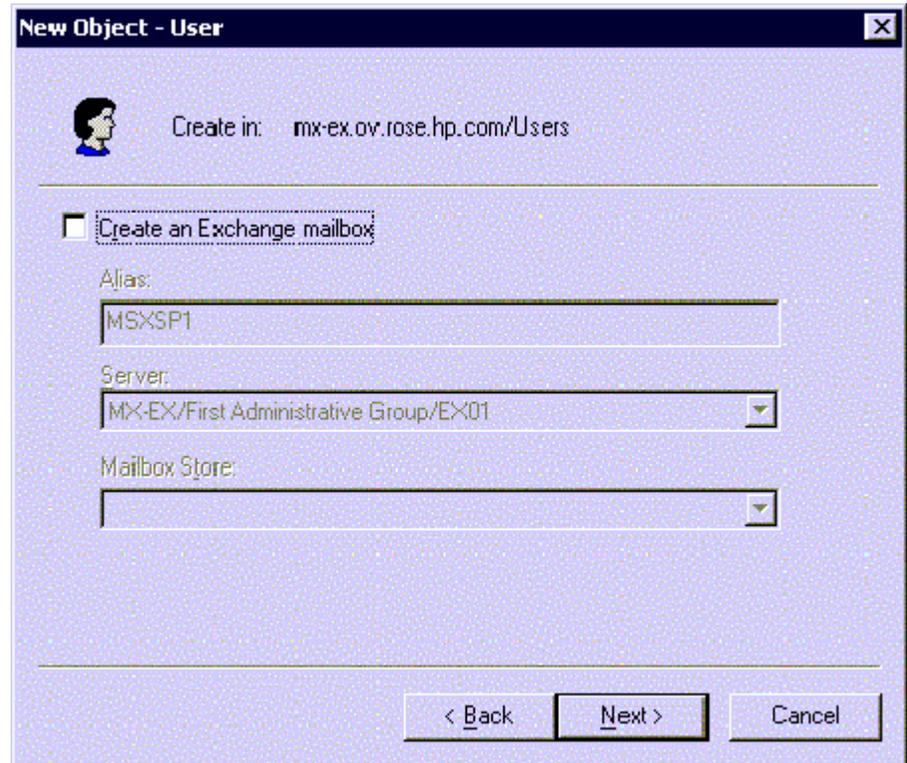
Password never expires

Account is disabled

< Back **Next >** Cancel

- 7 In the **New Object** dialog, deselect **Create an Exchange mailbox**, and click **Next**.

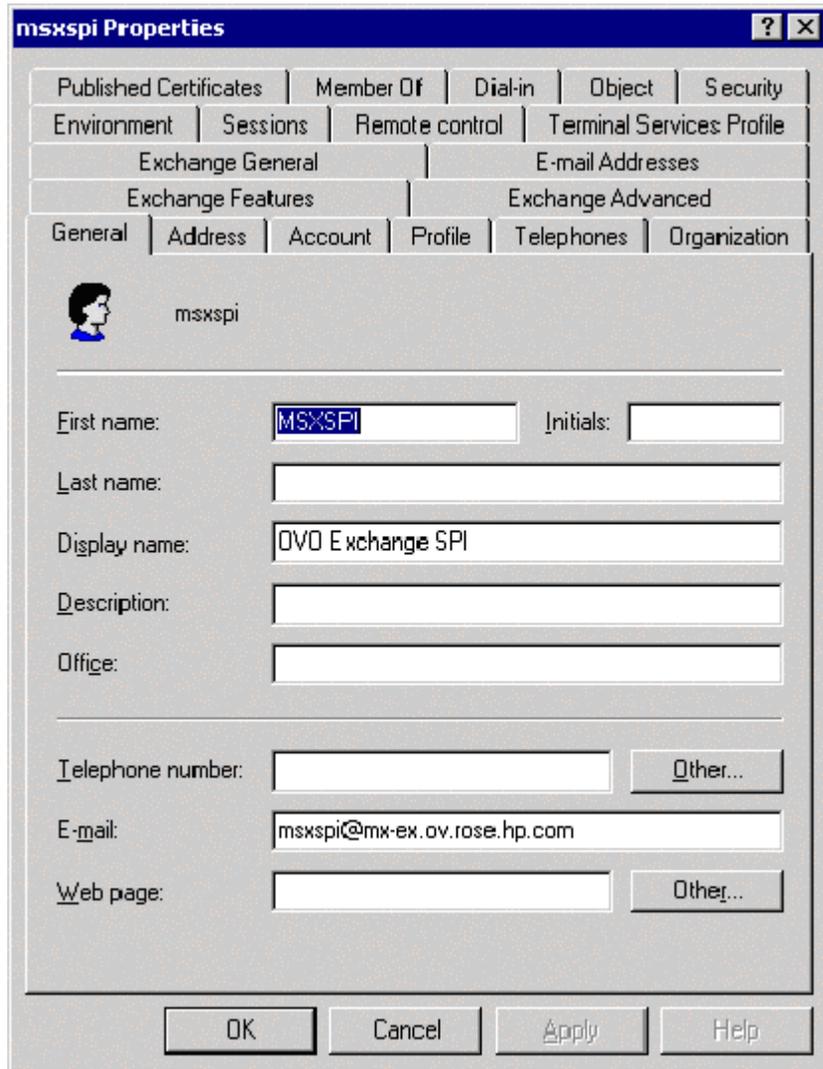
Figure 39 Creating an Exchange Mailbox



- 8 In the next dialog, complete creating the user by clicking **Finish**.
- 9 You are now back at the **Active Directory Users and Computers** dialog. In the right pane, right-click on the user just created (in this example *MSXSP1*) and select **Properties**.

- 10 In the **MSXSPI Properties** page, select the **General** tab. Enter “Exchange SPI for OpenView Operations for Windows” in the **Description** field.

Figure 40 Properties dialog

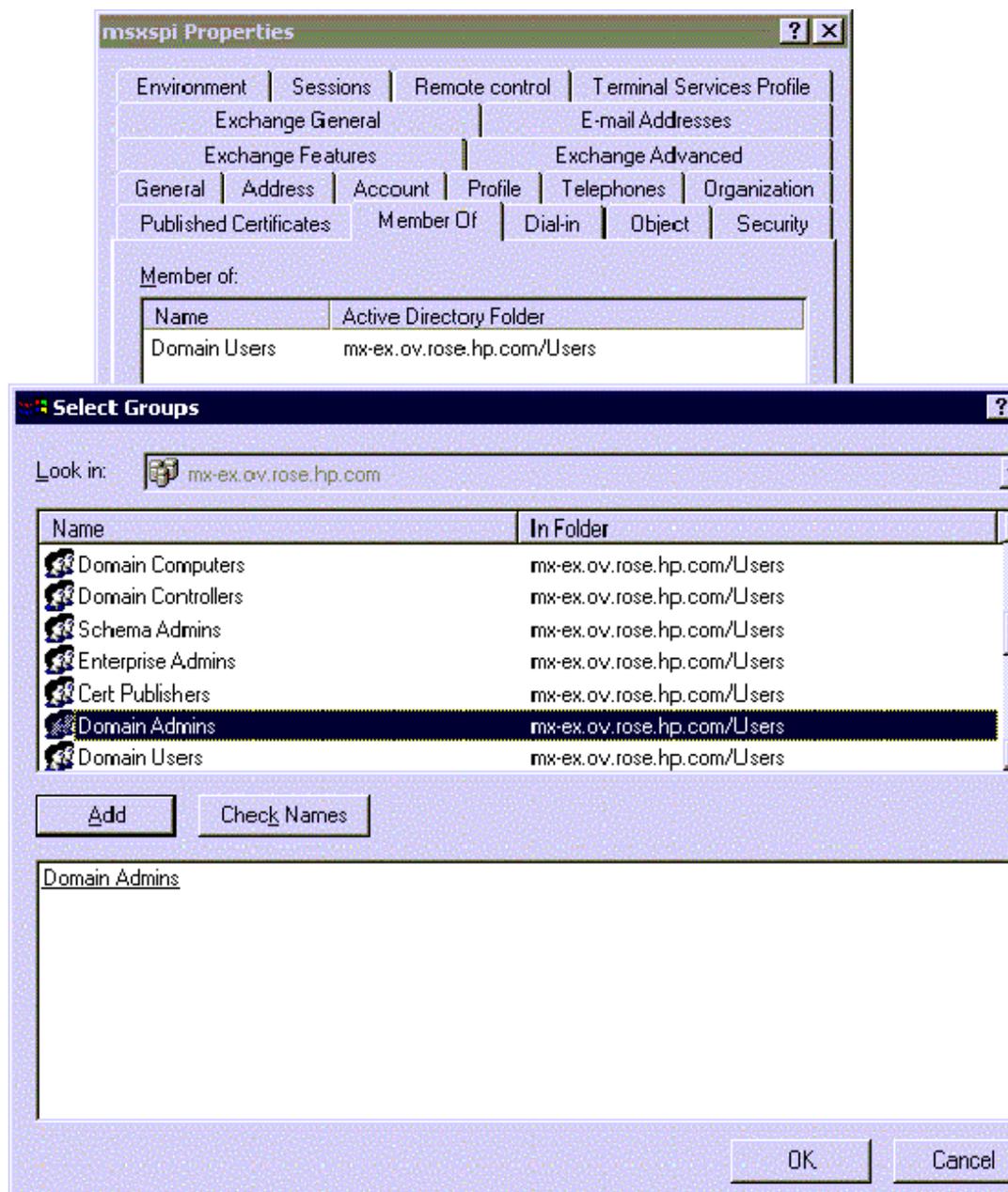


The screenshot shows the 'msxspi Properties' dialog box with the 'General' tab selected. The dialog has a title bar with a question mark and a close button. Below the title bar is a tabbed interface with the following tabs: Published Certificates, Member Of, Dial-in, Object, Security, Environment, Sessions, Remote control, Terminal Services Profile, Exchange General, E-mail Addresses, Exchange Features, Exchange Advanced, General, Address, Account, Profile, Telephones, and Organization. The 'General' tab is active, showing a user icon and the name 'msxspi'. The fields are as follows:

First name:	<input type="text" value="MSXSPI"/>	Initials:	<input type="text"/>
Last name:	<input type="text"/>		
Display name:	<input type="text" value="DVD Exchange SPI"/>		
Description:	<input type="text"/>		
Office:	<input type="text"/>		
Telephone number:	<input type="text"/>	<input type="button" value="Other..."/>	
E-mail:	<input type="text" value="msxspi@mx-ex.ov.rose.hp.com"/>		
Web page:	<input type="text"/>	<input type="button" value="Other..."/>	

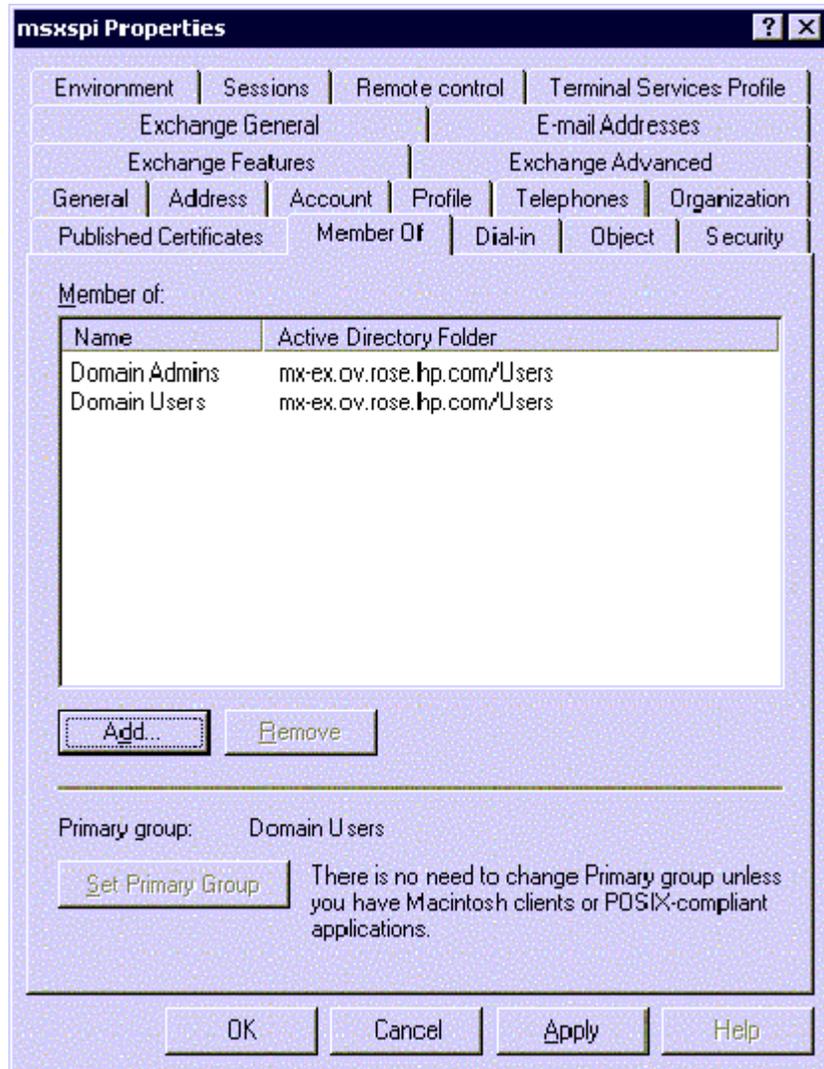
At the bottom of the dialog are four buttons: OK, Cancel, Apply, and Help.

11 Select the **Member Of** tab. Click **Add**.



- 12 In the **Select Group** dialog select **Domain Admins** from the top pane. Click **Add**, then **OK**.
- 13 The new user (MSXSPI) is now a member of Domain Admins group. Click **OK** and exit the **Active Directory Users and Computer** dialog.

Figure 41 New User with new Membership status

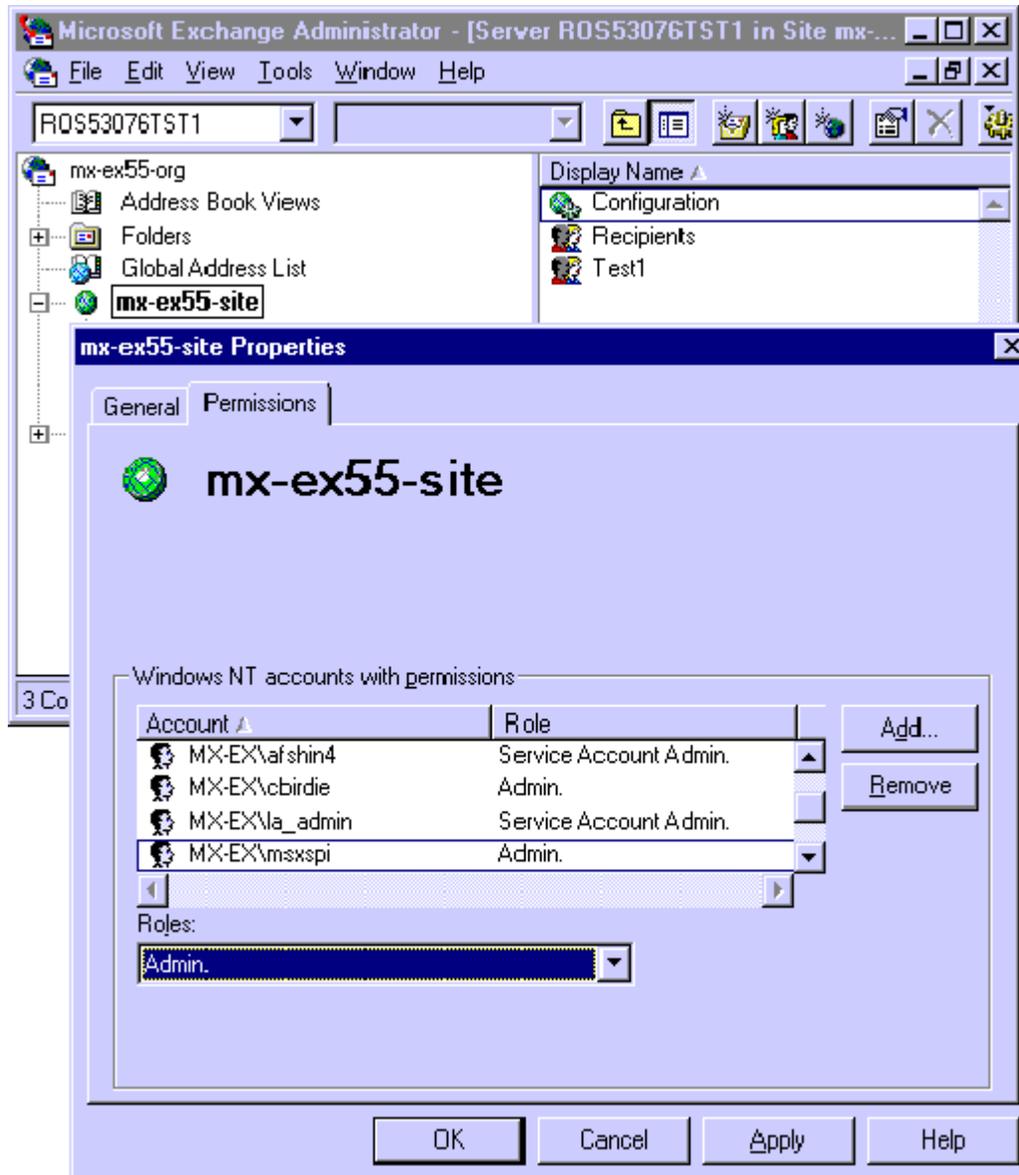


Task 2: Grant Exchange Access Permissions to User Account (W2k/EX5.5)

In order for the user account (in this example MSXSPI) to have access to a mailbox as well as the Exchange IS Public and Private databases, it must have certain Exchange Admin permissions. Use Exchange Administrator to grant these permissions at the site level.

- 1 Select **Start > Program > Microsoft Exchange > Microsoft Exchange Administrator**.
- 2 For each Exchange site where Advanced policies are to be deployed:
 - a In the left pane within the tree, select **<site_name>**.
 - b From the File menu select **Properties**.
 - c In the Properties window, select the **Permission** tab and click **Add** to open the **Add Users and Groups** window.
 - d Select the user account previously created (in this example MSXSPI), and click **Add**.
 - e Click OK to add the user, and close the **Add Users and Groups** window.
 - f Verify the user has the role of **Admin**.

Figure 42 Verifying User roles.

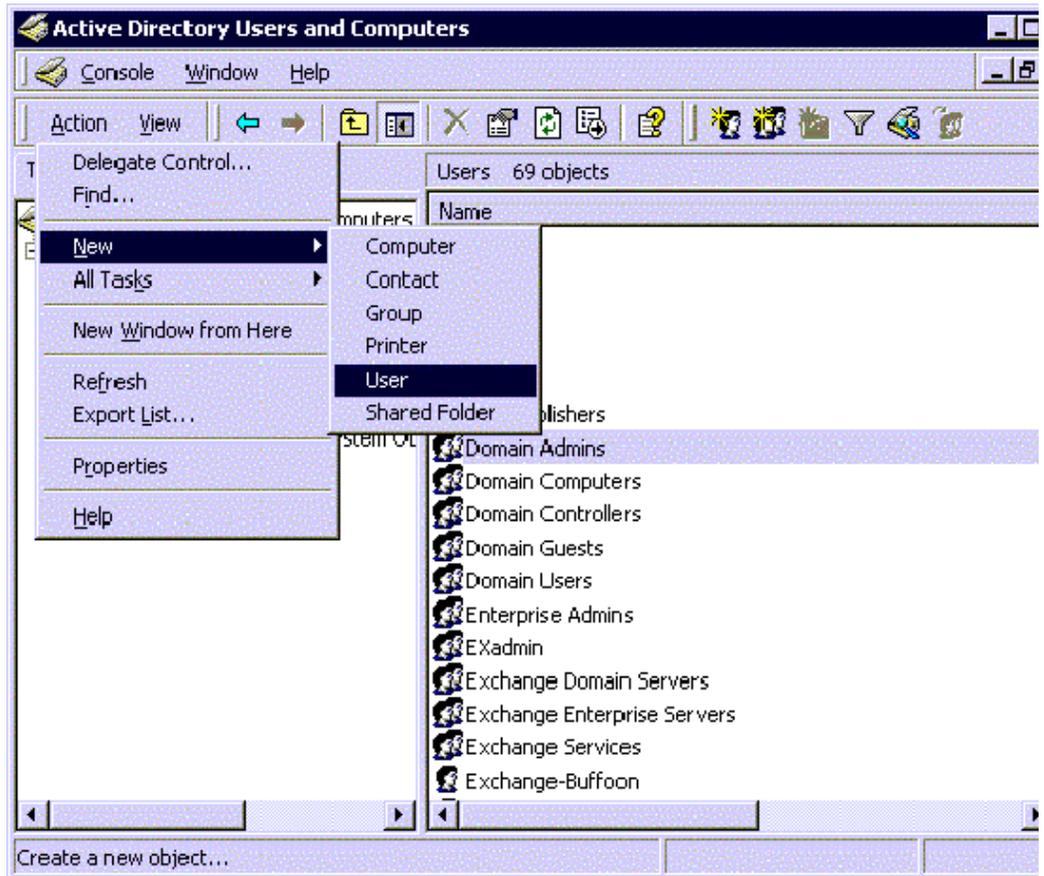


- g** Click **OK** to save the changes.

Case 3: Exchange 2000 Nodes in a Windows 2000 Domain (W2k/EX2k)

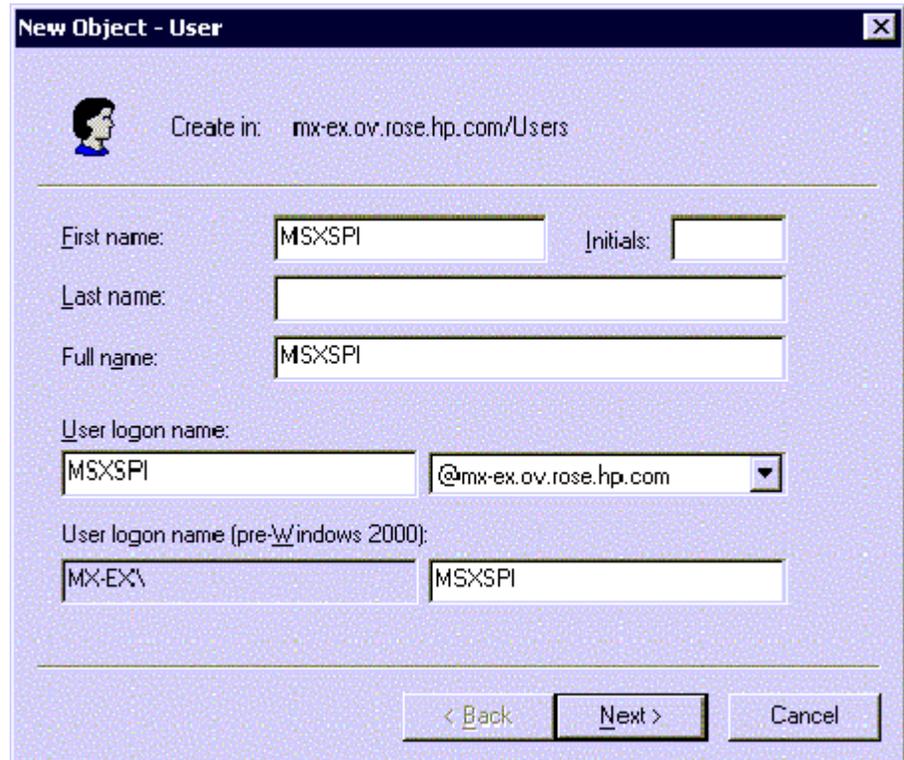
Task 1: Create User Account (W2k/EX2k)

- 1 Log on to the system that hosts the managed node's domain.
- 2 Select **Start > Programs > Administrative Tools > Active Directory Users and Computers**.
- 3 Expand the Active Directory of Users and Computers and right-click **Users** and select **New User**.



- 4 In the dialog box that appears, enter the new user account name, in this example MSXSPI, as the **First Name** and as the **User logon name**

Figure 43 Entering New User Account Name.



The screenshot shows a dialog box titled "New Object - User". At the top, it says "Create in: mx-ex.ov.rose.hp.com/Users". Below this, there are several input fields:

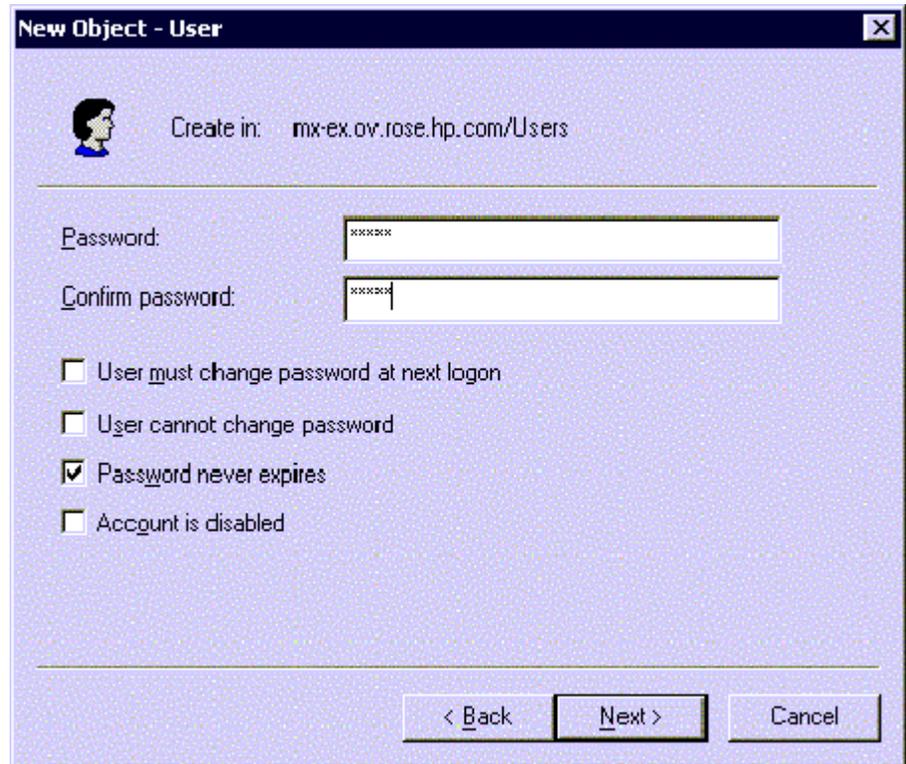
- First name:** MSXSPI
- Initials:** (empty)
- Last name:** (empty)
- Full name:** MSXSPI
- User logon name:** MSXSPI
- Domain:** @mx-ex.ov.rose.hp.com (selected from a dropdown)
- User logon name (pre-Windows 2000):** MX-EX\MSXSPI

At the bottom, there are three buttons: "< Back", "Next >", and "Cancel".

- 5 In the next window, enter **Password/Confirm Password** for the user account (in this example MSXSPI).

- 6 Select **Password Never Expires**. Then click **Next**.

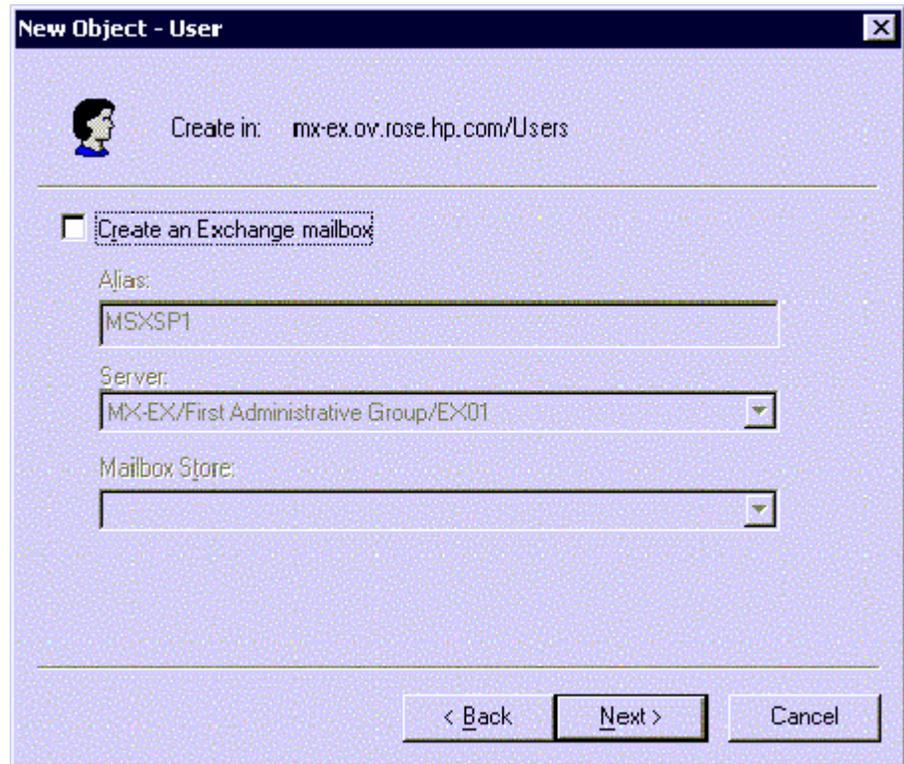
Figure 44 Setting Password Properties



- 1 In the **New Object** dialog, deselect **Create an Exchange mailbox**, and

click **Next**

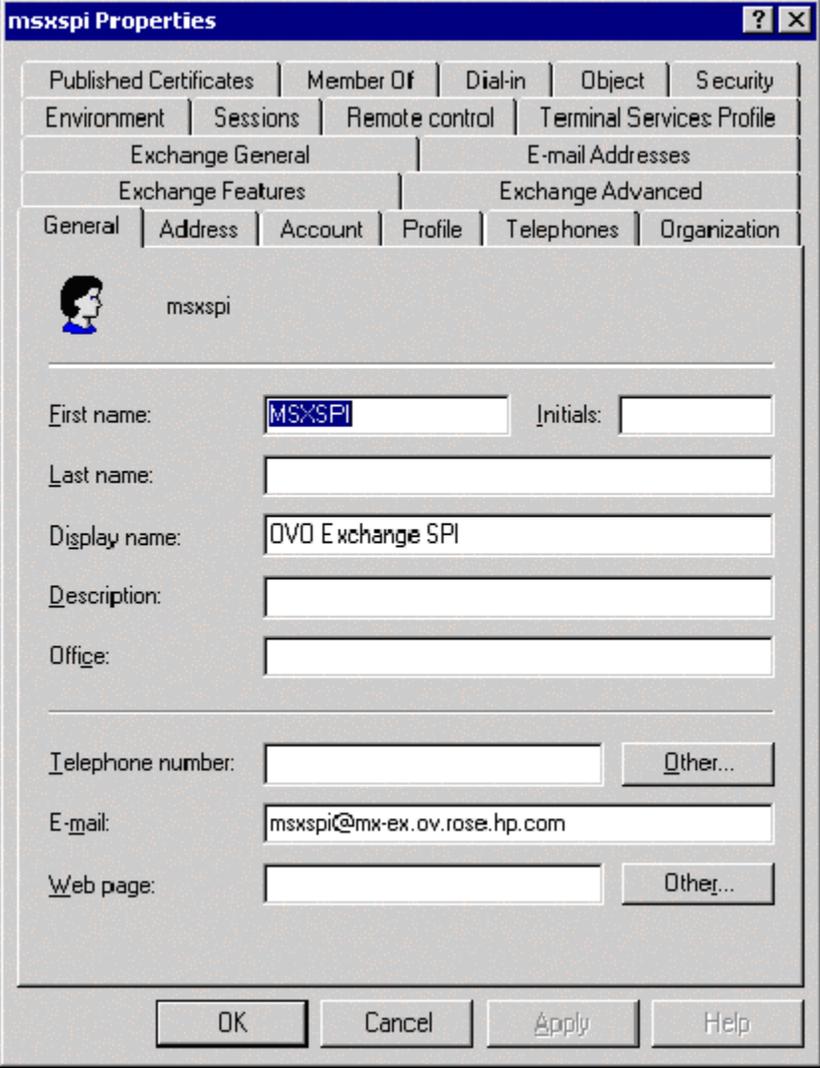
Figure 45 Deselecting Creating a Mailbox.



- 2 In the next dialog, complete creating the user by clicking **Finish**.
- 3 You are now back at the **Active Directory Users and Computers** dialog. In the right pane, right-click on the user just created (MSXSPI) and select **Properties**.

- 4 In the **MSXSPI Properties** page, select the **General** tab. Enter “OVO Exchange SPI” in the **Display name** and **Description** fields.

Figure 46 Entering Name in Properties dialog



The screenshot shows the 'msxspi Properties' dialog box with the 'General' tab selected. The dialog has a title bar with a question mark and a close button. Below the title bar is a tabbed interface with the following tabs: Published Certificates, Member Of, Dial-in, Object, Security, Environment, Sessions, Remote control, Terminal Services Profile, Exchange General, E-mail Addresses, Exchange Features, and Exchange Advanced. The 'General' tab is active and contains the following fields:

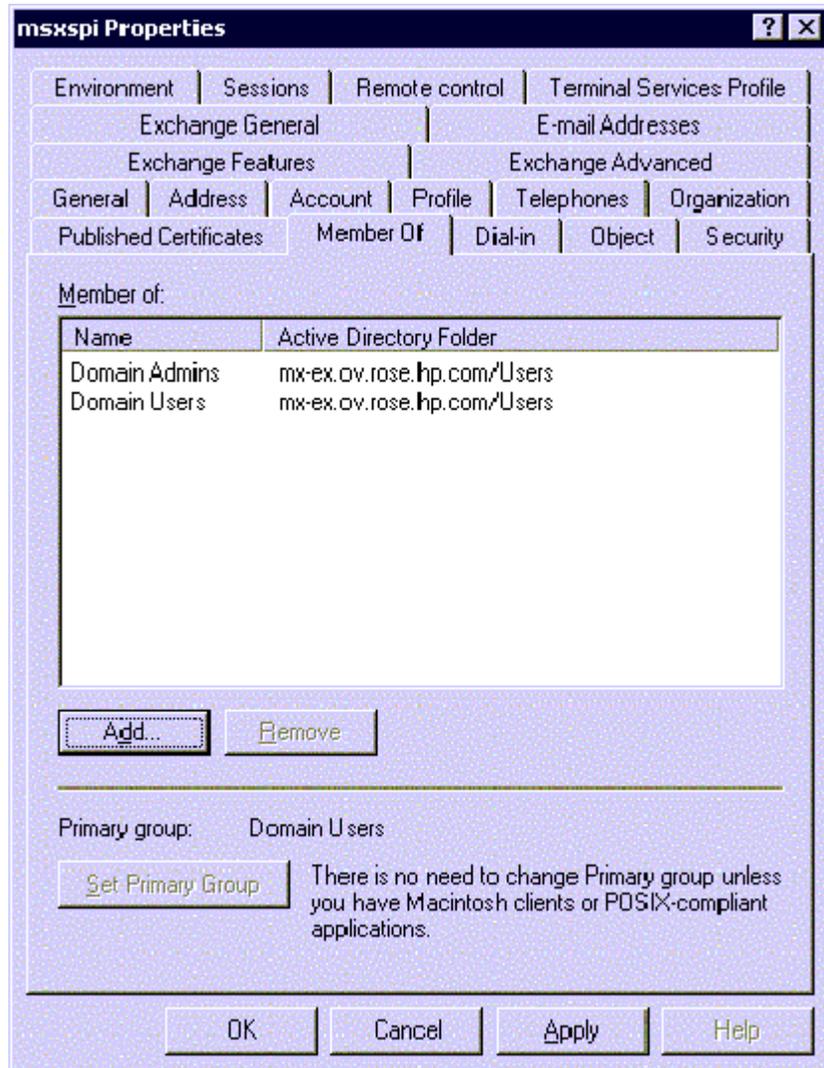
- First name:** MSXSPI
- Initials:** (empty)
- Last name:** (empty)
- Display name:** OVO Exchange SPI
- Description:** (empty)
- Office:** (empty)
- Telephone number:** (empty) with an 'Other...' button
- E-mail:** msxspi@mx-ex.ov.rose.hp.com
- Web page:** (empty) with an 'Other...' button

At the bottom of the dialog are four buttons: OK, Cancel, Apply, and Help.

- 5 Select the **Member Of** tab, and click **Add**.

- 6 In the **Select Group** dialog select **Domain Admins** from the top pane. Click **Add**, then **OK**.
- 7 The new user (in this example MSXSPI) is now a member of Domain Admins group. Click **OK** and exit the **Active Directory Users and Computer** dialog.

Figure 47 Confirming Membership Privileges

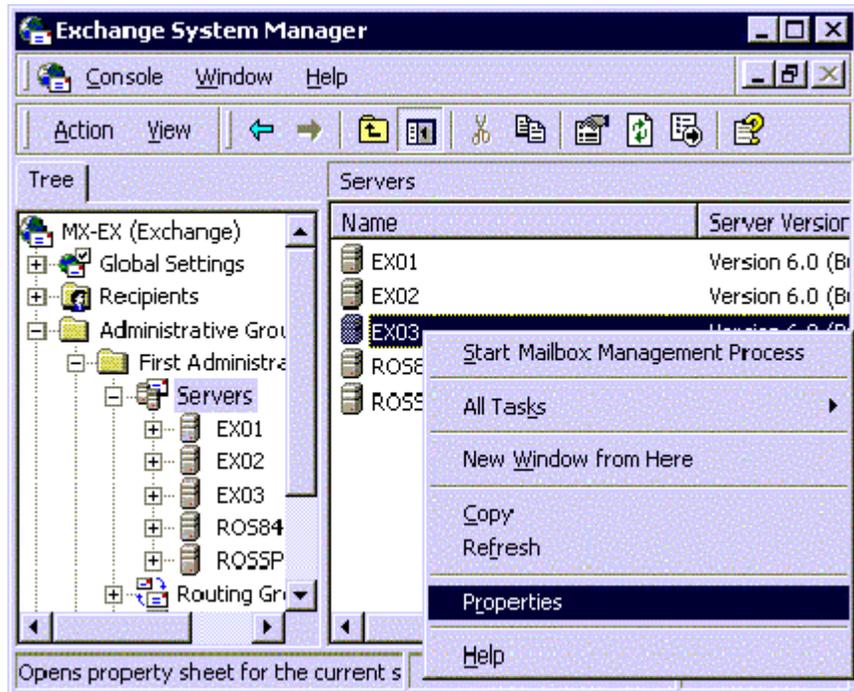


Task 2: Grant Exchange Access Permissions to User Account (W2k/EX2k)

In order for the user account (in this example MSXSPI) to have access to a mailbox as well as the Exchange IS Public and Private databases, it must have certain Exchange Admin permissions. Use Exchange System Manager to grant these.

- 1 Select **Start > Program > Microsoft Exchange > System Manager**.

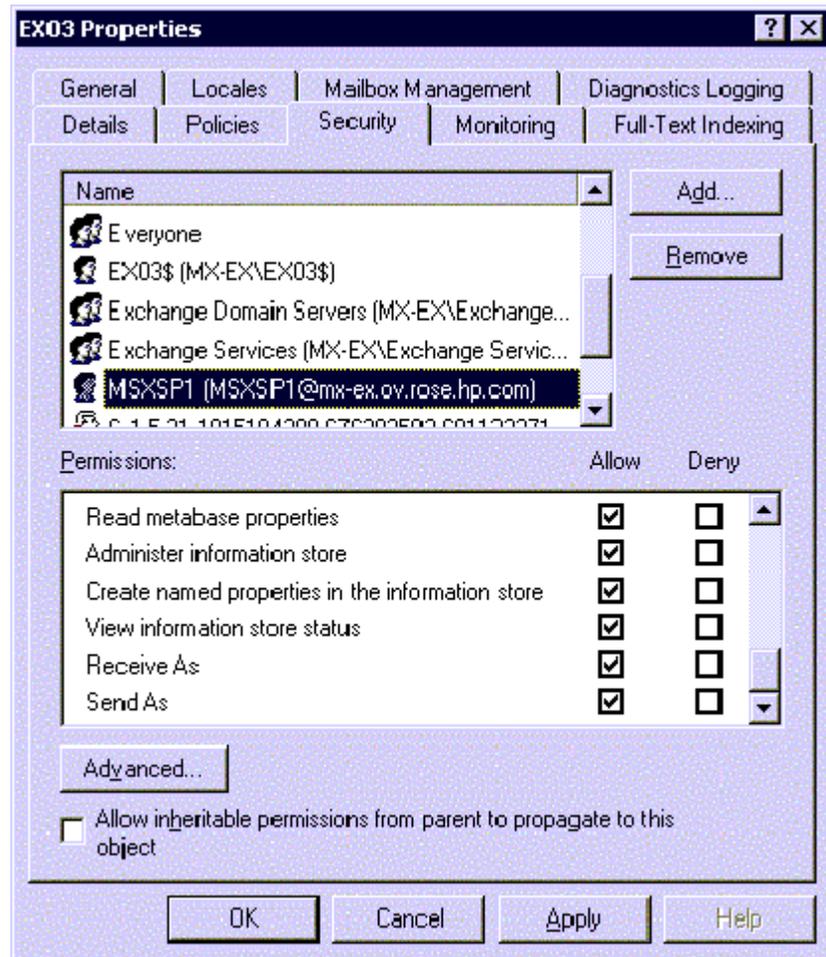
Figure 48 Exchange System Manager dialog



- 2 In the left pane expand the **Administrative Groups** folder.
- 3 Expand your *<Exchange_server_administrative_group>* folder.
- 4 In the right pane, right-click the server to which you want to grant the user account just created (in this example MSXSPI) access and select **Properties**.
- 5 In the Properties dialog, select the **Security** tab.

- 6 In the **Name** box select the user name, in this example MSXSPI.
- 7 In the **Permission** box, check both the **Receive As** and **Send As** permissions check boxes.

Figure 49 Properties dialog



- 8 Uncheck the box **Allow inheritable permissions from parent to propagate to this object**.
- 9 Click **OK** and exit the **Exchange System Manager** dialog.

10 Repeat this procedure for each targeted Exchange server.

- ▶ At a large Exchange site, it can take several minutes to propagate the new Exchange administrator information. If you experience permission problems while accessing Exchange databases, enforce the setting of the new Exchange Admin account by logging directly on to the affected Exchange server (which is not yet replicated) and setting the account manually.

Using Exchange SPI Policies, Reports and Graphs

This chapter outlines procedures for:

- deploying the various policy groups
- creating a User Account with the proper access permissions for each combination of Exchange version and operating system
- configuring the EXSPI End to End Message Ping policy to determine SLA performance of sending and receiving messages
- generating Exchange SPI reports and graphs

Using Exchange SPI Policies



Important Microsoft Information on the Web: Before you deploy Exchange SPI policies, please refer to the Microsoft article “PRB: Performance Object Is Not Displayed in Performance Monitor” at this URL: <http://support.microsoft.com/support/kb/articles/Q248/9/93.ASP>.

The article contains information on editing the Windows registry so that performance objects (tracked by Performance Monitor) are always enabled. A disabled performance object could cause an Exchange SPI policy to fail. By following the instructions in the article, you can ensure that policies are able to collect Exchange performance data as expected.

EXSPI Policy Prerequisites and Descriptions

Some policies in the SPI for Exchange policy groups require that particular software components/services are installed on Exchange server systems before the deployed policies will work. For policies in the EXSPI Advanced group, you must configure a domain admin account, see “[Deploying Policies from other Policy Groups](#)” on page 84.

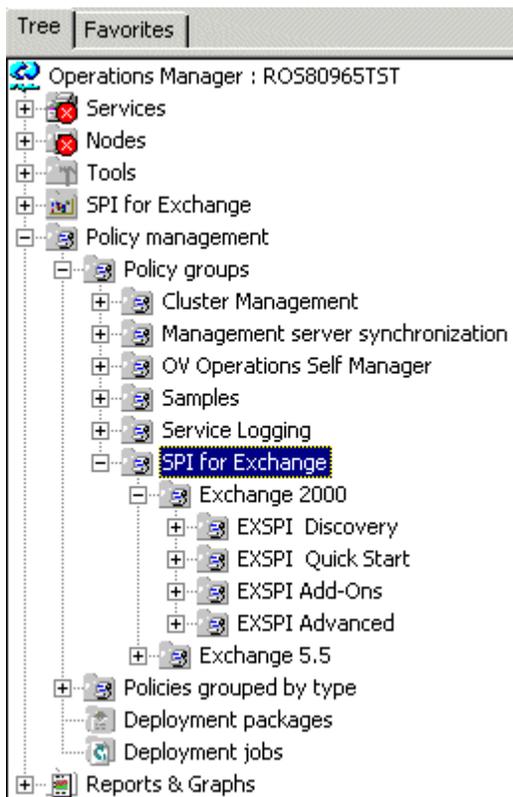
Updating the account information in the policies can be performed using the HP OpenView Operations for Windows tools called **ovpmpwutil**. Detailed procedures for using ovpmpwutil can be found in the Command-line Tools section of HP OpenView Operations for Windows on-line Help.

Use the following tables to decide which policies you want to install. In the Policy Prerequisites table you can see whether or not a policy group/subgroup works with Exchange 5.5 and/or Exchange 2000, as well as any required configuration. Policy Group Descriptions show you what type of data/functionality the policy group offers.

Individual policy definitions are documented in the Exchange SPI on-line Help.

Policy Groups are located in the console tree under **Policy Management** > **Policy Groups** > **SPI for Exchange** and then the Exchange version.

Figure 50 SPI for Exchange Policy location on the console tree



EXSPI Policy Group Prerequisites for Exchange 5.5

Policy Group/ Subgroup	Required Exchange Service	Required Manual Configuration
EXSPI Discovery	N/A	N/A.
EXSPI Quick Start	N/A	N/A
EXSPI Add-Ons EXSPI cc:Mail Connector	cc:Mail Connector	N/A
EXSPI MCU Server	MCU Server	N/A
EXSPI Internet Mail Services	Internet Mail Service (IMS)	N/A
IS Virus Scan	N/A	N/A
EXSPI Lotus Notes Connector	Lotus Notes Connector	N/A
EXSPI News Service	N/A	N/A
EXSPI Advanced EXSPI End to End Message Ping		<ul style="list-style-type: none"> • Create MSXSPI User account with correct permissions • Edit the MBOX Config Tool to contain User Password • Create mailbox using MBOX Config tool • Configure EXSPI End to End Message Ping policy to set up server pairs • Modify the policy to include user account and password
EXSPI Event Log Warnings & Information		Use for troubleshooting
EXSPI Reporter Collection		Create MSXSPI User account and password

EXSPI Policy Group Prerequisites for Exchange 2000

Policy Group/ Subgroup	Required Exchange Service	Required Manual Configuration
EXSPI Discovery	N/A	Policy must be modified to contain a domain admin user and password
EXSPI Quick Start All Policies	N/A	N/A
EXSPI Add-Ons EXSPI cc:Mail Connector	cc:Mail Connector	N/A
EXSPI Chat Service	Exchange Chat Service	N/A
EXSPI Conferencing Service	Exchange Conferencing Server	N/A
EXSPI MCU Server	MCU Server	N/A
EXSPI Instant Messaging	Exchange Instant Messaging Service	Some policies in this group must be modified to contain a domain admin user and password
IS Virus Scan		N/A
EXSPI Lotus Notes Connector	Lotus Notes Connector	N/A
EXSPI NNTP (Network News Transfer Protocol (NNTP)	N/A
Transaction Log		Some policies in this group must be modified to contain a domain admin user and password

Policy Group/ Subgroup	Required Exchange Service	Required Manual Configuration
EXSPI Advanced EXSPI End to End Message Ping	N/A	For each node where the policy is to be deployed: <ul style="list-style-type: none"> • Create MSXSPI User account with correct permissions • Edit the MBOX Config Tool to contain User Password • Create mailbox using MBOX Config tool • Configure EXSPI End to End Message Ping policy to set up server pairs • Modify the policy to include user account and password
EXSPI Event Log Warnings & Information	N/A	Use for troubleshooting
EXSPI Reporter Collection	N/A	Create MSXSPI User account and password

EXSPI Policy Group Descriptions

Group: EXSPI Quick Start (Exchange 5.5)	Description
EXSPI-VersionCheck	Checks for the Exchange SPI version.
EXSPI Directory Service	Executes alarm metrics for problems detected in the Microsoft Exchange Directory service.
EXSPI Event Log Errors	Monitors all errors (type = Error) in the Windows System Log.
EXSPI General Data Collection	Contains all standard data collection policies used to feed data into the data collector. The collected data can be graphed or used to generate reports.
EXSPI Information Store	Executes alarm metrics for problems detected in the Exchange Information Store service.
EXSPI Internal Errors	Open Message Interface policy for trapping EXSPI errors.
EXSPI Message Transfer Agent	Executes alarm metrics for problems detected in the Microsoft MTA service.
EXSPI Services and Processes	Monitors the availability of key Exchange services and processes.
EXSPI Transaction Log	Monitors the size in MB of the Exchange transaction logfiles as well as the disk space used by the files. When size increases or available disk space decreases to specific defined values, messages with warnings appear in the message browser.

Group: EXSPI Quick Start (Exchange 2000)	Description
EXSPI-VersionCheck	Checks for the Exchange SPI version.
EXSPI Event Log Errors	Monitors all errors (type = Error) in the Windows System Log.
EXSPI General Data Collection	Contains all standard data collection policies used to feed data into the OpenView data collector. The collected data can be graphed or used to generate reports.
EXSPI Information Store	Executes alarm metrics for problems detected in the Exchange Information Store service.
EXSPI Internal Errors	Open Message Interface policy for trapping EXSPI errors.
EXSPI Message Transfer Agent	Executes alarm metrics for problems detected in the Microsoft MTA service.
EXSPI Services and Processes	Monitors the availability of key Exchange services and processes.
EXSPI Site Replication Service	Monitors site replication to verify that synchronization updates are being processed efficiently. Non-zero counters indicate that site replication synchronization is in process. If the values are not decreasing over time a problem may exist with the site replication service or performance of the server. High values are not necessarily bad, but values not decreasing is cause for concern.
EXSPI SMTP	Executes alarm metrics for problems detected in messages sent to the Simple Mail Transfer Protocol (SMTP) server.

Group: EXSPI Add-Ons	Description
EXCHANGE 5.5	
EXSPI cc:Mail Connector	Executes alarm according to for cc:Mail Connector metrics. Deploy on all Exchange servers containing the cc:Mail Connector.
EXSPI Internet Mail Services	Executes alarm metrics for the problems detected in Exchange Internet Mail service. Deploy on all Exchange servers containing IMS.
EXSPI Lotus Notes Connector	Executes alarms for Lotus Notes Connector metrics. Deploy on all Exchange servers containing the Lotus Notes Connector.
EXSPI News Service	Executes alarm metrics for problems detected in the Exchange News service. Deploy on all Exchange 5.5 servers containing the Exchange News service.
EXCHANGE 2000	
EXSPI cc:Mail Connector	Executes alarm according to for cc:Mail Connector metrics. Deploy on all Exchange servers containing the cc:Mail Connector.
EXSPI Chat Service	Monitors the current client connections to the chat community, showing anonymous connections, authenticated connections, authentication failures, timeouts.
EXSPI Conferencing Service	Monitors current client connections to the server, server load for online data and video conferences, and CPU process time of the T.120 MCU (multipoint control unit) server.
EXSPI Instant Messaging	Monitors current connections using instant messaging service, current subscriptions, and average processor time per instance.
EXSPI IS Virus Scan	Exchange SPI monitors the Anti-Virus API performance counters and Windows Event Log informing on the possibility of a virus attach.
EXSPI Lotus Notes Connector	Executes alarms for Lotus Notes Connector metrics. Deploy on all Exchange servers containing the Lotus Notes Connector.
EXSPI NNTP	Executes alarm metrics for outbound newsfeed connections that fail. For Exchange 2000 servers.

Group: EXSPI Add-Ons	Description
EXCHANGE 2000	
EXSPI Transaction Log	Monitors the size in MB of the Exchange transaction logfiles as well as the disk space used by the files. When size increases or available disk space decreases to specific defined values, messages with warnings appear in the message browser.
Group: EXSPI Advanced EXCHANGE 5.5 and EXCHANGE 2000	Description
EXSPI End to End Message Ping	Alarms on AND collects data for the End to End Message Ping policy
EXSPI Event Log Warnings/Information	Monitors all warnings and information messages in the Windows System Log. Is not typically deployed.
EXSPI Reporter Collection	Feeds data into the OpenView data collector for use by OpenView reporter.

Deploying the Quick Start Policy Group

To receive any information from a managed Exchange server requires that the Quick Start policy group for the appropriate version be deployed. This policy group is deployed automatically based on the results of the Service Discovery.

The Quick Start policy group contains the most basic definitions and rules for scheduling data collecting/graphing, and for generating messages/alerts.

After Discovery, the version specific policies in the Quick Start group are auto deployed. Or, to perform this manually:

- 1** In the left pane of the OVO Manager console expand the **Policy management > Policy groups** folders to view policy groups.
- 2** Open the **SPI for Exchange** folder and select the correct Exchange version: **Exchange 2000** or **Exchange 5.5**.
- 3** Open the appropriate Exchange folder, select the **EXSPI Quick Start** policy group, right-click and select **Deploy on...**
- 4** In the **Deploy policies on...** dialog select all nodes by clicking the check box next to **Nodes**, or select individual nodes by clicking the appropriate checkbox.

Deploying Policies from other Policy Groups

In each of the Exchange 5.5 and Exchange 2000 folders are two additional policy groups that supplement the Quick Start group:

EXSPI Add-ons policies

- Some policies in the EXSPI Add-Ons policy group require a standard Windows domain admin with password to be supplied in order for them to perform Active Directory queries, and some can be deployed with no additional configuration. Follow the procedure “[Adding Domain Admin User and Password to a Policy](#)” on page 43 for editing policies in this way. Those requiring the domain admin with password are:
 - EXSPI Add-Ons > Transaction Log > **EXSPI-6.0 1d-Transaction Log**
 - EXSPI Add-Ons > Transaction Log > **EXSPI-6.0 15m-Transaction Log**
 - EXSPI Add-Ons > Transaction Log > **EXSPI-6.0 Dc-Instant Messaging**
 - EXSPI Add-Ons > Transaction Log > **EXSPI-6.0 Dc-Instant Messaging Enabled Users**
- EXSPI Add-Ons policies collect data that show how related services, such as Lotus notes or Internet Information Services, are performing. Please see the section “[EXSPI Policy Prerequisites and Descriptions](#)” on page 74 for requirements on installing specific policies in the Add-ons group.

To deploy policies in the Add-ons group

- a In the left pane of the OVO Manager console expand the **Policy management > Policy groups** folder to view policy groups.
- b Click the plus sign (+) next to **SPI for Exchange**, or double-click it to view Exchange SPI policy groups.
- c Double-click **EXSPI Add-ons** and select an add-on policy, check the description in the details pane to verify it is the correct one (double click to open and see details if necessary), right-click and select **Deploy on....**

- d In the Deploy on... dialog select all nodes by clicking the check box next to **Nodes**, or select individual nodes by clicking each appropriate checkbox.

EXSPI Advanced policies

There are three groups of policies in the EXSPI Advanced policy group:

EXSPI End to End Message Ping policy group

- These policies enable the Exchange SPI to test network connections between Exchange servers, and collect performance data on message receipt and delivery.

To deploy the EXSPI End to End Message Ping policy see the procedure outlined in [“Configuring EXSPI End to End Message Ping” on page 86](#).

EXSPI Event Log Warnings and Information policy group

- The EXSPI Event Log Warnings and Information policies capture Windows event log text and are generally meant to be deployed for troubleshooting purposes.

EXSPI Reporter Collection policy group

- To deploy EXSPI Reporter Collection policies, please refer to [“Using Exchange SPI Reports and Graphs” on page 96](#) in this manual, and the SPI for Exchange on-line Help for a listing of all the preconfigured reports offered, with detailed descriptions and policy prerequisites.

Configuring EXSPI End to End Message Ping

Use the EXSPI-End-to End Message Ping policy in the EXSPI Advanced policy group to determine SLA performance by sending and receiving messages.



This policy requires a mailbox on each node where the policy will be deployed.

Prior to deploying the EXSPI-End-to End Message Ping policy create a user account with special admin privileges (see [“Creating a User Account with Proper Access Permissions” on page 45](#)) and run the tool **SPI for Exchange > Exchange 2000 (or 5.5) > MBox Config**. This tool will create an Exchange mailbox accessible to the special user account.

Requirement: When you configure server connections (see [“Set Up Server Connections to Test Message Delivery/Receipt” on page 88](#)), you must start the EXSPI Admin tool EXSPI Ping Config from the OpenView management server.

Task 1: Edit the MBOX Config Tool for user password

To edit the MBOX Config tool

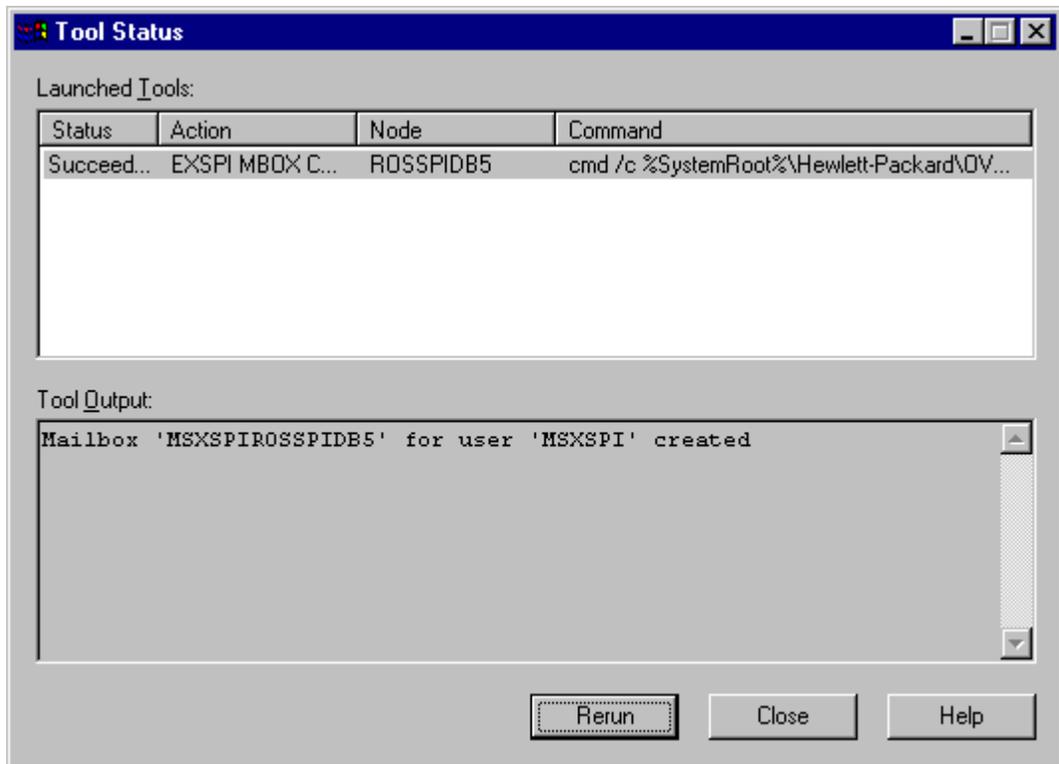
- 1 Click on **Tools** on the console tree, and expand **SPI for Exchange > EXSPI 5.5 (or EXSPI 2000)**. In the details pane on the right you see the **MBox Config** tool.
- 2 Right click **MBOX Config** and select **Properties**.
- 3 Select the **Target** tab. In the Password/Verify Password text boxes enter the password assigned to the user account created in [“Creating a User Account with Proper Access Permissions” on page 45](#).
- 4 Click **OK** to save changes, and exit.

Task 2: Create Mailboxes

You must create a mailbox for the user account (in our example MSXSPI), on every targeted Exchange server, so that the user can access mailbox and folder information.

To create a mailbox for the user account

- 1 In the of the OVO Manager console expand the **Tools > SPI for Exchange > Exchange 5.5** or **Exchange 2000** folders.
- 2 In the details pane on the right, double-click the **MBOX Config** tool.
- 3 Select the servers the tool should launch on.
- 4 Select **Launch** to start the tool running on the selected nodes.





If you cannot automatically create mailboxes and receive an error, try to manually create a mailbox for each Exchange server with the prefix MSXSPI and NT hostname. For example, the node rosspidb5.rose.hp.com (Internet name) and NT name ROSSPIB5 require a mailbox called MSXSPIROSSPIDB5 with primary NT account MSXSPI.

Task 3: Set Up Server Connections to Test Message Delivery/Receipt

Before deploying the EXSPI End to End Message Ping policy in the Advanced group, the servers you want to monitor must be configured.

To configure the servers

- 1 Expand the **OVO Manager** folder and select **Policy Management > Policies grouped by type**.
- 2 Right-click the **ConfigFile** policy type and select **New > Policy**.
- 3 In the configfile dialog, click the down-arrow and select **exspi**.
(By default `exspi_config` is selected for Sub-Group, and `exspilink.txt` for Filename.)
- 4 Select the **Data** tab and click **Load Template**, which opens the default file as shown:

```
# Format of the file:
# Src-Svr:Src-MB::Dest-MB:Timeout:MetSLA:AlmostMetSLA

# Src-Svr          = Source Server (required)

# Src-MB          = Source Mailbox (optional)
                  Defaults to 'MSXSPI<host_name>'.

# Reserved        = Reserved for future use, leave empty

# Reserved        = Reserved for future use, leave empty

# Dest-MB         = Destination Mailbox (required)

# Timeout         = Timeout (required)
                  (s-seconds, m-minutes, h-hours)
```

```
# MetSLA           = Met SLA time (require for reports)
                    (s-seconds, m-minutes, h-hours)

# AlmostMetSLA     = Almost met SLA time (require for reports)
                    (s-seconds, m-minutes, h-hours)
```

Examples:

```
#      EXCH1:::MSXSPIEXCH2:25m:1m:1m
#      EXCH1:MSXSPIEXCH1:::MSXSPIEXCH3:2h:5m:2m
#      EXCH2:MSXSPIEXCH2:::MSXSPIEXCH4:1h:20m:10m
#      EXCH3:MSXSPIEXCH3:::MSXSPIEXCH4:25m:5m:5m
```

5 Enter information about the servers to replace each entry separated by a colon (:). When finished, select **Save and Close**.

- **Source Server** (required) — The server that the ping originates from. Each server where Exchange SPI is distributed has the same file, so Exchange SPI can parse this file and use all lines where the Source Server matches the server where it is run from.
- **Source Mailbox** (optional) — The mailbox to send the mail from. If this is not included, a default account is used “MSXSPI<host_name>” where <host_name> is replaced with the name of the server.
- **Destination Mailbox** (required) — The mailbox to send the ping to. This field is usually the only required destination entry.
- **Timeout** (required) (s-seconds, m-minutes, h-hours) — If a sent message does not return in the defined timeout interval, EXSPI logs it as a failure and sends a message to the OVO management server. Failed messages are tallied in terms of count and percentage within a report. The timeout value must be larger than the values for MetSLA and AlmostMetSLA so that a returned message can be processed using these values. It may have Exceeded SLA even though it has not exceeded the timeout interval. A Failed/Timeout message occurs,

therefore, only when the message does not return before the timeout period is exceeded.

- ▶ The minimum timeout value should be set slightly less than the collection interval. For example, if the collection interval for metric 1002 is 30 minutes (the default), the timeout should be set to at least 25 minutes. The logic is that because the next measurement occurs only every 30 minutes, you should allow up to that amount of time for any messages to return before “giving up” and generating a failure. If you keep the timeout value within the collection interval and the reply message does return, it can be processed as Met, Almost Met, or Exceeded as opposed to Failed/Timeout.
- **MetSLA** (required for reports) (s-seconds, m-minutes, h-hours) — If the round trip time is greater than this value, the message is logged as either Almost Met SLA or Exceeded SLA. This value is required if data is being sent to the Measurement Data Collector Agent DSI for reporting (-l option when running `exspi.exe`). It is optional if only using alarms.
- **AlmostMetSLA** (required for reports) (s-seconds, m-minutes, h-hours) — If the round trip time is greater than the MetSLA value but less than or equal to MetSLA plus AlmostMetSLA, the message is logged as Almost Met SLA. Otherwise, when the round trip time is higher than MetSLA plus AlmostMetSLA, it is logged as Clearly Exceeded SLA. This parameter is required if data is being logged to the data collection Agent DSI (-l option when running `exspi.exe`), optional if only using alarms.
- ▶ Timeout, MetSLA, and AlmostMetSLA values can have optional identifiers that denote the measurement units the value represents; for example, 4m (4 minutes) 30s (30 seconds) or 1h (1 hour). The default unit is seconds; for example, the entry 4 by default is recognized as 4 seconds.

Examples:

EXCH1:::MSXSPIEXCH2:25m:1m:1m

Use the default FROM mailbox of MSXSPIEXCH1. Message must return within 1 minute to meet the SLA, 2 minutes to almost meet the SLA, and at over 25 minutes a failure/timeout is generated.

EXCH1:MAILBOXEXCH1:::MAILOXEXCH3:2h:5m:2m

Message must return within 5 minutes to meet the SLA, 7 minutes to almost meet the SLA, and at over 2 hours a failure/timeout is generated.

EXCH2:MAILBOXEXCH2:::MAILOXEXCH4:1h:20m:10m

Message must return within 20 minutes to meet the SLA, 30 minutes to almost meet the SLA and at over 1 hour a failure/timeout is generated.

Task 4: Set Up EXSPI End to End Message Ping Alarms—Configure Server Pair Thresholds

Alarms can be set to occur with metric 1002 (Ping). As you may need to set different thresholds for multiple server pairs, some examples are included here to clarify the procedure. These examples show the syntax to insert in the exspilnk.txt file to set differing thresholds. Metric 1002 sends the “FromMailbox,ToMailbox” in the object pattern fields with the following definitions:

FromMailbox = FromServer:FromMailbox
 ToMailbox = :ToMailboxl

Config Entry

Object

EXCH1:::MSXSPIEXCH2:25m:1m:1m

EXCH1:MSXSPIEXCH1,;MSXSPIEXCH2

EXCH1:MAILBOXEXCH1:::
 MAILOXEXCH3:2h:5m:2m

EXCH1:MAILBOXEXCH1,;MAILOXEXCH3

EXCH2:MAILBOXEXCH2:::
 MAILOXEXCH4:1h:20m:10m

EXCH2:MAILBOXEXCH2,;MAILOXEXCH4

Condition Name & Type	Condition Object Pattern	Threshold	Explanation
EXSPI-1002.1 +Message on Matched Condition	EXCH1:MSXSPIEXCH1, :MSXSPIEXCH2	120	Threshold condition for ping between System EXCH1 and mailbox MSXSPIEXCH2 on system EXCH2. Object pattern is case sensitive.
EXSPI-1002.2 +Message on Matched Condition	EXCH1:MSXSPIEXCH1, :MSXSPIEXCH3	240	Threshold condition for ping between System EXCH1 and mailbox MSXSPIEXCH3 on system EXCH3. Object pattern is case sensitive.
EXSPI-1002.3 -Suppress Matched Condition	EXCH1:MSXSPIEXCH1, :MSXSPIEXCH2 EXCH1:MSXSPIEXCH1, :MSXSPIEXCH3		If the threshold was not exceeded for these two system pairs, you must suppress the message if either of these system pairs gets past 1002.1 or 1002.2.
EXSPI-1002.4 +Message on Matched Condition		60	A blank object pattern to catch all remaining system pairs.

Task 5: Modify the Policy to include the user account password

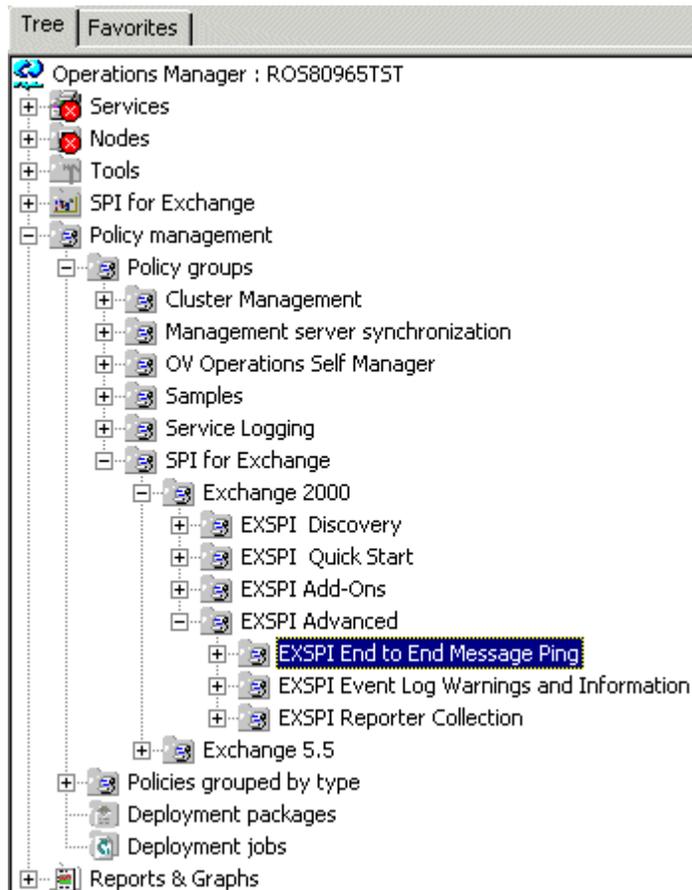
Before deploying the EXSPI End-to-End Message Ping policy, you must edit it so that it has access to data on the Exchange Server system.

To edit the policy:

- 1 Open the OVO console and expand the **Policy Management** folder.

- 2 In the left pane select **Policy groups > SPI for Exchange > Exchange 5.5 or Exchange 2000 > EXSPI Advanced > EXSPI End-to-End Message Ping** group.

Figure 51 Location of Exchange 2000 End to End Message Ping policy group



- 3 In the right pane right-click the **EXSPI-6.0/5.5-End-to-End Message Ping** policy and select **All Tasks > Edit**.
- 4 In the dialog that appears, confirm or enter the user name (in our example MSXSPI), check the **Specify Password** check box, and enter the password you have assigned to the user account.
- 5 Click **Save and Close**.

Task 6: Deploy the Configuration File and the Policy

- 1 In the OVO Manager console expand the folders **Policy management** > **Policy groups** > **SPI for Exchange** > **Exchange 5.5 / Exchange 2000** > **EXSPI Advanced**.
- 2 In the **EXSPI Advanced** folder double-click the Advanced policy sub-group you want to deploy.
- 3 In the details pane where all the policies and/or configuration files are now listed, select the policies and/or configuration file needed, right-click, and select **Deploy on....**
- 4 In the **Deploy policies on...** dialog, select all nodes by clicking the check box next to **Nodes**, or select individual nodes by clicking the adjacent checkbox.

Using Exchange SPI in High Availability Environments

Exchange SPI can be configured to work in environments where cluster-aware applications are used. You can use the XML file included with OVO (**msexchange.apm.xml**) to enter information about the cluster-aware application. This file is located in the **Instrumentation** directory.

Monitoring Exchange in Cluster Environments

The Exchange Smart Plug-in includes an XML file (**msexchange.apm.xml**) to be used for monitoring the Exchange environment. This file works in conjunction with another file that you must create and name: **apminfo.xml**. Instructions for doing this are included in this section, but are covered in more detail under the OVO online Help topic: *Managing cluster-aware applications*.

These two files: the Exchange SPI XML file and the apminfo.xml file, allow you to monitor Exchange in a cluster. As a result, when a package is moved from one node in a cluster-such as node #1- to another node in the same cluster-such as node #2-monitoring would stop on node #1 and start on node #2.

Configuring the XML File

The procedure below describes a scenario where Exchange SPI is enabled for monitoring one node in a cluster while remaining disabled for all other nodes in that cluster.

Create the `apminfo.xml` file (which describes cluster instances)

The example below shows Exchange SPI instances for Exchange. The file must be named **apminfo.xml**.

- 1 Using a text editor, create a file with entries as specified below.
- 2 In the file, enter **MSEExchange** for the Application Name to match the `msexchange.apm.xml` file.
- 3 Enter the Instance Name to match the instance name configured in Exchange SPI.

Application Name: MSEExchange

Instance Name: MSEExchange

Example:

```
<?xml version="1.0" ?>
<APMClusterConfiguration>
<Application>
  </Name>MSEExchange</Name>
  <Instance>
    </Name>MSEExchange</Name>
    /Package>Instance name used by the cluster software</Package>
  </Instance>
</Application>
</APMClusterConfiguration>
```

- 4 Save the completed apminfo.xml file on each node in the cluster in the directory:

```
<installation_directory>/Installed Packages/790C06B4-844E-11D2-972B-080009EF8C2A/conf/OpC/
```

Note:



- The SPI for Exchange software will only monitor Exchange servers in cluster environments.
- Only the Measurement Threshold Policies in the Quick Start folders are supported. Data logging, reporting and graphing are not supported.

Using Exchange SPI Reports and Graphs

Exchange SPI Reports

Exchange SPI report generation requires that you complete the following:

- Deploy the Quick Start policy group for data collection policies (if not automatically deployed).
- Configure and deploy Exchange SPI report collection policies.

Deploying the Quick Start policy group

In order to collect data for reports and graphs the General Data Collection policies in the Quick Start policy group need to be deployed.

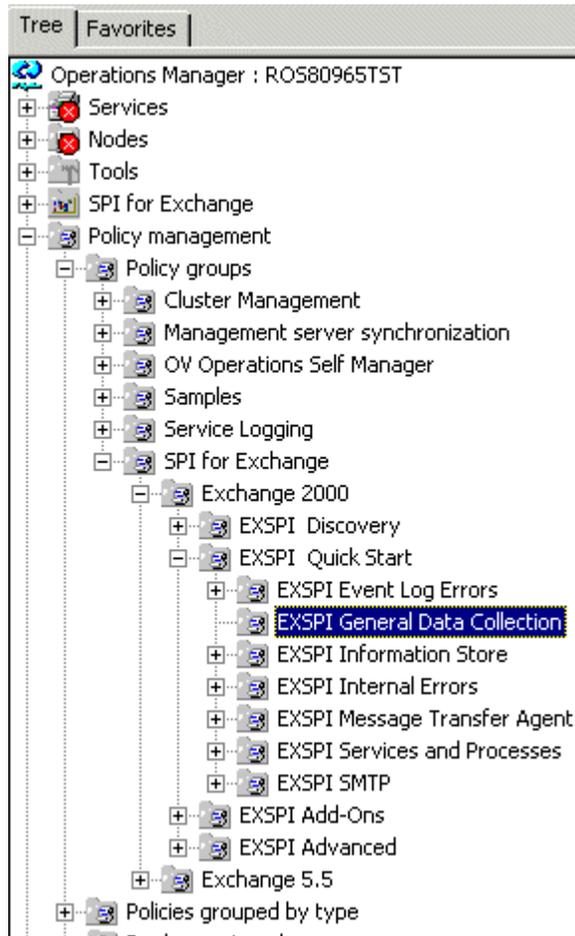
All policies in the Quick Start policy group are deployed automatically after discovery.

To deploy the policies manually, if required:

- 1 Locate the General Data Collector policies in the Quick Start policy group-

for the correct Exchange version.

Figure 52 Location of Exchange SPI General Data Collection policies for Exchange 2000

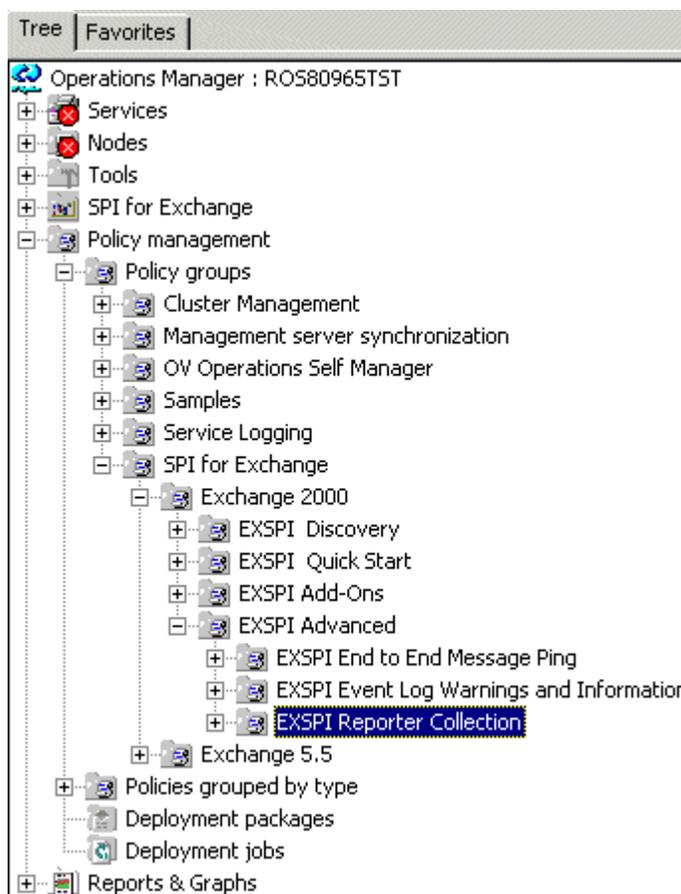


- 2 Select all the policies in this group in the details pane.
- 3 Right click, select **All Tasks > Deploy on....**
- 4 Select the nodes the policies should be deployed on.
- 5 Confirm the selection with **OK**.

Configure/Deploy Reporter Collection Policies

For any Exchange server system on which you would like to receive reports, you need to deploy Exchange SPI policies from the **EXSPI Advanced > EXSPI Reporter Collection** group.

Figure 53 Location of Exchange 2000 Reporter Collection policies



Task 1: Enable Message Tracking

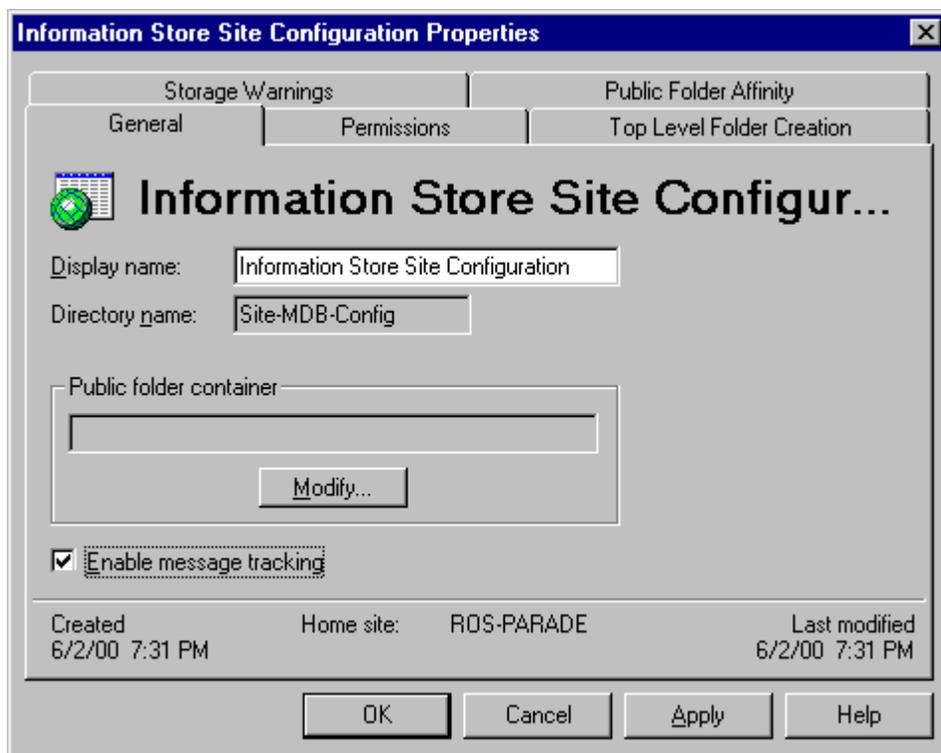
Exchange provides a message-tracking facility that stores processed message information in a log file. This information, which includes sender address, recipient addresses, and message size, is collected by the EXSPI-

<version>Dc-TrackLog Data collection policy, where <version> is 5.5 (for Exchange 5.5) or 6.0 (for Exchange 2000). This policy must be deployed to the appropriate managed nodes.

Enabling Message Tracking on Exchange 5.5 Servers

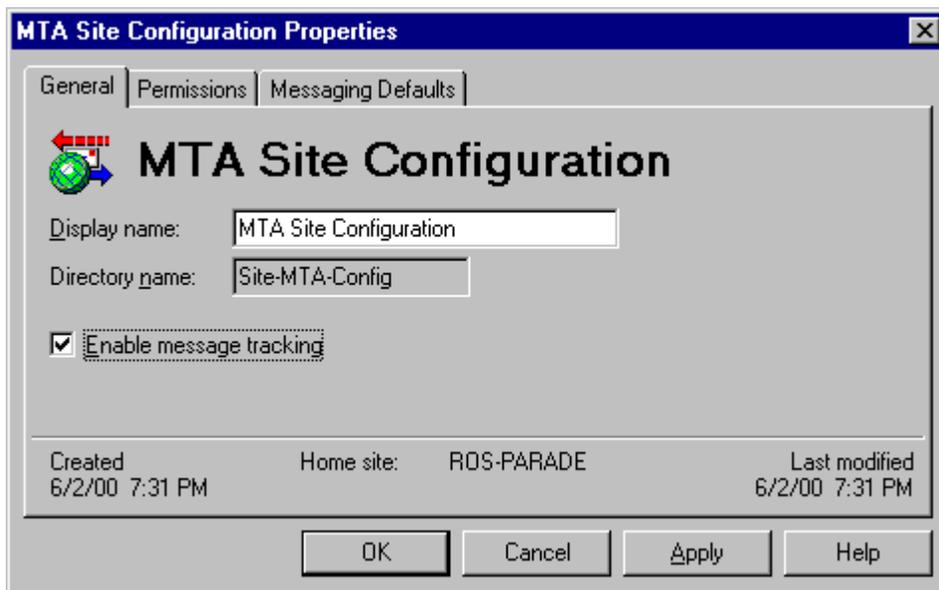
- 1 Select **Start > Programs > Microsoft Exchange > Microsoft Exchange Administrator**.
- 2 Expand the site level and Configuration to view selections beneath it.
- 3 In the details pane double-click **Information Store Site Configuration**.
- 4 In the **Information Store Site Configuration Properties** dialog, check **Enable message tracking**, and select **OK**.

Figure 54 Information Store Site Configuration dialog



- 5 Repeat steps 3 and 4 for MTA Site Configuration.

Figure 55 MTA Site Configuration dialog



- If the Internet Mail Service connector does not exist, skip the following steps.

- 6 In the left pane select **Connections**.
- 7 In the right pane select **Internet Mail Service**, check the **Enable message tracking** checkbox, and press **OK**.

Enabling Message Tracking on Exchange 2000 Servers

- 1 Select **Start > Programs > Microsoft Exchange > System Manager**.
- 2 Expand the **Administrative Groups** to see individual servers.
- 3 Right-click on the server and select **Properties**.
- 4 In the **General** tab check **Enable message tracking**.
- 5 Repeat steps 3 and 4 for each server.

Task 2: Edit the MBOX Config Tool for User Password

See the procedure “[Edit the MBOX Config Tool for user password](#)” on page 86.

Task 3: Create Mailboxes

See the procedure “[Create Mailboxes](#)” on page 87.

Task 4: Modify the EXSPI Reporter Collection Policies to include the user account and password

You need to edit each of the EXSPI Reporter Collection policies in the EXSPI Advanced policy group, so that Exchange Server system data is accessible. The EXSPI General Data Collector policies in the EXSPI Quick Start policy group do not need modification.

To edit EXSPI Reporter Collection policies in the EXSPI Advanced group:

- 1 Open the OVO console and expand the **Policy Management** folder.
- 2 In the left pane select **Policy groups > SPI for Exchange > Exchange 5.5** or **Exchange 2000 > EXSPI Advanced > EXSPI Reporter Collection** policy group.
- 3 In the right pane right-click a Reporter Collection policy and select **All Tasks > Edit:**
 - **EXSPI-*<version>*Dc-Exchange Info** policy, where *<version>* is **5.5** (for Exchange 5.5) or **6.0** (for Exchange 2000).
 - **EXSPI-*<version>*Dc-TrackLog Data** collection policy, where *<version>* is **5.5** (for Exchange 5.5) or **6.0** (for Exchange 2000).
 - **EXSPI-*<version>*Dc-Mailbox Data** collection policy, where *<version>* is **5.5** (for Exchange 5.5) or **6.0** (for Exchange 2000).
 - **EXSPI-*<version>*Dc-Public IS Sum. Data** collection policy, where *<version>* is **5.5** (for Exchange 5.5) or **6.0** (for Exchange 2000).
 - **EXSPI-*<version>*Dc-Mailbox (or Private) IS Sum. Data** collection policy, where *<version>* is **5.5** (for Exchange 5.5) or **6.0** (for Exchange 2000).
 - **EXSPI-*<version>*Dc-Public Folder Data** policy, where *<version>* is **5.5** (for Exchange 5.5) or **6.0** (for Exchange 2000).

- 4 In the dialog that appears, leave the user name, check the **Specify Password** check box, and enter the password you have assigned to the user account.
- 5 Click **Save** and **Close**.
- 6 Repeat these steps for each Reporter Collection policy in the group.

Task 5: Deploy Reporter Collection Policies

- 1 In the OVO Manager console expand the **Policy management > Policy groups** folders to view policy groups.
- 2 Open **SPI for Exchange > Exchange 5.5** or **Exchange 2000 > EXSPI Advanced** to view the policy groups in the EXSPI Advanced folder.
- 3 In the **EXSPI Advanced** folder double-click the Reporter Collection policy sub-group.
- 4 In the details pane where all the policies are now listed, select the policies, right-click, and select **Deploy on...**
- 5 In the **Deploy policies on...** dialog, select all nodes by checking **Nodes**, or select individual nodes by clicking the adjacent check box.

Time Interval before generating Exchange SPI Reports

Exchange SPI reports will not be available until data has been gathered to the management server from the managed nodes. This occurs each night, so at least one day of activity is needed for the reports to populate. Where a report type requires data from a Sat/Sun collection, those reports will require a weekend to pass.

Installing Exchange Report Package to Exchange SPI stand alone

Where the Exchange SPI is installed stand alone, there is a component that must be installed on the Windows system running Reporter. This component establishes the connection between Reporter and OVO.

To install the SPI for Exchange Report Package on the Reporter-installed system:

- 1 Insert disk B7490-13035/15035 of the OVO Windows CD set in the CD-ROM drive of the system running Reporter.

- 2 Run EXSPI-Reporter.msi to install the SPI for Exchange reporter package.
- 3 Check the Reporter status pane to note changes to Reporter configuration.
- 4 Add group reports by assigning reports as desired.

Exchange SPI Graphs

Exchange SPI comes with a set of preconfigured graphs. They are located on the OVO console tree in the **Operations Manager > Reports and Graphs > Graphs > SPI for Exchange** folder. The graphs show Exchange 5.5 and Exchange 2000 data, and are organized in the following categories:

Information Store

Users: This graph shows information store user count metrics, for the current day.

Delivery: This graph shows hourly metrics for the average delivery times of messages to Exchange Server private and public mailboxes.

Transaction Log Disk Space: This graph shows Transaction Log Disk Space usage on the Exchange Server.

Messaging

Queues: This graph show Exchange Server queue lengths.

Newsfeed Volume: This graph shows Exchange Server newsfeed volume.

MTA Volume: This graph shows Exchange Server Message Transfer Agent volume.

Internet Mail Volume: This graph shows Exchange Server Internet Mail Connector volume.

Internet Mail Queue: This graph shows the Exchange Server Internet Mail Service queue count.

SMTP Volume: This graph show SMTP Volume on the Exchange Server.

SMTP Queues: This graph shows SMTP Server queues on the Exchange Server.

Mailbox Database

Private Mailbox Volume: This graph shows Exchange Server Private Mailbox volume.

Mailbox Usage: This graph shows Exchange Server Mailbox usage.

Public Folder Database

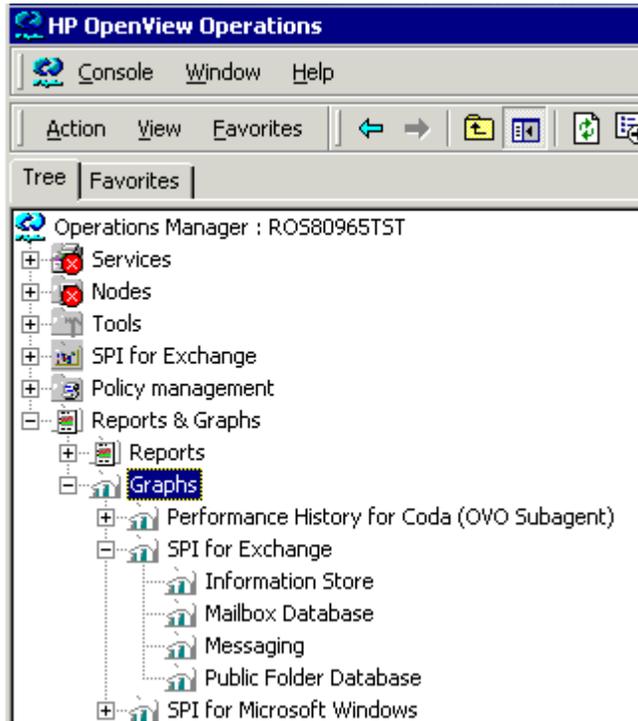
Public Folder Usage: This graph shows Exchange Server Public Folder usage.

Public Folder Database: This graph shows Exchange Server Public Folder volume.

Displaying a graph

- 1 In the console tree, open the folders **Graphs > SPI for Exchange**.

Figure 56 Location of Exchange SPI Graphs on the console tree.



- 2 Select a category of graph on the console tree, then select a graph from the list in the details pane and double click.
- 3 In the **Display graph** dialog, select desired Exchange servers from the Nodes display, and the date range you wish for the graph. Check the box if you wish the data for the graph to be periodically updated.
- 4 Click **Finish** and the graph displays.

The policies that enable data collection for these graphs are all included in EXSPI Quick Start and are deployed automatically after Discovery.

Customizing Policies and Uninstalling the Exchange SPI

This chapter outlines the procedures for:

- Customizing policies and groups of policies
- Uninstalling the Exchange SPI.

Customizing Policies Using the Tag Feature

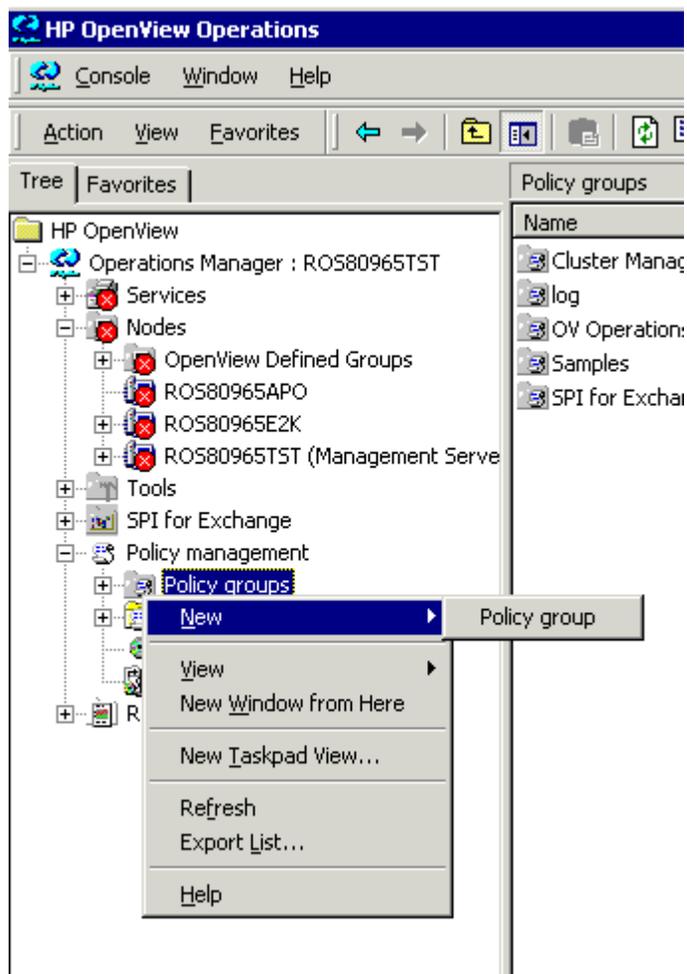
If you have servers dedicated to specific sites or business units, you may find it effective for those servers to have uniquely named Exchange SPI policies. In such cases copy default policies into new groups, affix prefixes to the original names and include them in the schedule policy that collects data during that measurement interval. The procedure below gives you an example of how you might do this.

Task 1. Create the New Policy Group

- 1 In the OVO console, expand the **Policy management** > **Policy Groups** folders.

- 2 Right-click the folder in which you want to locate the new group and select **New > Policy Group**.

Figure 57 Creating a new policy group



- 3 Enter the new group name for the folder created and click **Enter**.

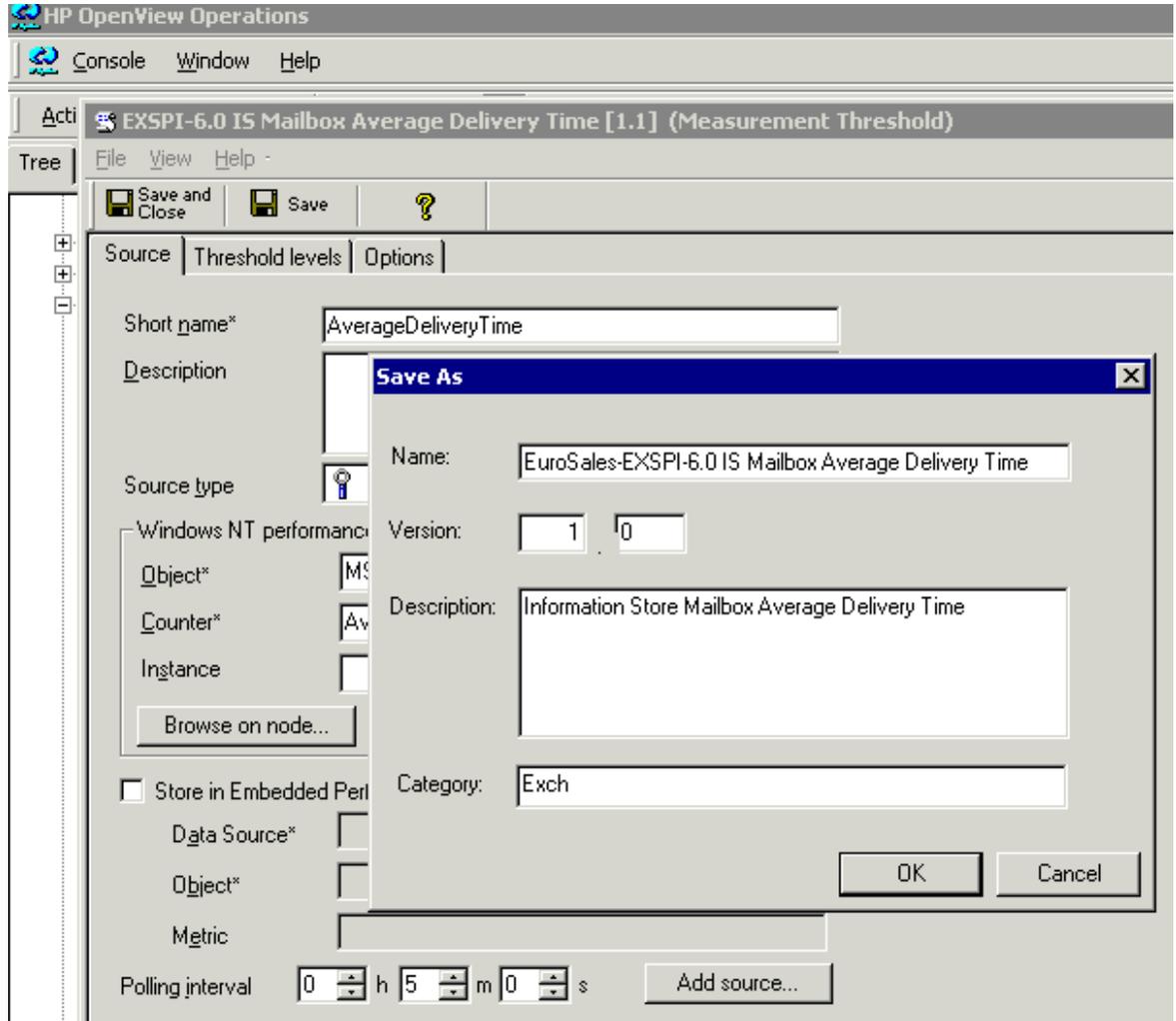
- 4 In the console, use Shift+click or Ctrl+click to select the default policies to be in the group, right-click and select **Copy**.
 - ▶ Remember to always copy scheduled task policies from the default policy group containing the measurement threshold policy you are copying to the new policy group. The scheduled task policy is necessary for any data collection to occur.
- 5 Right-click the new group you just created and click **Paste**.
- 6 The copied policy will be pasted into the new Policy group.
- 7 If you copied an entire group of default policies into the new group, you can eliminate those you do not need by right-clicking them and selecting **Delete**.

Task 2: Tag the Policies

To designate these policies as a specific group, use a special prefix

- 1 Double-click each policy and make any changes to the policy desired.
- 2 Select **File > Save As**. In the dialog that appears enter the special prefix followed by a hyphen in front of the default policy name; for example **EuroSales-EXSPI-6.0 IS Mailbox Average Delivery Time**.

Figure 58 Customizing a policy



- 3 After saving any renamed policies, double-click the scheduled task policy that you copied to the new group together with the other policies. (In the example EXSPI-6.0 Id-Dc-Instant Messaging is used.)
- 4 In the **Command*** text box at the end of the text, insert the tag (-t) parameter and the <prefix>-

For example, to ensure data collection for all the policies renamed with the prefix *EuroSales* the Command text box would appear as shown in the figure below:

Figure 59 Example of an edited Command

EuroSales-EXSPI-6.0 1d-Dc-Instant Messaging [1.0] (Scheduled Task)

File View Help

Save and Close Save ?

Task | Schedule

Task type: Command

Command*

Execute as user

Specify password:*

Before starting task:

Send Start Message to Acknowledged Msg. Browser to Active Msg. Browser

After finishing task:

Send Success Message to Acknowledged Msg. Browser to Active Msg. Browser

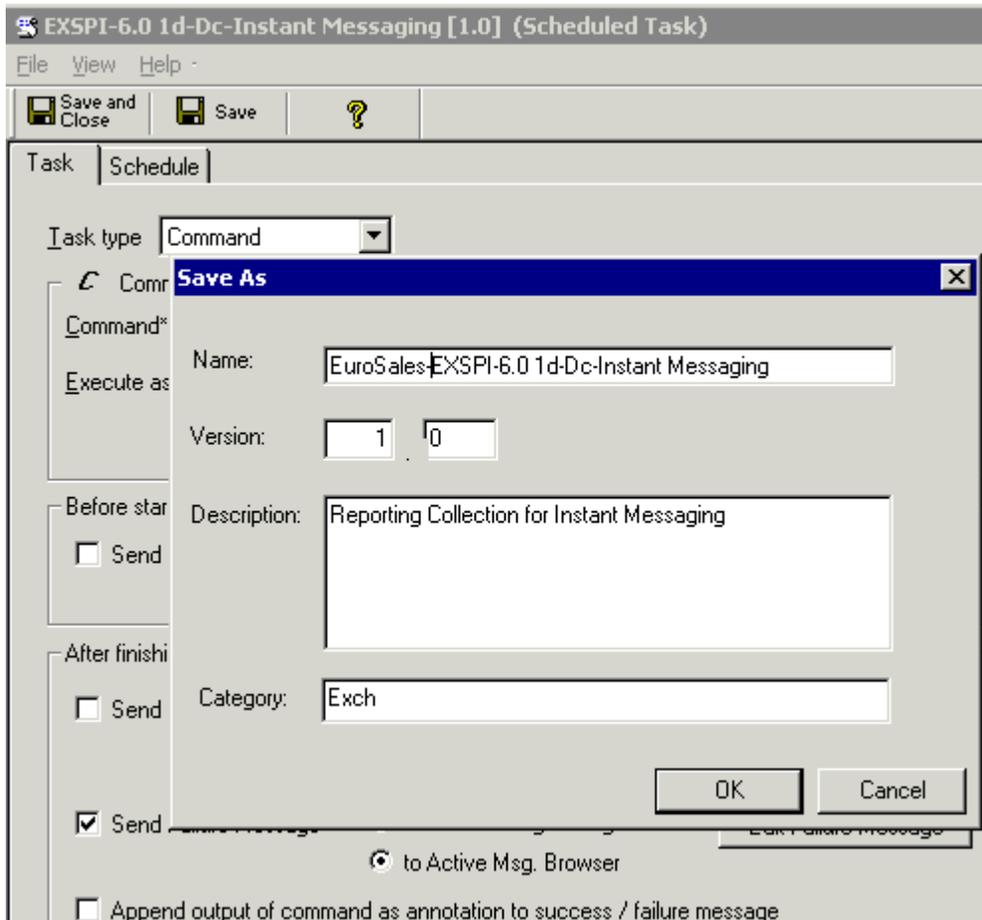
Send Failure Message to Acknowledged Msg. Browser to Active Msg. Browser

Append output of command as annotation to success / failure message

- 5 When finished, rename the scheduled task policy to include the group prefix, in this way:

Select **File > Save As** and rename the EXSPI-6.0 Id-Dc-Instant Messaging scheduled task policy to *EuroSales-EXSPI-6.0 Id-Dc-Instant Messaging*.

Figure 60 Renaming Policy



The prefix attached to the beginning of each policy in the new group makes the policies easy to find in the **Policies grouped by type** folder in the console. Also, creating a new group for the new policies gives you an efficient means to deploy them (right-click the group and select **All Tasks > Deploy on...**). Please see the online Help for more details.

Uninstalling Exchange SPI

To uninstall the Exchange SPI, first uninstall all components and policies from the managed nodes, then from the management server:

- 1 Remove Exchange SPI remote console programs.
- 2 Remove Exchange SPI package from managed nodes.
- 3 Remove Exchange SPI policies from managed nodes.
- 4 Remove Exchange SPI policy groups from management server.
- 5 Remove Exchange SPI tools from management server.
- 6 Uninstall Exchange SPI programs from the management server

Task 1: Remove Exchange SPI Policies from all Managed Nodes

- 1 On the OVO console tree, expand the folders **HP OpenView > Operations Manager > SPI for Exchange**.
- 2 Right-click the **SPI for Exchange**, select **All Tasks > Uninstall from...**
- 3 In the **Uninstall Policies on** dialog, select **All Nodes**.
- 4 Click **OK**.

Task 2: Remove Exchange SPI Policy Groups from the Management Server

- 1 On the OVO console tree select and expand the folder **Policy Groups**.
- 2 Right-click **SPI for Exchange** and select **Delete**.

Task 3: Remove Exchange SPI Tools from the Management Server

- 1 On the OVO console tree right-click **Tools** and select **Configure Tools**.
- 2 In the **Configure Tools** dialog right-click **SPI for Exchange** and select **Delete**.

Task 4: Uninstall Exchange SPI Programs from the Management Server

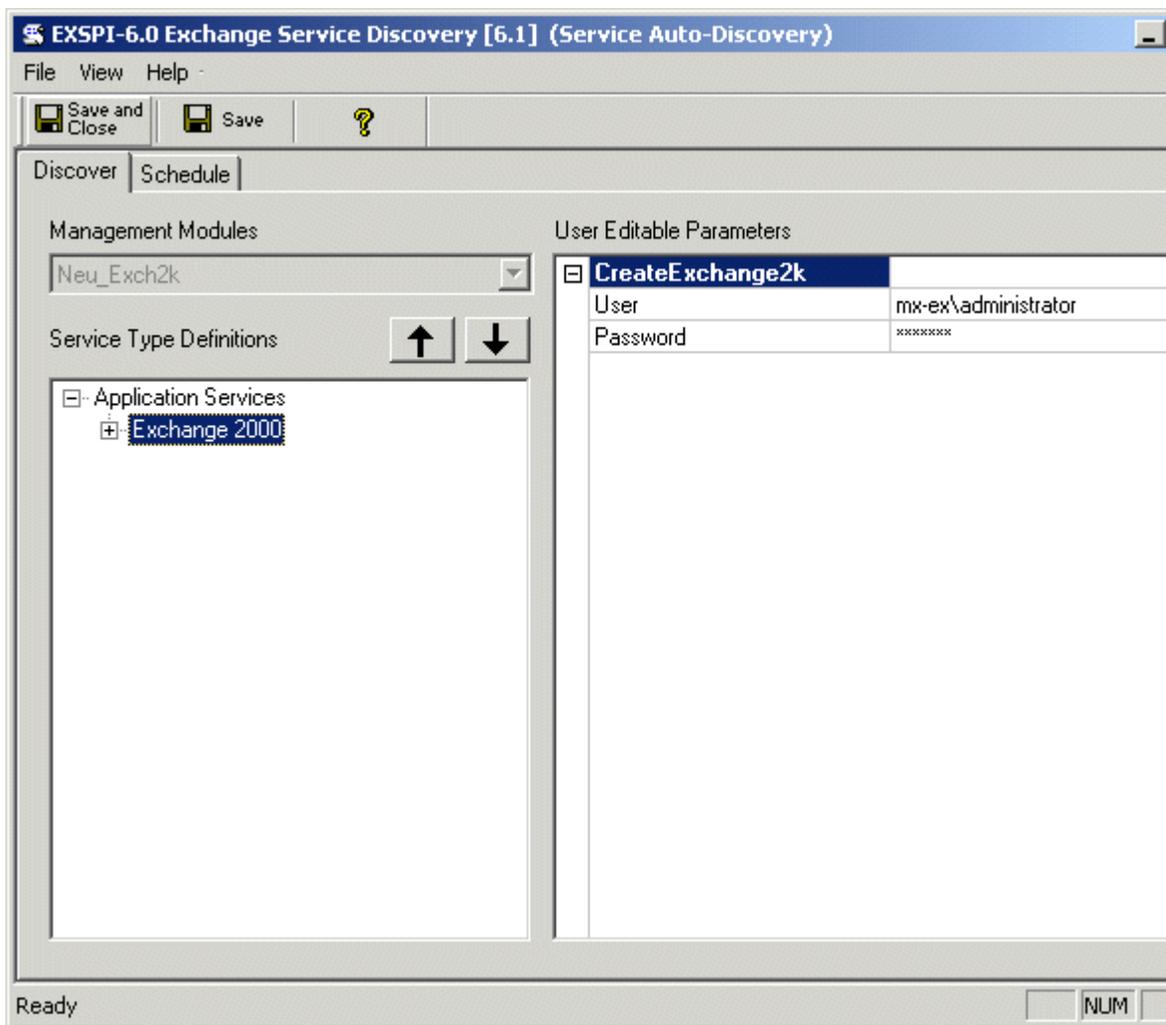
- 1 Select **Start > Settings > Control Panel**.
- 2 In the Control Panel dialog, double-click **Add/Remove Programs**.
- 3 In the **Add/Remove Properties**, select the **Install/Uninstall** tab, select **HP OpenView <installed_version>**.
- 4 In the **Uninstallation** dialog select the **Smart Plug-in for Exchange** checkbox, then click **Next**.
- 5 Select **Yes** and **Yes To ALL** to prompts regarding removal of shared components.



Exchange SPI Fast Start

The following is a concise procedure to follow for getting up and running with the Smart Plug-in for Exchange:

- 1 Install the OVO Windows CDs (B7490-13034/15034 and B7490-13035/15035) and the SPI for Exchange CD (B7490-13036/15036).
- 2 If you will need the “EXSPI Advanced” functionality, create the Exchange SPI domain admin user “MSXSPI”. Follow the procedure “[Deploying Policies from other Policy Groups](#)” on page 84 in this manual, including creating a mailbox with the EXSPI MBoxConfig tool.
- 3 Modify the policy **EXSPI-6.0 Exchange Service Discovery** in the **EXSPI Discovery** folder to contain a domain admin user and password (see figure below).



- ▶ The user needs read permissions to the **Configuration** partition (also called configuration name space) of Active Directory. There are three partitions: Domain, Configuration and Schema. It is not uncommon for each to have different security permissions. The discovery process only reads the Configuration partition. A domain admin user will have read access on this Configuration partition information, if permissions have not been modified for the Domain Admin User group.
- 4 In the OVO console tree select **Nodes**. Right-click, select **Configure Nodes** and check the nodes to manage. Wait about five minutes, as the following occurs on the managed nodes, without user intervention:

 - The **EXSPI-6.0 Exchange Service Discovery** and the **EXSPI Quick Start** policies for 2000 servers, and **EXSPI-5.5 Exchange Service Discovery** and the **EXSPI Quick Start** policies for NT4 and 2000 servers, are auto-deployed to the newly managed nodes. The act of managing the node will cause these policies to be deployed.
 - If Exchange is discovered on the newly managed node the Exchange topology is determined and stored in WMI. This topology is used to populate the Exchange Service Map and SPI for Exchange Views.
 - Any events that require operator action are sent to the active message browser and the corresponding service map nodes.
- 5 The SPI for Exchange policies are set up out of the box with low thresholds. It is suggested that the operator modify the base line the SPI for Exchange policies are based on, to make it appropriate for the Exchange base activity. Any modification to a threshold requires that those policies are re-deployed.
- 6 If policies from the **EXSPI Advanced** policy group are desired, update all policies in this group to contain the MSXSPI user name and password, see [“Deploying Policies from other Policy Groups” on page 84](#). Configure the End-to-End Message Ping policy, see [“Configuring EXSPI End to End Message Ping” on page 86](#). Deploy the desired policies of this group to the managed node.
- 7 Deploy the desired **EXSPI Add-ons** policies to the managed node. For Exchange 2000 some policies for monitoring the Instant Messaging and Transaction Log services require the MSXSPI user name and password, see the online Help for more details.

- 8 The **Quick Start** folders contain schedule policies that perform the data collection/logging work on the managed nodes.
- 9 All SPI for Exchange graphs populate with data that is maintained on the managed node. These graphs are best viewed with 12 to 48 hours of data.
- 10 Most SPI for Exchange reports populate with Service Reporter data after one day. This is due to the fact that the Service Reporter data gathering process needs to run at least once. Trend reports require at least three days of data gathered from the managed nodes. See the Exchange SPI on-line Help to understand which schedule policies are required to populate which reports. Some Advance Reporter Collection policies only run on Saturday/Sunday, so some reports will not have data until after a Saturday/Sunday collection is performed.

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