HERMES SoftLab
Citrix MetaFrame
SMART Plug-In
for HP OpenView
(SPI for Citrix MetaFrame)

(Documentation for use with Version B.01.12)

SPI for Citrix MetaFrame
Installation and
Configuration Guide

Notice

The information contained in this document is subject to change without notice.

Notice con't

HERMES SoftLab d.d.
Litijska 51
SI-1000 Ljubljana
Slovenia, Europe

www.hermes-softlab.com

Edition History

New editions are complete revisions of the manual.
The printing dates for each edition are listed below.

First Edition:	October	2002
Second Edition:	January	2003
Third Edition:	February	2003
Fourth Edition:	March	2003
Fifth Edition:	February	2005

Conventions

The following typographical conventions are used in this manual:

Font	Definition	Example
Italic	Product names, book or manual titles, man page names, and section, table, and figure titles	Refer to the *SPI for Citrix MetaFrame Installation and Configuration Guide* for additional information.
	Emphasis	You *must* follow these steps.
	Window and dialog box names	From the *Deploy policies on…* window, select a node.
Bold	Selection of items	Select **Policy management** then select **Policy groups**.
`Computer`	File names, syntax, directory path names, or text that should be entered on screen or that is displayed on the monitor	The following file is located on the root directory of the SPI for Citrix MetaFrame installation CD: `readme.txt`.
`[Button]`	Buttons in the user interface or keyboard keys	Click `[OK]`. Press the `[Ctrl]` key.

Contents

1

Quick Introduction to SPI for Citrix MetaFrame

Overview

HERMES SoftLab Citrix MetaFrame SMART Plug-In for HP OpenView (SPI for Citrix MetaFrame) is designed specifically for use with Citrix MetaFrame products from HP OpenView environments. Developed by HERMES SoftLab Group, it proactively and securely manages a distributed, Citrix MetaFrame environment from one, centralized point. Additional benefits of using SPI for Citrix MetaFrame include the following:

❑ Alerts on failures of critical and optional MetaFrame Presentation Server services

❑ Immediately identifies internal MetaFrame issues by forwarding relevant System and Application Event Log messages

❑ Notifies on important MetaFrame farm changes and risky configurations that can lead to farm instability

❑ Supervises session and published application activity parameters and alerts when they reach defined thresholds

❑ Provides farm, zone, server and user-oriented session management, making actions, such as "Send a message to all sessions of a user" or "Logoff all sessions on a server", straightforward, atomic operations

❑ Enhances an administrator's toolbox by providing various informational tools including version/service pack information for each server in a farm, and so on

❑ Regularly records resource consumption of critical and optional MetaFrame Presentation Server services

❑ Collects session and published application activity beyond what is available via performance counters (for example, session state, number of session processes, full domain\username of a user, logon time, and so on)

❑ Reports resource consumption of MetaFrame Presentation Server services for top servers in a farm

❑ Provides insight into session activity by generating numerous reports on their server resource consumption, their relation to users, session states, transmission activity, session duration, and so on.

❑ Generates reports on published application activity with regard to server resource consumption, users, duration of use, and so on.

❑ Automatically discovers MetaFrame farm servers, published applications, and their dependencies in a farm, and creates a corresponding service map model

❑ Regularly updates the MetaFrame farm service map model according to changes detected in a farm

High-level Architecture

Below is a high-level architecture diagram of SPI for Citrix MetaFrame.
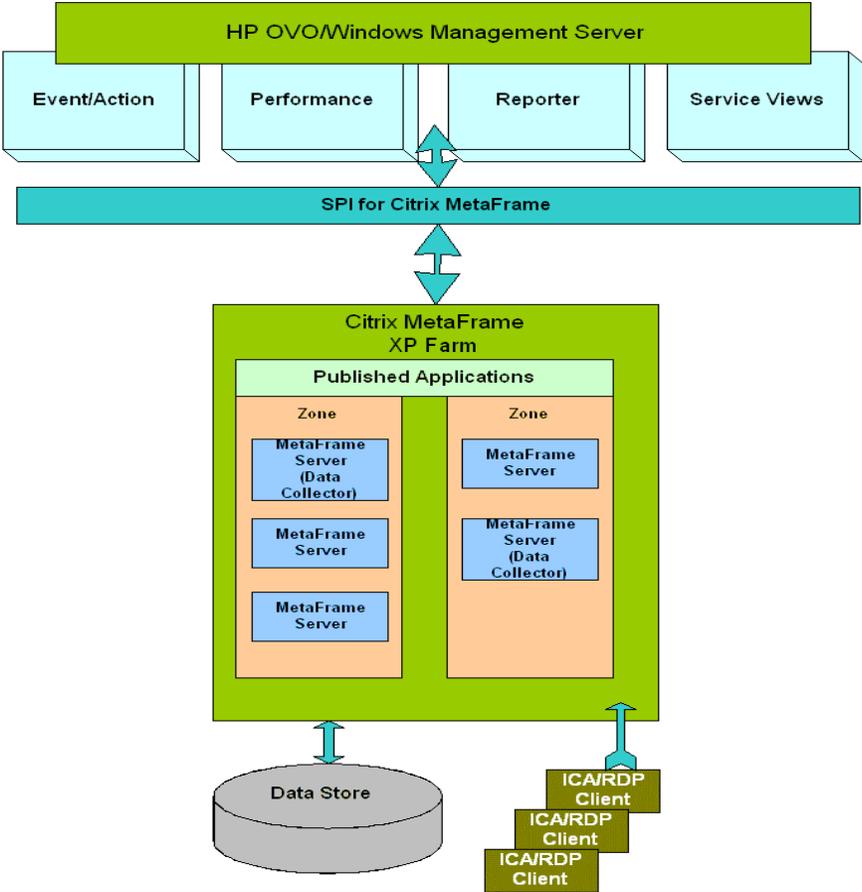
Main Components of SPI for Citrix MetaFrame

The main components of SPI for Citrix MetaFrame include the following:

- HP OpenView Operations/Windows Policies

- HP OpenView Operations/Windows Tools

- HP OpenView Operations/Windows Reports

- HP OpenView Operations/Windows Services Map View

Although these components are discussed in detail in the chapters that follow, a brief description of each is listed below.

Policies

Policies show HP OpenView Operations for Windows engines how to solve system management issues, for example, "Monitor CPU Utilization". Additionally, when a specific system event occurs, policies can generate HP OpenView Operations for Windows messages. These messages then trigger automatic or operator-initiated actions.

Tools

HP OpenView Operations for Windows tools are used to run specific applications or utilities on managed nodes. Additionally, their output can be displayed on the console. SPI for Citrix MetaFrame implements many HP OpenView Operations for Windows tools.

Reports

This version of SPI for Citrix MetaFrame produces reports on the following information:

- How much CPU time, physical, and virtual memory MetaFrame services consume on each MetaFrame server

- MetaFrame published application use on farm and server level

- Logon/logoff activity on farm and server level

- Detailed user activity (list of sessions, duration of each session, CPU, memory, and swap usage of each session)

- User and published application accounting information useful for billing purposes

- Top 10 reports on published application and server level

- Threshold assistant reports that help you adjust monitoring policies to your MetaFrame environment

Reports are generated via the HP OpenView Reporter product.

Services Map View

HP OpenView Services Map View is a component of the HP OpenView Operations GUI. This component enables you to manage your IT (information technology) environment while focusing on the IT services that you provide.

SPI for Citrix MetaFrame contains support for Services Map View; it automatically generates a MetaFrame service view of the Citrix MetaFrame enterprise configuration.

Contact Information

This chapter contains e-mail and Web page addresses you can use if you want to obtain the license activation file for the product, if you need help while using the product, and if you would like additional information about this or other HERMES SoftLab products.

Licensing

- To obtain the license activation file online:
  Go to **http://spi.hermes-softlab.com/licensing/**, register, and upload the license request file. When registering, have your PO information ready. The system will automatically process your request and send you the license activation file by e-mail.

- To obtain the license activation file via e-mail:
  Send the generated license request file by e-mail to the HERMES SoftLab Licensing Department at **spi-licensing@hermes.si**. You will receive the license activation file usually within 24 hours. If you need immediate response, contact HERMES SoftLab by telephone and e-mail (see contact information on License Entitlement Certificate).

Contacting Support

I M P O R T A N T   N O T E

Should you require additional assistance or information while using the product, contact the vendor that shipped the software.

If you have purchased the software directly from HERMES SoftLab, send e-mail to:
support-metafspi@hermes.si

General Information

For marketing or business-related issues in reference to this or other HERMES SoftLab SPIs, send e-mail to:
spi-info@hermes-softlab.com

Product Web Sites

Visit HERMES SoftLab SMART Plug-In Web site at:
http://www.hermes-softlab.com/products/SPI/about_SPI.html

and the company Web site at:
http://www.hermes-softlab.com/

Getting Started

The purpose of this chapter is to help you to get started quicker in using SPI for Citrix MetaFrame. This chapter also provides you with basic information about using the SPI. However, for additional, detailed information on working with SPI for Citrix MetaFrame, refer to the information in the chapters that follow.

File Locations

Below is a list of file locations for SPI for Citrix MetaFrame.

SPI for Citrix MetaFrame instrumentation is located on the management server in the following paths:

```
<OvInstallDir>\Instrumentation\Windows 2000\5.0\SPI
for Citrix MetaFrame
```

```
<OvInstallDir>\Instrumentation\Windows 2000\5.0\SPI
for Citrix MetaFrame Mgmt Server
```

```
<OvInstallDir>\Instrumentation\Windows 2000\5.0\SPI
for Citrix MetaFrame License Activations
```

```
<OvInstallDir>\Instrumentation\Windows Server
2003\5.2\SPI for Citrix MetaFrame
```

```
<OvInstallDir>\Instrumentation\Windows Server
2003\5.2\SPI for Citrix MetaFrame Mgmt Server
```

```
<OvInstallDir>\Instrumentation\Windows Server
2003\5.2\SPI for Citrix MetaFrame License Activations
```

Reporter components are installed on the Reporter system in:

```
<ReporterDataDir>\reports\METAFSPI
```

and

```
<ReporterInstallDir>\newconfig\packages
```

Additionally, the following printable documents are located on the SPI for Citrix MetaFrame installation CD:

- `readme-win.txt`

- `metafspi-release-notes-win.txt`

- `metafspi_license.txt`

- `METAFSPI-WINGuide.pdf`

Navigating Within This Guide

Refer to the information below for instructions on where to go for additional information about a particular subject.

For information on…	*Go to….*
SPI for Citrix MetaFrame features and where to go for product assistance	Chapter 1: Quick Introduction to SPI for Citrix MetaFrame
Hardware and software requirements	Chapter 2: Installing SPI for Citrix MetaFrame
How to install SPI for Citrix MetaFrame on the management server	Chapter 2: Installing SPI for Citrix MetaFrame
How to install SPI for Citrix MetaFrame on a Reporter system	Chapter 2: Installing SPI for Citrix MetaFrame
How to license SPI for Citrix MetaFrame	Chapter 2: Installing SPI for Citrix MetaFrame
How to configure HP OpenView Operations for Windows and SPI for Citrix MetaFrame	Chapter 2: Installing SPI for Citrix MetaFrame
How to deploy tools	Chapter 3: SPI for Citrix MetaFrame Usage

How to deploy policies	Chapter 3: SPI for Citrix MetaFrame Usage
Integrating SPI for Citrix MetaFrame with HP OpenView Reporter	Chapter 3: SPI for Citrix MetaFrame Usage
How to automatically generate a MetaFrame Services Map View of the Citrix MetaFrame enterprise configuration	Chapter 3: SPI for Citrix MetaFrame Usage
Detailed tool and policy definitions	Chapter 4: Reference Information
Removing SPI for Citrix MetaFrame from your environment	Chapter 2: Installing SPI for Citrix MetaFrame
Errors and how to solve them	Chapter 5: Troubleshooting

Summary of Installation and Configuration Tasks

To use this SPI more efficiently, follow the chart below.

1. Ensure that your system environment meets the SPI for Citrix MetaFrame hardware and software requirements.	**SEE CHAPTER 2** →	Check the following: - Operating system platform - Citrix MetaFrame platform - HP OpenView platform
2. Install SPI for Citrix MetaFrame on an HP OpenView management server and, if applicable, on a Reporter system.	**SEE CHAPTER 2** →	- Install the product from the CD provided - Verify the installation
3. Perform licensing of SPI for Citrix MetaFrame	**SEE CHAPTER 2** →	- Verify that licensing has been performed
3. Configure HP OpenView Operations and SPI for Citrix MetaFrame.	**SEE CHAPTER 2** →	- Establish security (MetaFrame farm passwords); performed on the management server - Place MetaFrame nodes under control of the management server (if necessary) - Deploy instrumentation on the MetaFrame nodes
4. Execute tools and deploy policies.	**SEE CHAPTER 3** →	- Make sure instrumentation has been deployed
5. Use SPI for Citrix MetaFrame to collect metrics.	**SEE CHAPTER 3** →	- Make sure that an HP OpenView Operations Agent is installed on all systems targeted for metrics collection
6. Integrate SPI for Citrix MetaFrame with HP OpenView Reporter to create Web-based reports.	**SEE CHAPTER 3** →	- Properly configure and install reports for HP OpenView Reporter - Deploy policies
7. Generate MetaFrame Services Map View of the Citrix MetaFrame enterprise configuration.	**SEE CHAPTER 3** →	- Perform autodiscovery

2

Installing SPI for Citrix
MetaFrame

Pre-requisites and Supported Platforms

This chapter describes the pre-requisites required for the installation of SPI for Citrix MetaFrame. To avoid potential problems during the SPI's installation, for example read this chapter carefully. Additionally, to effectively install and use SPI for Citrix MetaFrame, for example read and follow all steps described in each of the following sections in the order listed below:

- Installing and Removing SPI for Citrix MetaFrame
- SPI for Citrix MetaFrame Licensing Overview
- Verifying Requirements and Configuration

Hardware Requirements

The HP OpenView Management Server and Managed Nodes hardware requirements can be found in the following manual:

- *HP OpenView Operations/Performance for Windows Installation Guide*, located on the Management Server installation CD in the following directory: `\Documentation\OVOInstall.pdf`.

The Citrix MetaFrame hardware requirements can be found in the documentation that is provided with the Citrix MetaFrame software.

Software Requirements

Citrix MetaFrame versions compatible with SPI for Citrix MetaFrame include all editions of the Citrix MetaFrame Presentation Server products for Windows 2000 and Windows 2003 server family. Additionally, SPI for Citrix MetaFrame is compatible with HP OpenView Operations for Windows 7.x. The specific support matrix for SPI for Citrix MetaFrame follows below.

OVO/Windows Management Server:

- OVO/W 7.x on Windows 2000 and Windows 2003 server family

Managed Node:

- Citrix MetaFrame XPs/XPa/XPe 1.0 SP1/FR1, SP2/FR2, SP3/FR3, SP4/FR3 running on Windows 2000 and Windows 2003 server family (where applicable)

- Citrix MetaFrame Presentation Server 3.0 Standard/Advanced/Enterprise edition, running on Windows 2000 and Windows 2003 server family

I M P O R T A N T   N O T E :

If you are using Citrix MetaFrame 1.0 SP2/FR2, you also need to apply to each MetaFrame server a hotfix XE102W083. This is required for the *METAFSPI-Reporter* group of policies to correctly gather performance data.

HP OpenView Reporter:

- HP OpenView Reporter 3.5

I M P O R T A N T   N O T E :

With Reporter 3.5, Reporter patch OVR_00008 or later must be installed. ReporterLite is not yet supported.

Additional Requirements

Data Store Consistency

SPI for Citrix MetaFrame can only operate correctly if the MetaFrame farm Data Store is consistent. Use the `dscheck.exe` tool available with MetaFrame Presentation Server XP 1.0 SP3/FR3 and MetaFrame Presentation Server 3.0 to check and fix potential Data Store inconsistencies.

To check for Data Store consistency, login to one of the MetaFrame servers using the farm administrator account (Citrix suggests to login to the Data Collector node), and execute from command-line:

```
dscheck.exe
```

If the tool reports any Data Store inconsistencies, you need to resolve them before you continue with the installation of the SPI for Citrix MetaFrame. For details on how to resolve Data Store inconsistencies, refer to MetaFrame documentation about the `dscheck.exe` tool.

Measurement of Execution Impact

This section describes the execution impact on a computer's CPU, memory and disk for the HP OpenView Operations for Windows managed nodes. Specifically, the information listed here presents an example of the impact that SPI for Citrix MetaFrame can have on your systems.

The following is an example of the load placed on the systems that we used and how we tested the impact of SPI for Citrix MetaFrame in our lab.

Systems Used:

2xPIII 1 GHz 640Mb RAM, 20Gb HDD
Windows 2000 Advanced Server
Citrix MetaFrame FR2
SPI for Citrix MetaFrame (with *METAFSPI-Quick Start* and *METAFSPI-Reporter* policy groups deployed)

Result:

For all *METAFSPI-Quick Start* and *METAFSPI-Reporter* policies – a total of 35 policies – the execution impact was as follows:

- Average CPU consumption for a 5-second duration was 25% for each 5 minutes

- Average Committed Mbytes for a 5-second duration was 4.5Mb for each 5 minutes

- Average Available Mbytes for a 5-second duration was decreased by 5.5Mb for each 5 minutes

- Impact on disk was negligible

Installing and Removing SPI for Citrix MetaFrame

This section discusses how to install SPI for Citrix MetaFrame, re-install SPI for Citrix MetaFrame policies and tools, and how to uninstall SPI for Citrix MetaFrame.

If you need additional help with any of the configuration steps described in this chapter, for example refer to the *HP OpenView Operations for Windows* online help.

High-level Steps Required to Install SPI for Citrix MetaFrame on the Management Server

To install SPI for Citrix MetaFrame, perform the following high-level steps:

- Install the SPI for Citrix MetaFrame product from the CD provided.

- Verify installation.

- Establish security (configure MetaFrame farm administrator passwords).

- If not already present on your system, place MetaFrame nodes under control of your management server.

- Deploy instrumentation.

Each of these steps is described in further detail in the sections that follow.

Installing the SPI on the Management Server

To install SPI for Citrix MetaFrame on the HP OpenView Operations management server perform the steps that follow.

N O T E :

During the installation process, all HP OpenView Operations processes must be "up and running".

1. Login to your Windows machine where the HP OpenView Operations for Windows management server is installed as the user administrator.

2. Make sure that HP OpenView Operations for Windows is correctly installed on your system.

3. Insert the SPI for Citrix MetaFrame Installation CD into your computer.

4. From the screen displayed, select **SPI for Citrix MetaFrame package** for the HP OpenView Operations/Windows.

N O T E :

If the autorun feature is turned-off for your CD drive unit, from the root of the CD drive you can manually install SPI for Citrix MetaFrame by typing "METAFSPI.exe".

5. Execute the program.

6. At the end of installation procedure, you should verify the installation on the management server. To do this, refer to the section "Verifying Installation on the Management Server" that follows next.

Verify Installation on the Management Server

After the installation has completed successfully, many new HP OpenView Operations configuration items are uploaded to the HP OpenView Operations database on the management server.

To review these new items, start the HP OpenView Operations administrator GUI (management console) then check the corresponding sub-trees:

- `Tools`

- `Policy groups`

Depending on your installation, the following new configuration items are visible:

Tools Hierarchy
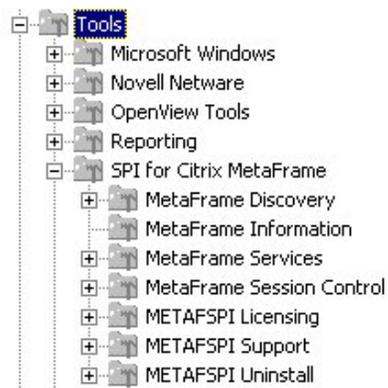
Policy Hierarchy
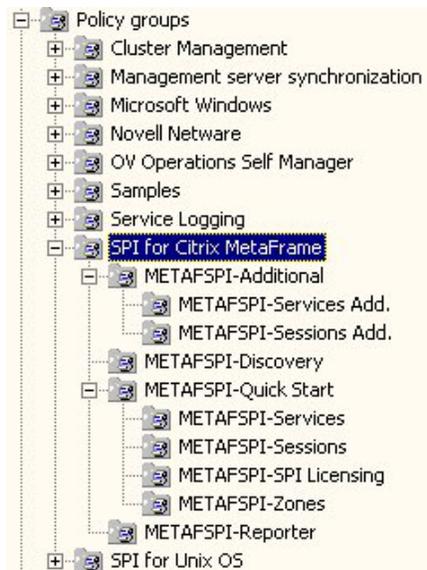
N O T E :

Refer to *Chapter 4: Reference Information* for detailed information about Tools and Tools Groups as well as Policies and Policy Groups.

Setup Farm Administrator Accounts and Establish Security

For SPI for Citrix MetaFrame to work correctly on a managed node, a MetaFrame farm administrator's password must be configured for each farm to be managed. Refer to the section *Tool for Security Configuration* in *Chapter 4: Reference Information* of this guide for additional information on how to establish security.

Additionally, you will need to make the Citrix Administrator the local administrator (put it into the local administrator group) of every MetaFrame node that you are managing. The easiest way to do this is to add the Citrix Administrator account to the following domain group: `HP-OVE-GROUP`.

N O T E :

`HP-OVE-GROUP` is the default name for the domain group that is established during HP OpenView installation. This name may vary depending on your environment.

Place MetaFrame Nodes Under Management

Information on how to configure HP OpenView Operations and SPI for Citrix MetaFrame on the managed nodes is described in the following sections.

`Adding Nodes to the Management Server`

Refer to your "HP OpenView Operations for Windows" online documentation in regard to adding nodes to the management server and adding nodes that you want to manage.

N O T E :

Make sure that the agent on the node is running.

Deploy Instrumentation

Once the software is installed on the HP OpenView Operations management server, you must deploy instrumentation on the management server and on the managed MetaFrame nodes. Do this by performing the steps in the sections that follow.

N O T E :

Instrumentation must first be deployed to the management server *before* instrumentation is deployed to the managed nodes.

Deploy Instrumentation to the Management Server

Perform the following steps to deploy instrumentation on the management server.

1. Select **Nodes** then select the management server node and right-click the node.

2. From the menu displayed, select **All Tasks** followed by selecting **Deploy instrumentation**. The *Deploy Instrumentation* window opens.

3. From the *Deploy Instrumentation* window, select the **SPI for Citrix MetaFrame Mgmt Server** option followed by pressing [OK]. The instrumentation begins to deploy.

4. Note that you can view deployment by selecting **Deployment jobs**. Additionally, if you do not receive an error message while the job is deploying then the instrumentation has deployed successfully.

Deploy Instrumentation to the Managed Nodes

Perform the following steps to deploy instrumentation on the managed nodes.

1. Select **Nodes** then select a specific node or node group and perform a right mouse button click on the selected item.

2. From the menu displayed, select **All Tasks** followed by selecting **Deploy instrumentation**. The *Deploy Instrumentation* window opens.

3. From the *Deploy Instrumentation* window, select the **SPI for Citrix MetaFrame** and **SPI Data Collector** options followed by pressing [OK]. The instrumentation begins to deploy.

4. Note that you can view deployment by selecting **Deployment jobs**. Additionally, if you do not receive an error message while the job is deploying then the instrumentation has deployed successfully.

Installation on a Reporter System

To install SPI for Citrix MetaFrame on a Reporter system, perform the following steps:

1. Where HP OpenView Reporter is installed, login to your Windows machine as the user `administrator`.

2. Make sure that HP OpenView Reporter is correctly installed on your system.

3. Insert the SPI for Citrix MetaFrame Installation CD into your computer.

4. From the screen displayed, select **SPI for Citrix MetaFrame – Reporter package**.

N O T E :

If the autorun feature is turned-off for your CD drive unit, from the root of the CD drive you can manually install the Citrix SPI reports by typing "METAFSPI-Reporter.exe".

5. Execute the program.

6. At the end of the installation procedure, verify the installation on the Reporter system.

7. To verify the installation, start HP OpenView Reporter and select **Reports**. Listed under Reports is **SPI for Citrix MetaFrame**. Begin to use Reports when, after at least two days, performance data are collected on the managed nodes.

Uninstalling SPI for Citrix MetaFrame

To completely uninstall SPI for Citrix MetaFrame, you must first remove all SPI for Citrix MetaFrame policies from the managed nodes. Although the uninstall process is mostly automatic, some manual steps, as listed in the following sections, are required.

S T O P !

You must run the METAFSPI Uninstall tool on all managed nodes before uninstalling the SPI for Citrix MetaFrame product. This tool deletes all of the SPI for Citrix MetaFrame files from the instrumentation on a managed node.

For additional information on how to use this tool, refer to the topic *METAFSPI Uninstall Tool*, which is listed in *Chapter 4: Reference Information*, of this manual.

Uninstalling from the Managed Nodes

To uninstall SPI for Citrix MetaFrame from the managed nodes, perform the following steps:

1. Login to your Windows machine where the HP OpenView Operations for Windows console is installed as the user administrator.

2. Select the SPI for Citrix MetaFrame managed node in the **Nodes** folder from which you wish to remove the SPI.

3. Right-click the selected node and select **View** then **Policy Inventory** from the menu that opens.

4. In the right pane, select all policies with a `METAFSPI` prefix and right-click.

5. From the menu displayed, select **All Tasks** followed by selecting **Remove from node**.

6. Confirm the policy removal. The SPI for Citrix MetaFrame policies are now removed from the selected managed node.

7. Execute the tool **Remove Instrumentation from Managed Node** from the tool group **METAFSPI Uninstall** on the managed node.

N O T E :

Repeat the above procedure for all nodes where policies are deployed. Additionally, to speed-up the un-installation process, you can perform Step 7, above, on several nodes concurrently.

Uninstalling from the Management Server

To uninstall SPI for Citrix MetaFrame from an HP OpenView Operations management server, perform the following steps:

1. Login to your Windows machine where the HP OpenView Operations for Windows console is installed as the user administrator.

2. Perform all of the steps described in the section, *Uninstalling from the Managed Nodes*. Perform the steps on all managed nodes on which SPI for Citrix MetaFrame has been installed.

3. Manually remove the *SPI for Citrix MetaFrame* tools group by performing the following steps:

   a. Select the **Tools** folder.

   b. From the menu bar displayed at the top of the screen, select **Action**.

   c. Next, select **Configure** followed by selecting **Tools…**. The *Configure Tools* window opens.

   d. From the *Configure Tools* window, select and right-click **SPI for Citrix MetaFrame**.

   e. Select **Delete** to open a *Confirm Delete* dialog box.

   f. Press [Yes] to confirm the deletion.

4. Manually remove the *SPI for Citrix MetaFrame* service map (if one was created) by performing the following steps:

   a. Select the **Services** folder.

   b. From the menu bar displayed at the top of the screen, select **Action**.

   c. Next, select **Configure** followed by selecting **Services…**. The *Configure Services* window opens.

   d. From the *Configure Services* window, select **SPI for Citrix MetaFrame**; it should be located under the top-level **Services** item.

      e.   Select [DELETE] to open a *Confirm Delete* dialog box.

      f.   Press [Yes] to confirm the deletion.

5.   Open Control Panel and double-click **Add/Remove Programs**. Select **SPI for Citrix MetaFrame** and press the [Remove] button to uninstall the SPI.

6.   Verify that the de-installation procedure was successful.

Uninstalling from a Reporter System

To uninstall SPI for Citrix MetaFrame on a system that contains the HP OpenView Reporter product, perform the following steps:

1.   Login to your Windows machine where the HP OpenView Reporter is installed as the user administrator.

2.   Open Control Panel and double-click **Add/Remove Programs**. Select **SPI for Citrix MetaFrame - Reporter** and press [Change/Remove] to uninstall the SPI for Citrix MetaFrame reports.

SPI for Citrix MetaFrame Licensing

To start using SPI for Citrix MetaFrame, you will need to purchase a product
license (either temporary or permanent) for every node that will be monitored by
SPI for Citrix MetaFrame.

N O T E :

**After the trial usage license expires, the product will automatically become
unusable. To extend your use of the product, contact HERMES SoftLab
Licensing Department at spi-licensing@hermes.si.**

Licensing Procedure

Listed below are the steps you must perform to obtain a license needed to use SPI
for Citrix MetaFrame.

Deploy the Licensing Template to Managed Nodes

1. Start the HP OpenView Operations Console and log in as an HP OpenView
   Operations Administrator.

2. Deploy instrumentation **SPI for Citrix MetaFrame** to all nodes. Note that this step might already be performed as part of the SPI installation.
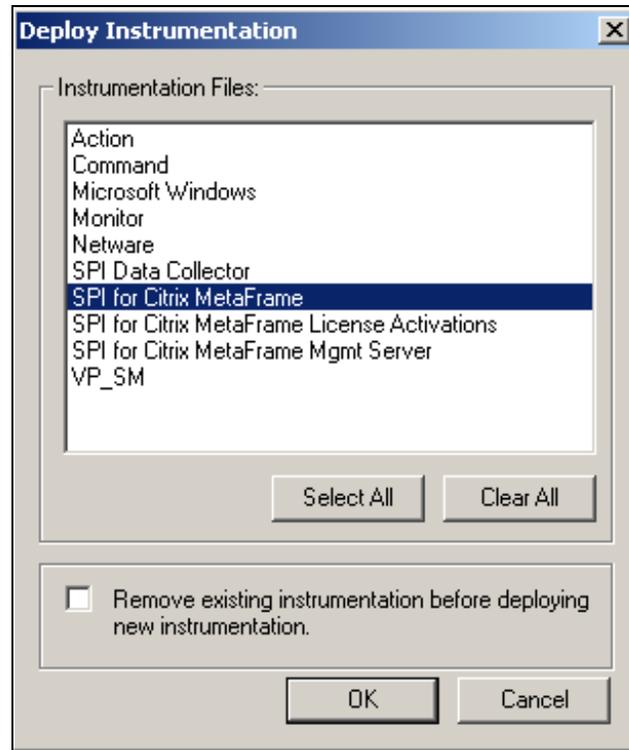
3. Deploy instrumentation **SPI for Citrix MetaFrame Mgmt Server** on the management server only.
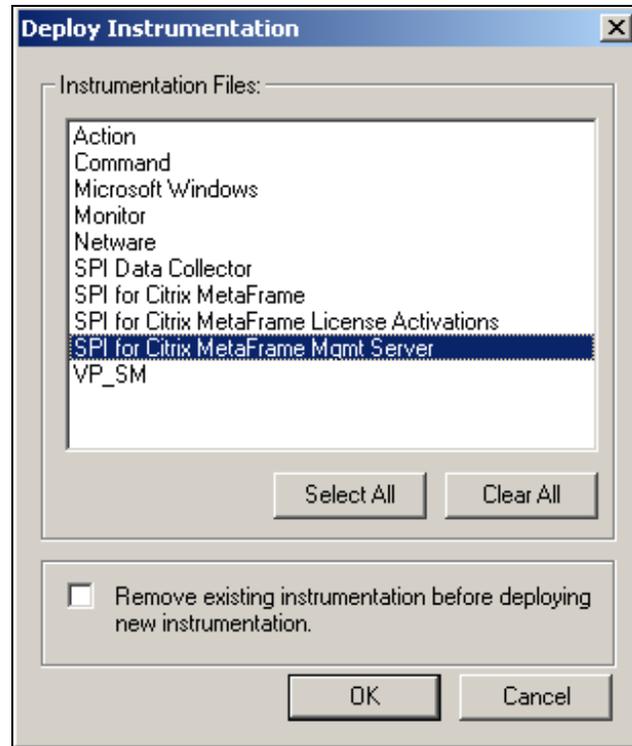
4. From the **Policy groups**, expand **SPI for Citrix MetaFrame/METAFSPI-Quick Start/METAFSPI-SPI Licensing** group, and then deploy the `METAFSPI-LicOpcMsg` policy to all nodes managed by SPI for Citrix MetaFrame.

Generate the License Request File

1. In the Operations Console go to **Tools/SPI for Citrix MetaFrame/METAFSPI Licensing** tool group.

2. Run the *1.Clear License Request File on Mgmt Server* tool to clear the `metafspi_license_requests.dat` license request file on the management server.

3. Run the *2. Generate License Request* tool on the managed nodes for which you need licenses. In the **Edit Parameters** dialog box, replace the string "Your Company Name" with the name of your company. Press `[OK]` to generate the license request. Note that this tool creates license requests on each selected node and sends them to the management server, which will put all of them to one `metafspi_license_requests.dat` file.
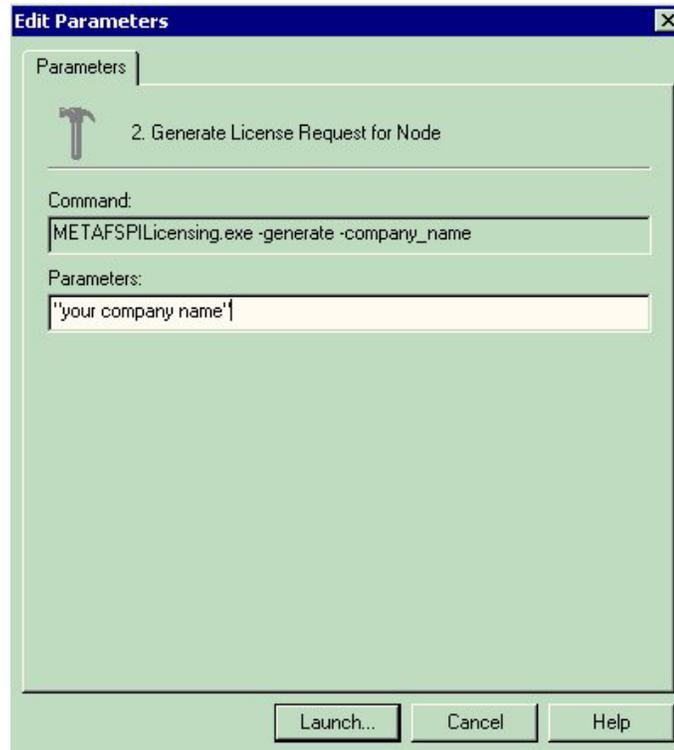
Obtain the License Activation File

1. To obtain the license activation file:

   - Use the Licensing portal:
     Go to **http://spi.hermes-softlab.com/licensing/**, register, and upload the license request file. When registering, have your PO information ready. The system will automatically process your request and send you the license activation file by e-mail.

     -or-

   - Send e-mail:
     Send the generated license request file by e-mail to the HERMES SoftLab Licensing Department at **spi-licensing@hermes.si**. You will receive the license activation file usually within 24 hours. If you need immediate response, contact HERMES SoftLab by telephone and e-mail (see contact information on License Entitlement Certificate).

2. You will receive a license activation file `metafspi_licact_new.dat`.

Merge and Deploy the License Files

1. Copy the `metafspi_licact_new.dat` file to the following directory: `%OvInstallDir%\Instrumentation\Windows 2000\5.0\SPI for Citrix MetaFrame License Activations`

2. Run the *3. Merge License Activation Codes on Mgmt Server* tool to merge the `metafspi_licact_new.dat` file with the SPI license file. When you run this tool for the first time, the tool will merge the license activation file `metafspi_licact_new.dat` with the empty SPI license activation file `metafspi_licact.dat`.

3. Deploy the **SPI for Citrix MetaFrame License Activations** instrumentation to all managed nodes with SPI for Siebel installed for which you have requested the licenses. With this, you will deploy the newly modified

`metafspi_licact.dat` license activation file on all nodes and each node will then check this file for a valid license.
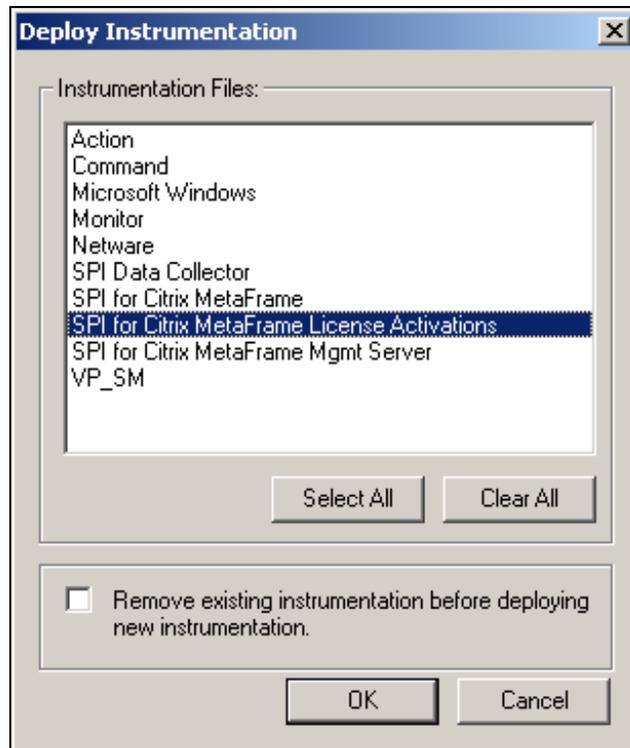
If the license is not valid for the particular managed node, an error message will open in the HP OpenView Operations for Windows console.

Verify Licensing

To check if the licensing was successful, perform the steps described in the next section.

Verifying Requirements and Configuration

This section describes the final step that needs to be performed on a node to ensure that all requirements are met and that configuration of SPI for Citrix MetaFrame is complete.

Using the Check Requirements/Configuration Tool to Check Requirements and Configuration Information

The **Check Requirements/Configuration** tool located in the **METAFSPI Support** tools group provides troubleshooting information as well as helps to verify SPI for Citrix MetaFrame requirements and configuration information. Once you have completed licensing your product, follow the steps below to finalize the setup of SPI for Citrix MetaFrame.

When SPI for Citrix MetaFrame is installed and configured (for example, licenses are configured, instrumentation is deployed), from the **METAFSPI Support** tools group, run the tool **Check Requirements/Configuration**. This tool will check each configuration and output a few cases indicating whether the check is OK or not. *Figure 2-1: Check Requirements/Configuration Tool Output OK*, which follows, displays a scenario where the tool has been run and the configuration is fine, while *Figure 2-2 Check Requirements/Configuration Tool Output Failed* shows a "failed" scenario where the check found that a valid METAFSPI license is missing.

Note that the following tool outputs are always listed in the *Tool Output:* field of the *Tool Status* dialog box displayed.

Tool Output	Area Verified
Launching user has local admin privileges	Configuration
Valid METAFSPI license	Configuration
MFCOM service is running	Requirements
Farm admin account configured	Configuration
SPI Data Collector deployed	Configuration
MetaFrame server version	Requirements

Figure 2-1: Check Requirements/Configuration Tool Output OK
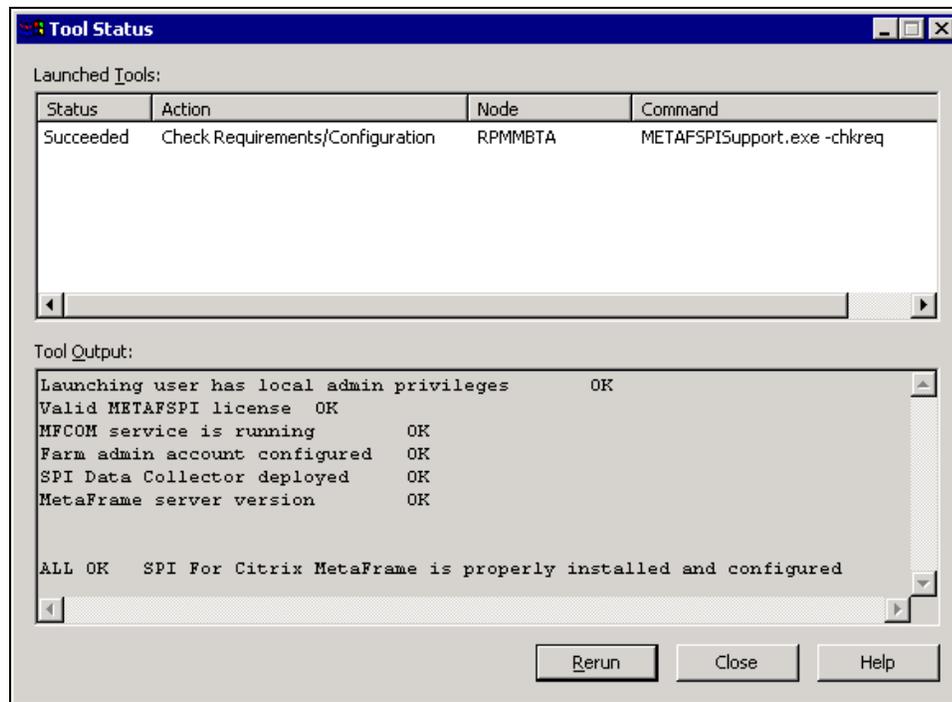
Figure 2-2: Check Requirements/Configuration Tool Output Failed
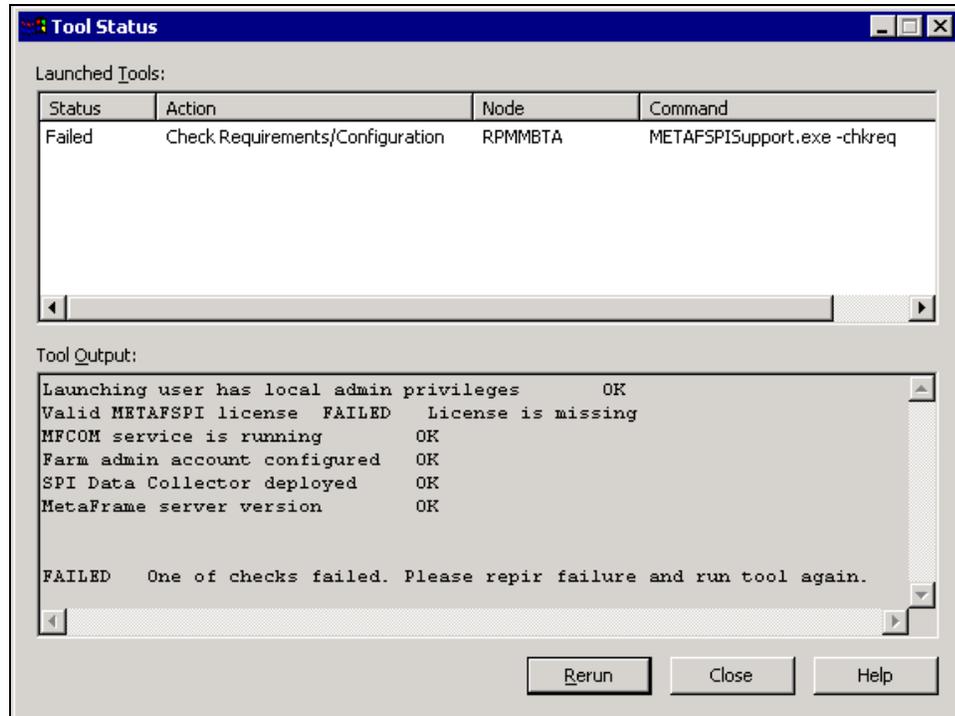
For additional information on the METAFSPI Support tools group, refer to the section *METAFSPI Support Tools* listed in *Chapter 4: Reference Information* of this manual.

3

SPI for Citrix MetaFrame Usage

Deploying Tools

SPI for Citrix MetaFrame implements many HP OpenView Operations for Windows tools. To start a selected tool on a selected node, perform the following steps:

1. Select **Tools** followed by selecting **SPI for Citrix MetaFrame.** Then, select a tool group from the list displayed, for example, *MetaFrame Information*. Once a tool type is selected, from the list of tools displayed in the right window pane, double-click on the specific tool that you want to execute, for example, *Display Application Information*.
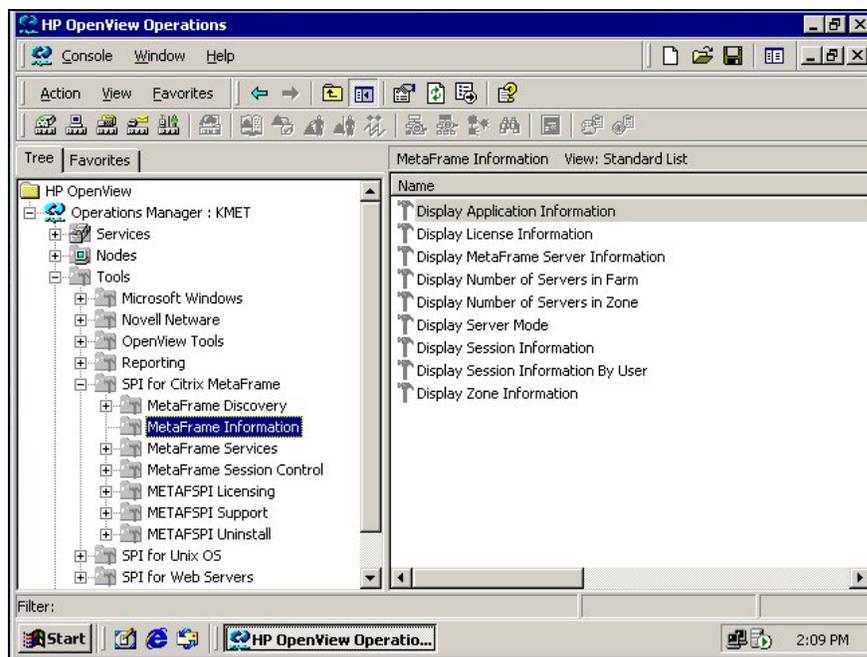
A *Select where to launch this tool* window opens.

2. From the *Select where to launch this tool* window, select the node(s) on which to launch the tool (refer to the figure below).
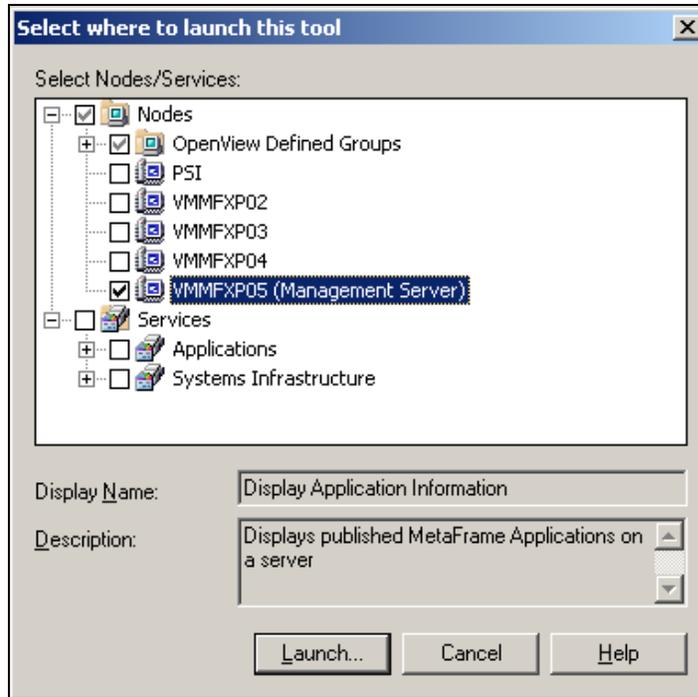
Press [Launch...] and wait for the tool to execute.

3. Tool output is displayed in the *Tool Status* window that opens:
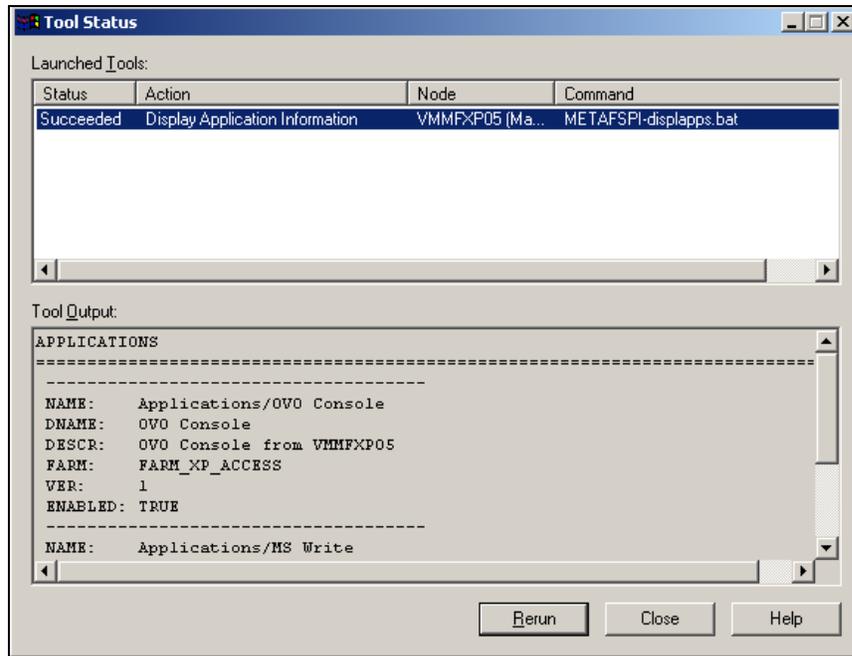
4. All tools are executed under a built-in HP OpenView Operations for Windows "HP ITO account" local account (which is mapped to the LocalSystem account if agent is running under it), for which the password is provided for automatically by HP OpenView Operations for Windows.

Deploying Policies

Policies instruct HP OpenView Operations for Windows engines how to solve system management issues, for example, "Monitor CPU Utilization". Additionally, when a specific system event occurs, policies can generate HP OpenView Operations for Windows messages. These messages then trigger automatic or operator-initiated actions.

Follow the steps in this section to deploy policies to nodes. Note that the Administrator should also customize the thresholds within the policies.

1. Make sure that all prerequisites listed in the section, *Software Requirements*, are met.

2. Login to your Windows machine where the HP OpenView Operations for Windows console is installed as the user administrator.

3. Select Policy management followed by selecting Policies group and SPI for Citrix MetaFrame. Then, select the policy group to deploy, for example, *METAFSPI-Quick Start… METAFSPI-Services*.

4. From the right window pane, select and right-click the actual policy to deploy.
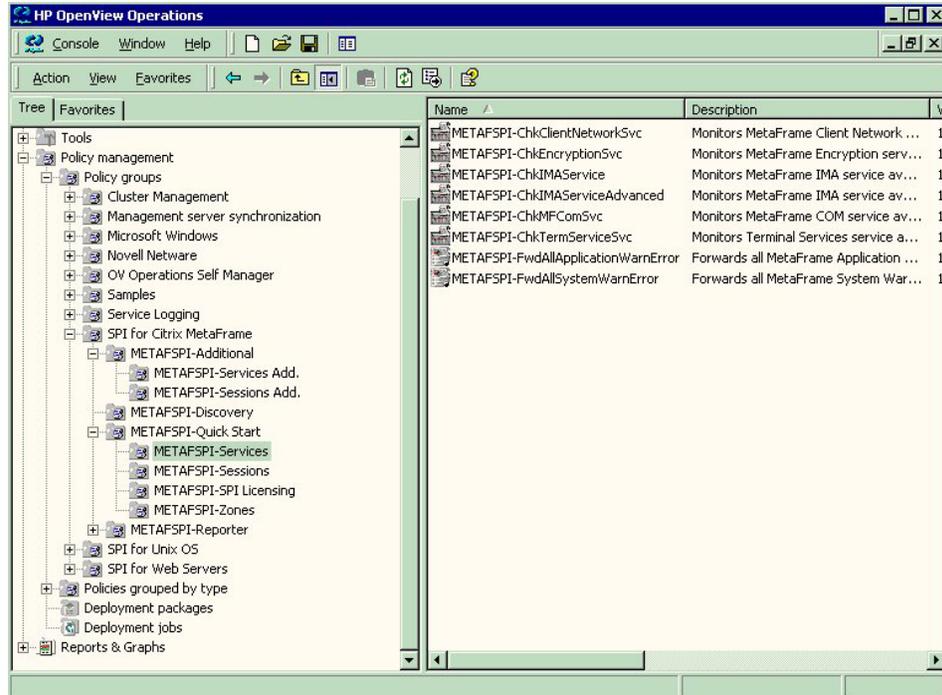
5. From the menu displayed next, select **All Tasks…** followed by selecting **Deploy on**. The *Deploy policies on…* window opens.

6. From the *Deploy policies on…* window, select the node(s) on which you want the policy deployed and check any deployment options desired. Press [OK].
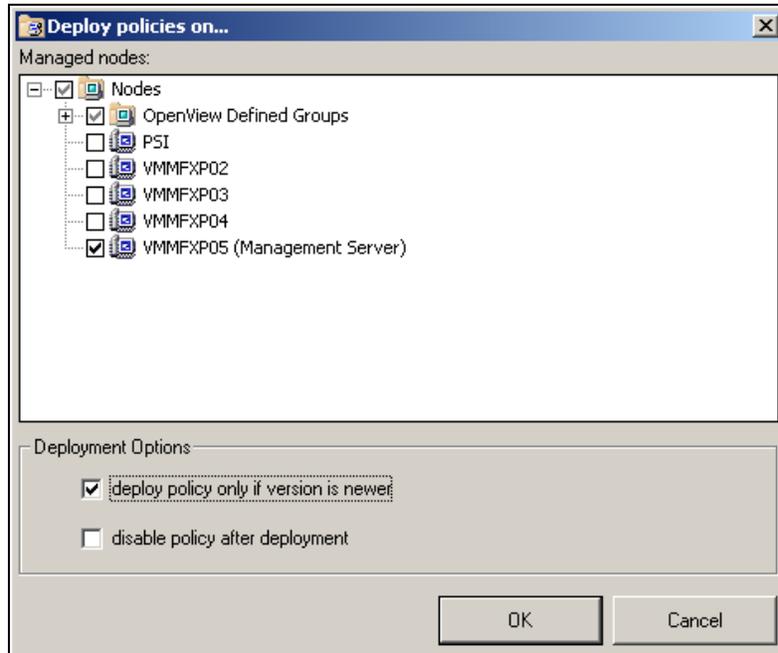
7. Wait for deployment to finish. You can observe deployment in the "Deployment jobs" tree.

8. After deployment has completed, check the installed policies. To do this, select the **Nodes** folder followed by selecting a node.
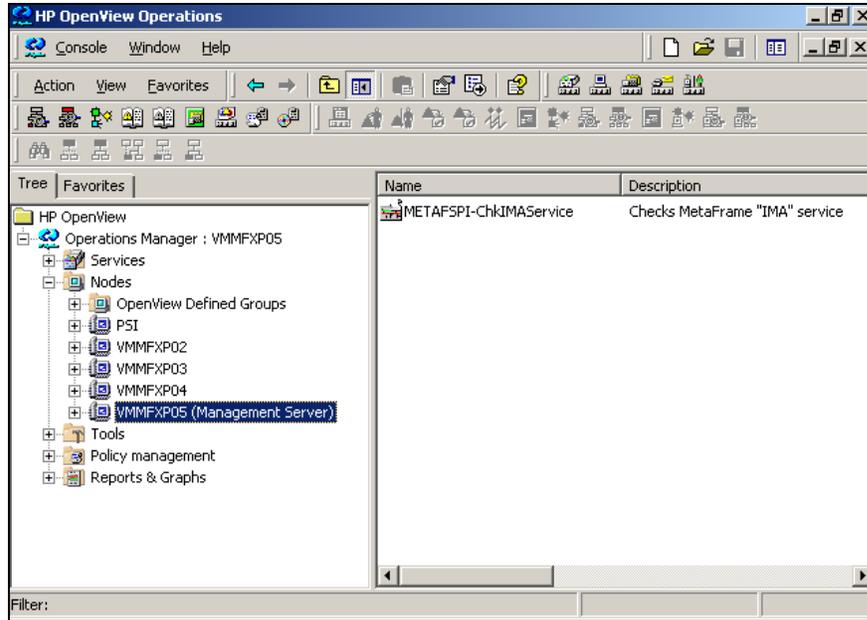
Right-click the node to open a menu.

9. From the menu, select **View** followed by selecting **Policy inventory**. A list of all deployed policies is displayed.

N O T E :

For your convenience, SPI for Citrix MetaFrame policies are logically grouped together under the SPI for Citrix MetaFrame policy group. For example, you can deploy policies in the *METAFSPI-Quick Start* group to get started quickly with the SPI. For additional information on policies grouped by common usage, refer to the section, *Policy Grouping within SPI for Citrix MetaFrame*, which is listed in *Chapter 4: Reference Information*, of this manual.

SPI for Citrix MetaFrame Integration with HP OpenView Reporter

Integration Requirements

SPI for Citrix MetaFrame integration with HP OpenView Reporter requires that the following actions have occurred prior to the installation of reports on a system:

- The HP OpenView Reporter is installed on the same system as the HP OpenView Management server or it is installed as a standalone system, and the Reporter Service is running.

- An HP OpenView Operations Agent 7.x is installed on the Managed Nodes from which you want to generate reports.

Deploying Policies and Collecting Performance Data

To produce reports, policies must be deployed. All policies related to collecting performance data are grouped together conveniently under the following policy group: **SPI for Citrix MetaFrame**… **METAFSPI-Reporter**. Once a policy is successfully deployed, the CODA agent begins to collect performance data for sessions, services processes, and published applications at regular intervals. For all Citrix MetaFrame systems where CODA agents are collecting data, HP OpenView Reporter can be used to generate reports.

How HP OpenView Reporter Creates Reports

Reporter follows the steps below when producing reports:

- Perform System Discovery

- Gather Performance Data

- Generate Reports

Each of these steps is described in detail in the following sections.

Perform System Discovery

HP OpenView Reporter creates Web-based reports from data derived from the targeted systems that it "discovers". During a system discovery, Reporter looks for systems that are specified in the **Discovery Area**, and which have a CODA or HP OpenView Performance Agent for Windows NT/2000 (formerly known as MeasureWare Agent or MWA) agent installed on them. It then adds those systems to the **Discovered Systems** group:

Discovered systems are placed in groups for easier access and reporting. Systems can be assigned to groups as they are discovered as specified in the Automatic Grouping facility. By default, systems are automatically assigned to groups based on the name of their operating system. However, you can also manually assign systems to groups.

A system can belong to any number of different groups. You can also create your own groups and assign systems to them manually using the "drag and drop" action.

Note that the following group is created for SPI for Citrix MetaFrame purposes:

- SPI for Citrix MetaFrame

There is also an auto-grouping defined for this group, based on the following criteria:

- Data Source = ^METAFSPIUX.*

The above indicates that each discovered system which contains a Data Source that begins with the word METAFSPIUX, for example, METAFSPIUX_SVCS and METAFSPIUX_SESX both match this rule, is automatically added to the "SPI for Citrix MetaFrame" discovered systems group in Reporter.

I M P O R T A N T   N O T E :

The auto-grouping feature only works with newly discovered systems. If your systems have already been discovered by Reporter prior to the installation of the Reporter part of SPI for Citrix MetaFrame, they may not have been added to the SPI for Citrix MetaFrame Reporter group; it may even occur that the group itself has not been created.

- If you find that a SPI for Citrix MetaFrame group was not created automatically, create one by yourself (take special care about the case used for the letters, it must be SPI for Citrix MetaFrame).
- If you find that a specific MetaFrame system has not been put under the SPI for Citrix MetaFrame group, you can add to the group manually.

Gather Performance Data

Once Reporter has run through its discovery, it gathers performance data from each discovered system and places it in a local database. Additionally, Reporter gathers data only for those metrics that it knows about. These metrics are specified under **Metrics Lists**:
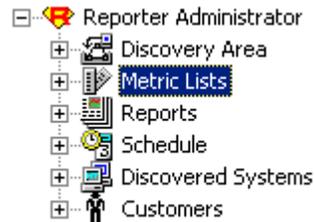
Metric lists control what information is gathered from a system into the Reporter's database. A metric list groups metrics from a single metric class supplied by the performance agent for UNIX or Windows. The metric list can also select the degree of summarization (points every 5 minutes, hour, day, and so on) and how much data to gather and retain in the database. The shorter the interval, the more records collected. The default summarization level is one hour. Metric lists are tightly connected to Data Source and Objects within that Data Source on each system.

The following metric lists are created for SPI for Citrix MetaFrame reports on MetaFrame services:

- `METAFSPI_SVC`

50

Each of the preceding metric lists contains the following four metrics:

- `hinstancename`
- `PAGEFILEBYTES`
- `PCTPROCESSORTIME`
- `WORKINGSET`

Points in metric lists are summarized hourly, and retained for seven days.

The following metric lists are created for SPI for Citrix MetaFrame reports on MetaFrame sessions:

- `METAFSPIUX_SESS`
- `METAFSPIUX_SICA`
- `METAFSPIUX_SESX`
- `METAFSPIUX_SESM`

The `METAFSPI_SESS` metric list contains the following metrics:

- `hinstancename`
- `WORKINGSET`
- `TOTALTIMEOUTS`
- `TOTALFRAMES`
- `TOTALERRORS`
- `PRIVATEBYTES`
- `PCTPROCESSORTIME`
- `PAGEFILEBYTES`

The `METAFSPIUX_SICA` metric list contains the following metrics:

- `hinstancename`
- `LATENCYSESSIONAVERA`
- `LATENCYLASTRECORDED`

The `METAFSPIUX_SESX` metric list contains the following metrics:

- SESSIONNAME
- SESSIONID
- DOMAINNAME
- USERNAME
- STATE
- LOGONTIME
- LASTINPUTTIME
- APPDN
- ADDRFAMILY
- ISDESKTOPSESS
- ISMODEMSESS
- CPUTIME
- WORKINGSETSIZE
- PAGEFILESIZE

The `METAFSPIUX_SESM` metric list contains the following metrics:

- SUMMKEY
- NUMALLSESS
- NUMACTSESS
- NUMDISCSESS
- NUMAPPINST
- NUMIPSESS
- NUMIPXSESS
- NUMNETBIOSSESS
- NUMMODEMSESS
- NUMDESKTOPSESS

- NUMPROCS

Points in metric lists are summarized with a 5-minute interval and retained for 42 days.

Also, the following metric list is created for all SPI for Citrix MetaFrame reports:

- METAFSPIUX_FARM

It contains the following metrics:

- FARMNAME

- ZONENAME

Points in the metric list are summarized hourly and retained for three days.

Generate Reports

Reporter generates HTML reports based on the data available in the local Reporter database. Additionally, Reporter creates the HTML reports from the set of reports that it knows about; reports which are located in the **Reports** group:
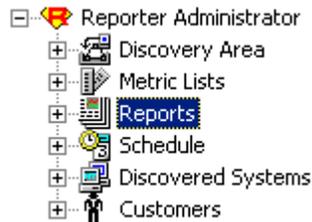
Available reports are listed in families under the Reports icon. You can expand the Reports hierarchy in the Reporter window then click on a report family to display in the right pane, the reports it contains. You can also delete the report when it is in the right pane. Click on an individual report to display its definition details. Additionally, you can edit the report definition details in the right pane including the Date Range and Shift Name.

The following report family is created for SPI for Citrix MetaFrame purposes:

* `SPI for Citrix MetaFrame`

Reports Implemented in SPI for Citrix MetaFrame

Several report categories and related individual reports exist under the **SPI for Citrix MetaFrame** report family as specified in the tables that follow.

N O T E :

All SPI for Citrix MetaFrame reports require that the `METAFSPI-ServerConfigLogging` scheduled task correctly logs its data. This policy logs server configuration information once per hour – by default this occurs 17 minutes past the hour. You must ensure that at least at 12:17 PM, the MetaFrame server is operational; otherwise, it will not be included in reports on the following day.

Category	*Report*
MetaFrame Sessions	**Session Logon/Logoff Activity (farm/yesterday)** *Filename:* g_METAFSPIUX_SESS_LOGON_LOGOFF_FARM.rpt *Description:* This report presents the number of logons / logoffs per hour on each Citrix MetaFrame farm over time. Using this report it is possible to receive insight into user logon / logoff behavior and to identify periods of peak logon / logoff activity. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers in a farm that have the following policies assigned to the nodes (for at least 2 days): METAFSPI-ServerConfigLogging METAFSPI-SessionsExLogging

Category	Report
MetaFrame Sessions	**Session Logon/Logoff Activity (Farm/last 28 days)** *Filename:* g_METAFSPIUX_SESS_LOGON_LOGOFF_28DAYS_FARM.rpt *Description:* This report presents session logon/logoff activity on MetaFrame farms in last 28 days. A session is defined as a unique combination of session ID and session logon time. Using this report it is possible to receive insight into the trends of session logon/logoff activity on each farm. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers in a farm that have the following policies assigned to the nodes (for at least 2 days): METAFSPI-ServerConfigLogging METAFSPI-SessionsExLogging
MetaFrame Sessions	**Session Logon/Logoff Activity (server/yesterday)** *Filename:* g_METAFSPIUX_SESS_LOGON_LOGOFF_SERVER.rpt *Description:* This report presents the number of logons / logoffs per hour on each Citrix MetaFrame server over time. Using this report it is possible to receive insight into user logon / logoff behavior and to identify periods of peak logon / logoff activity. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days): METAFSPI-ServerConfigLogging METAFSPI-SessionsExLogging

Category	Report

MetaFrame Sessions	**Session Logon/Logoff Activity (server/last 28 days)**
	
	Filename:
	`g_METAFSPIUX_SESS_LOGON_LOGOFF_28DAYS_SERVER.rpt`
	
	Description: This report presents session logon/logoff activity for MetaFrame servers within farms for the last 28 days. A session is defined as a unique combination of session ID and session logon time.
	Using this report it is possible to receive insight into the trends of session logon/logoff activity on each individual server.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

MetaFrame Sessions	**Session Activity in MetaFrame Farms (farm/last 28 days)**
	
	Filename: `g_METAFSPIUX_SESS_STATE_28DAYS_FARM.rpt`
	
	Description: This report presents daily average session activity in MetaFrame farms. Sessions are categorized according to their state into three groups: active, disconnected, and all other (connected, connecting, shadowing, idle, listening, resetting, down, init, stale). Each group is graphed with a different color. Using this report it is possible to identify trends in farm session activity and to perform inter-farm session activity comparison.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Category	Report
MetaFrame Sessions	**Session Activity in MetaFrame Farms (farm/yesterday)** *Filename:* g_METAFSPIUX_SESS_STATE_FARM.rpt *Description:* This report presents session activity in each Citrix MetaFrame farm over time. Sessions are categorized according to their state into three groups: active, disconnected, and all other. Each group is graphed with its own color. Using this report it is possible to identify farms with high session activity and to perform inter-farm session activity comparison. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days): METAFSPI-ServerConfigLogging METAFSPI-SessionsExLogging
MetaFrame Sessions	**Session Activity on MetaFrame Servers (server/last 28 days)** *Filename:* g_METAFSPIUX_SESS_STATE_28DAYS_SERVER.rpt *Description:* This report presents daily average session activity on MetaFrame servers within farms. Sessions are categorized according to their state into three groups: active, disconnected, and all other (connected, connecting, shadowing, idle, listening, resetting, down, init, stale). Each group is graphed with a different color. Using this report it is possible to identify trends in server session activity and to perform cross-server session activity comparison. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days): METAFSPI-ServerConfigLogging METAFSPI-SessionsExLogging

Category	*Report*
MetaFrame Sessions	**Session Activity on MetaFrame Servers (server/yesterday)** *Filename:* g_METAFSPIUX_SESS_STATE_SERVER.rpt *Description:* This report presents session activity on each Citrix MetaFrame server over time. Sessions are categorized according to their state into three groups: active, disconnected, and all other. Each group is graphed with its own color. Using this report it is possible to identify servers within each farm with high session activity and to perform inter-server session activity comparison. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days): METAFSPI-ServerConfigLogging METAFSPI-SessionsExLogging
MetaFrame Published Applications	**Number of Users of Published Applications (farm/yesterday)** *Filename:* g_METAFSPIUX_APP_NR_USERS_DAY_FARM.rpt *Description:* This report presents the number of users of each published application per hour for MetaFrame farms. Using this report it is possible to monitor license utilization (if required by nature of application) or to receive insight into how much a specific published application is being used. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days): METAFSPI-ServerConfigLogging METAFSPI-SessionsExLogging

Category	Report

MetaFrame Published Applications	**Number of Users of Published Applications (farm/last 28 days)**
	
	Filename: `g_METAFSPIUX_APP_NR_USERS_28DAYS_FARM.rpt`
	
	Description: This report presents the number of users of each published application per day for MetaFrame farms for the last 28 days. The values depicted on the chart represent the number of unique (not concurrent) users that used a specific published application on that day.
	Using this report it is possible to receive insight into how much a specific published application is being used.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

MetaFrame Published Applications	**Number of Users of Published Applications (server/yesterday)**
	
	Filename: `g_METAFSPIUX_APP_NR_USERS_DAY_SERVER.rpt`
	
	Description: This report presents the number of users of each published application per hour for MetaFrame servers within farms. Using this report it is possible to receive insight into how much a specific published application is being used on each server.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Category	Report

MetaFrame Published Applications	**Number of Users of Published Applications (server/last 28 days)**
	
	Filename: `g_METAFSPIUX_APP_NR_USERS_28DAYS_SERVER.rpt`
	
	Description: This report presents the number of users of each published application per day for MetaFrame servers within farms for the last 28 days. The values depicted on the chart represent the number of unique (not concurrent) users that used a specific published application on that day. Using this report it is possible to receive insight into how much a specific published application is being used.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

MetaFrame Accounting	**Application Accounting Information (farm/last month)**
	
	Filename: `g_METAFSPIUX_ACCOUNTING_APP_MONTH_FARM.rpt`
	
	Description: This report presents various accounting information for each published application used across all servers and all users in MetaFrame farms. 'Total number of logged application instances' field represents the number of running application instances that were detected in the reporting interval. 'Total use time' field represents the total duration application instances were running. 'Total CPU time spent' field represents the total CPU time application instances spent while running. 'Total memory use' field represents the total physical memory spent in time while application instances were running. This report provides accounting data that can be further used for billing of published application use.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Category	Report

MetaFrame Accounting	**User Accounting Information (farm/last month)**
	
	Filename: `g_METAFSPIUX_ACCOUNTING_USER_MONTH_FARM.rpt`
	
	Description: This report presents various accounting information for each user across all servers in MetaFrame farms. 'Total number of logged application instances' field represents the number of running application instances detected in the reporting interval. 'Total use time' field represents the total duration this users' application instances were running. 'Total CPU time spent' field represents the total CPU time application instances spent while running. 'Total memory use' field represents the total physical memory spent in time while application instances were running. This report provides accounting data that can be further used for billing of users based on their actual use of MetaFrame farm.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Threshold Assistant	**Threshold Assistant for Session State Monitoring (farm/last 28 days)**
	
	Filename: `g_METAFSPIUX_THRASS_SESS_STATE_28DAYS_FARM.rpt`
	
	Description: This report provides statistical information that helps adjust thresholds in session state monitoring policies for individual MetaFrame farms. For each corresponding monitoring policy the report produces the average and minimum/maximum values for PRIME and ALL shifts across all servers in a farm (PRIME shift needs to be defined in HP OpenView Reporter). Using this report it is possible to determine farm-wide threshold levels for session state monitoring policies, adjust them to the actual environment, and greatly reduce the number of false alarms that need administrative attention.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Category	Report

Threshold Assistant	**Threshold Assistant for Session State Monitoring (server/last 28 days)**
	
	Filename:
	`g_METAFSPIUX_THRASS_SESS_STATE_28DAYS_SERVER.rpt`
	
	Description: This report provides statistical information that helps adjust thresholds in session state monitoring policies for individual MetaFrame servers. For each corresponding monitoring policy the report produces the average and minimum/maximum values for PRIME and ALL shifts for each server in a farm (PRIME shift needs to be defined in HP OpenView Reporter).
	
	Using this report it is possible to determine server-specific threshold levels for session state monitoring policies, adjust them to the actual environment, and greatly reduce the number of false alarms that need administrative attention.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Category	Report
Threshold Assistant	**Threshold Assistant for Session CPU and Memory Monitoring (farm/last 28 days)** *Filename:* g_METAFSPIUX_THRASS_SESS_CPUMEM_28DAYS_FARM.rpt *Description:* This report provides statistical information that helps adjust thresholds in session CPU and Memory monitoring policies for individual MetaFrame farms. For each corresponding monitoring policy, the report produces the average and minimum/maximum values for PRIME and ALL shifts across all servers in a farm (PRIME shift needs to be defined in HP OpenView Reporter). Using this report it is possible to determine farm-wide threshold levels for session CPU and Memory monitoring policies, adjust them to the actual environment, and greatly reduce or even eliminate false alarms that need administrative attention. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days): METAFSPI-ServerConfigLogging METAFSPI-SessionsLogging

Category	Report

Threshold Assistant	**Threshold Assistant for Session CPU and Memory Monitoring (server/last 28 days)**
	
	Filename:
	`g_METAFSPIUX_THRASS_SESS_CPUMEM_28DAYS_SERVER.rpt`
	
	Description: This report provides statistical information that helps adjust thresholds in session CPU and Memory monitoring policies for individual MetaFrame servers within farms. For each corresponding monitoring policy, the report produces the average and minimum/maximum values for PRIME and ALL shifts for individual farm servers (PRIME shift needs to be defined in HP OpenView Reporter). Using this report it is possible to determine server-specific threshold levels for session CPU and Memory monitoring policies, fine-tune them for individual servers or groups of servers, and greatly reduce or even eliminate false alarms that need administrative attention.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsLogging`

Category	Report

Threshold Assistant	**Threshold Assistant for Session Network Latency Monitoring (farm/last 28 days)**
	
	Filename: `g_METAFSPIUX_THRASS_SESS_NETLAT_28DAYS_FARM.rpt`
	
	Description: This report provides statistical information that helps adjust thresholds in session network latency monitoring policies for individual MetaFrame farms. For each corresponding monitoring policy, the report produces the average and minimum/maximum values for PRIME and ALL shifts across all servers in a farm (PRIME shift needs to be defined in HP OpenView Reporter). Using this report it is possible to determine farm-wide threshold levels for session network latency monitoring policies, adjust them to the actual environment, and greatly reduce or even eliminate false alarms that need administrative attention.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsICALogging`

Category	Report

Threshold Assistant	**Threshold Assistant for Session Network Latency Monitoring (server/last 28 days)**
	
	Filename:
	`g_METAFSPIUX_THRASS_SESS_NETLAT_28DAYS_SERVER.rpt`
	
	Description: This report provides statistical information that helps adjust thresholds in session network latency monitoring policies for individual MetaFrame servers within farms. For each corresponding monitoring policy, the report produces the average and minimum/maximum values for PRIME and ALL shifts for individual farm servers (PRIME shift needs to be defined in HP OpenView Reporter).
	
	Using this report it is possible to determine server-specific threshold levels for session network latency monitoring policies, fine-tune them for individual servers or groups of servers, and greatly reduce or even eliminate false alarms that need administrative attention.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsLogging`

Category	Report

Threshold Assistant	**Threshold Assistant for Session Network Traffic Monitoring (farm/last 28 days)**
	
	Filename: `g_METAFSPIUX_THRASS_SESS_NETTRA_28DAYS_FARM.rpt`
	
	Description: This report provides statistical information that helps adjust thresholds in session network traffic monitoring policies for individual MetaFrame farms. For each corresponding monitoring policy, the report produces the average and minimum/maximum values for PRIME and ALL shifts across all servers in a farm (PRIME shift needs to be defined in HP OpenView Reporter). This report does not take into account Console and Idle sessions, since they are often incorrectly reporting very large values.
	
	Using this report it is possible to determine farm-wide threshold levels for session network traffic monitoring policies, adjust them to the actual environment, and greatly reduce or even eliminate false alarms that need administrative attention.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsLogging`

Category	*Report*

Threshold Assistant	**Threshold Assistant for Session Network Traffic Monitoring (server/last 28 days)**
	
	Filename:
	`g_METAFSPIUX_THRASS_SESS_NETTRA_28DAYS_SERVER.rpt`
	
	Description: This report provides statistical information that helps adjust thresholds in session network traffic monitoring policies for individual MetaFrame servers within farms. For each corresponding monitoring policy, the report produces the average and minimum/maximum values for PRIME and ALL shifts for individual farm servers (PRIME shift needs to be defined in HP OV Reporter). This report does not take into account Console and Idle sessions, since they are often incorrectly reporting very large values for session network traffic metrics. Using this report it is possible to determine server-specific threshold levels for session network traffic monitoring policies, fine-tune them for individual servers or groups of servers, and greatly reduce or even eliminate false alarms that need administrative attention.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsLogging`

MetaFrame Users	**Number of Logged-in Users on Farm Level (farm/yesterday)**
	
	Filename: `g_METAFSPIUX_NR_USERS_DAY_FARM.rpt`
	
	Description: This report presents the number of logged-in users per hour for MetaFrame farms. Using this report it is possible to monitor user activity and to identify periods of high user activity.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Category	Report

MetaFrame Users	**Number of Logged-in Users on Farm Level (farm/last 28 days)**
	
	Filename: `g_METAFSPIUX_NR_USERS_28DAYS_FARM.rpt`
	
	Description: This report presents number of logged-in users for MetaFrame farms. For every time-stamp graph depicts number of users that had at least one session opened on any MetaFrame server in a farm. Using this report it is possible to precisely monitor user activity over longer period of time and identify periods of high user activity.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

MetaFrame Users	**Number of Logged-in Users on Server Level (server/yesterday)**
	
	Filename: `g_METAFSPIUX_NR_USERS_DAY_SERVER.rpt`
	
	Description: This report presents the number of logged-in users per hour for MetaFrame servers within farms. Using this report it is possible to monitor user activity on an individual server level, identify servers with high user load, and possibly to optimize load balancing algorithms.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Category	Report

MetaFrame Users	**Number of Logged-in Users on Server Level (server/last 28 days)**
	
	Filename: `g_METAFSPIUX_NR_USERS_28DAYS_SERVER.rpt`
	
	Description: This report presents number of logged-in users to MetaFrame servers within farms. For every time-stamp graph depicts number of users that had at least one session opened on a MetaFrame server. Using this report it is possible to precisely monitor user activity on an individual server level over a longer period, identify trends in user activity, and possibly optimize load balancing algorithms.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Top Applications	**Top 10 published applications by CPU use (farm/last 28 days)**
	
	Filename: `g_METAFSPIUX_TOP_APP_CPU_28DAYS_FARM.rpt`
	
	Description: This report presents the top 10 published applications by their CPU use in MetaFrame farms. Published applications are listed table-wise in descending order from largest CPU consumer down. The right side of the table presents total CPU time consumed by specific published application in minutes and also in % of CPU time all published applications spent while running on MetaFrame servers. CPU time consumed by all non-top 10 published applications is summarized under the 11th published application instance named "Other". This report is useful for determining the heaviest published applications in a farm in terms of CPU load. Correlating this information to the list of servers these applications are published on can help in the planning of future administrative actions.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Category	*Report*
Top Applications	**Top 10 published applications by CPU use (server/last 28 days)** *Filename:* g_METAFSPIUX_TOP_APP_CPU_28DAYS_SERVER.rpt *Description:* This report presents the top 10 published applications by their CPU use on MetaFrame servers within farms. Published applications are listed table-wise in descending order from the largest CPU consumer down. The right side of the table presents total CPU time consumed by a specific published application in minutes and also in % of CPU time all published applications spent while running on the MetaFrame server. CPU time consumed by all non-top 10 published applications is summarized under the 11th published application instance named "Other". This report is useful for determining the heaviest published applications in each individual MetaFrame server in terms of CPU load. This allows for focusing of planning and administrative actions on published applications that need it the most. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days): METAFSPI-ServerConfigLogging METAFSPI-SessionsExLogging

Category	Report

Top Applications	**Top 10 published applications by CPU use (farm/yesterday)**
	
	Filename: `g_METAFSPIUX_TOP_APP_CPU_DAY_FARM.rpt`
	
	Description: This report presents the top 10 published applications by their CPU use in MetaFrame farms. Published applications are listed table-wise in descending order from the largest CPU consumer down. The right side of the table presents total CPU time consumed by specific published application in minutes and also in % of CPU time all published applications spent while running on MetaFrame servers. CPU time consumed by all non-top 10 published applications is summarized under the 11th published application instance named "Other". This report is useful for determining the heaviest published applications in a farm in terms of CPU load. Correlating this information to the list of servers these applications are published on can help in the planning of future administrative actions.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Category	*Report*
Top Applications	**Top 10 published applications by CPU use (server/yesterday)** *Filename:* g_METAFSPIUX_TOP_APP_CPU_DAY_SERVER.rpt *Description:* This report presents the top 10 published applications by their CPU use on MetaFrame servers within farms. Published applications are listed table-wise in descending order from the largest CPU consumer down. The right side of the table presents total CPU time consumed by specific published application in minutes and also in % of CPU time all published applications spent while running on a MetaFrame server. CPU time consumed by all non-top 10 published applications is summarized under the 11th published application instance named "Other". This report is useful for determining the heaviest published applications in each individual MetaFrame server in terms of CPU load. This allows for the focusing of planning and administrative actions on published applications that need it most. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days): METAFSPI-ServerConfigLogging METAFSPI-SessionsExLogging

Category	Report
Top Applications	**Top 10 published applications by memory use (farm/last 28 days)** *Filename:* g_METAFSPIUX_TOP_APP_MEM_28DAYS_FARM.rpt *Description:* This report presents the top 10 published applications by their memory use in time within MetaFrame farms. Published applications are listed table-wise in descending order from largest memory consumer down. The right side of the table presents total memory consumed by each published application in megabyte hours and also in % of memory in time all published applications used while running on MetaFrame servers. Memory consumed by all non-top 10 published applications is summarized under the 11th published application instance named "Other". This report is useful for determining the heaviest published applications in a farm in terms of memory load in time. Correlating this information to the list of servers these applications are published on can help in the planning of future administrative actions. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days): METAFSPI-ServerConfigLogging METAFSPI-SessionsExLogging

Category	*Report*

Top Applications	**Top 10 published applications by memory use (farm/yesterday)**
	
	Filename: `g_METAFSPIUX_TOP_APP_MEM_DAY_FARM.rpt`
	
	Description: This report presents the top 10 published applications by their memory use in time within MetaFrame farms. Published applications are listed table-wise in descending order from the largest memory consumer down. The right side of the table presents total memory consumed by each published application in megabyte hours and also in % of memory in time all published applications used while running on MetaFrame servers. Memory consumed by all non-top 10 published applications is summarized under the 11th published application instance named "Other". This report is useful for determining the heaviest published applications in a farm in terms of memory load in time. Correlating this information to the list of servers these applications are published on can help in the planning of future administrative actions.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Category	*Report*

Top Applications	**Top 10 published applications by memory use (server/last 28 days)**
	
	Filename: `g_METAFSPIUX_TOP_APP_MEM_28DAYS_SERVER.rpt`
	
	Description: This report presents the top 10 published applications by their memory use in time within MetaFrame farms. Published applications are listed table-wise in descending order from largest memory consumer down. The right side of the table presents total memory consumed by each published application in megabyte hours and also in % of memory in time all published applications used while running on MetaFrame servers. Memory consumed by all non-top 10 published applications is summarized under the 11th published application instance named "Other". This report is useful for determining the heaviest published applications in each individual MetaFrame server in terms of memory load in time. This allows for the focusing of planning and administrative actions on published applications that need it most.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Category	*Report*

Top Applications	**Top 10 published applications by memory use (server/yesterday)**
	
	Filename: `g_METAFSPIUX_TOP_APP_MEM_DAY_SERVER.rpt`
	
	Description: This report presents the top 10 published applications by their memory use in time within MetaFrame farms. Published applications are listed table-wise in descending order from largest memory consumer down. The right side of the table presents total memory consumed by each published application in megabyte hours and also in % of memory in time all published applications used while running on MetaFrame servers. Memory consumed by all non-top 10 published applications is summarized under the 11th published application instance named "Other". This report is useful for determining the heaviest published applications in each individual MetaFrame server in terms of memory load in time. This allows for the focusing of planning and administrative actions on published applications that need it most.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Category	Report
Top Applications	**Top 10 published applications by number of launched instances (farm/last 28 days)** *Filename:* g_METAFSPIUX_TOP_APP_NUMINST_28DAYS_FARM.rpt *Description:* This report presents the top 10 published applications by their number of launched instances within MetaFrame farms. Published applications are listed table-wise in descending order from application with largest number of launched instances down. The right side of the table also presents the number of launched instances in % of all launched application instances on a farm's servers. Number of launched instances by all non-top 10 published applications is summarized under the 11th published application instance named "Other". This report is useful for determining the most "popular" published applications in a farm. Correlating this information to the list of servers these applications are published on can help in the planning of future administrative actions. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days): METAFSPI-ServerConfigLogging METAFSPI-SessionsExLogging

Category	*Report*
Top Applications	**Top 10 published applications by number of launched instances (farm/yesterday)** *Filename:* g_METAFSPIUX_TOP_APP_NUMINST_DAY_FARM.rpt *Description:* This report presents the top 10 published applications by their number of launched instances within MetaFrame farms. Published applications are listed table-wise in descending order from the application with largest number of launched instances down. The right side of the table also presents the number of launched instances in % of all launched application instances on a farm's servers. Number of launched instances by all non-top 10 published applications is summarized under the 11th published application instance named "Other". This report is useful for determining the most "popular" published applications in a farm. Correlating this information to the list of servers these applications are published on can help in the planning of future administrative actions. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days): METAFSPI-ServerConfigLogging METAFSPI-SessionsExLogging

Category	Report

Top Applications	**Top 10 published applications by number of launched instances (server/last 28 days)**
	
	Filename: `g_METAFSPIUX_TOP_APP_NUMINST_28DAYS_SERVER.rpt`
	
	Description: This report presents the top 10 published applications by their number of launched instances on MetaFrame servers within farms. Published applications are listed table-wise in descending order from the application with largest number of launched instances down. The right side of the table also presents the number of launched instances in % of all launched application instances on a farm's servers. Number of launched instances by all non-top 10 published applications is summarized under the 11th published application instance named "Other". This report is useful for determining the most "popular" published applications on each individual MetaFrame server in a farm. This allows for the focusing of planning and administrative actions on published applications that need it most.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsExLogging`

Category	*Report*
Top Applications	**Top 10 published applications by number of launched instances (server/yesterday)** *Filename:* g_METAFSPIUX_TOP_APP_NUMINST_DAY_SERVER.rpt *Description:* This report presents the top 10 published applications by their number of launched instances on MetaFrame servers within farms. Published applications are listed table-wise in descending order from the application with the largest number of launched instances down. The right side of the table also presents the number of launched instances in % of all launched application instances on a farm's servers. Number of launched instances by all non-top 10 published applications is summarized under the 11th published application instance named "Other". This report is useful for determining the most "popular" published applications on each individual MetaFrame server in a farm. This allows for the focusing of planning and administrative actions on published applications that need it most. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days): METAFSPI-ServerConfigLogging METAFSPI-SessionsExLogging

Category	*Report*

Top Servers	**Top 10 servers with highest average session latency (farm/last 28 days)**
	
	Filename: `g_METAFSPIUX_TOP_SRV_SESSAVGLAT_28DAYS_FARM.rpt`
	
	Description: This report shows the top 10 servers with the highest average ICA session latency for each MetaFrame farm. The first part of the report focuses on determining the top 10 servers and calculating their average ICA session latency, while the second part of the report shows in detail how average ICA session latency was changing over time on each farm's server. This report is useful for determining and focusing administrative attention on servers where users may be experiencing bad response times.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsICALogging`

Top Servers	**Top 10 servers with highest average session latency (farm/yesterday)**
	
	Filename: `g_METAFSPIUX_TOP_SRV_SESSAVGLAT_DAY_FARM.rpt`
	
	Description: This report shows the top 10 servers with the highest average ICA session latency for each MetaFrame farm. The first part of the report focuses on determining the top 10 servers and calculating their average ICA session latency, while the second part of the report shows in detail how average ICA session latency was changing over time on each farm's server. This report is useful for determining and focusing administrative attention on servers where users may be experiencing bad response times.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have the following policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServerConfigLogging`
	`METAFSPI-SessionsICALogging`

Category	*Report*
Top Servers	**Top 10 Servers with Largest MetaFrame Services CPU use (farm/last 28 days)** *Filename:* g_METAFSPIUX_TOP_SRV_SVCSCPU_28DAYS_FARM.rpt *Description:* This report consist of two parts: an upper part that depicts the top ten systems where MetaFrame services on average consumed most of the CPU time and a lower part that displays for each of the top ten systems listed, a chart of CPU consumption with hourly accuracy. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have at least the following two policies assigned to the nodes (for at least 2 days): METAFSPI-ServicesLogging METAFSPI-ServerConfigLogging All other METAFSPI-Reporter policies are highly recommended
Top Servers	**Top 10 Servers with Largest MetaFrame Services CPU use (farm/yesterday)** *Filename:* g_METAFSPIUX_TOP_SRV_SVCSCPU_DAY_FARM.rpt *Description:* This report consist of two parts: an upper part that depicts the top ten systems where MetaFrame services on average consumed most of the CPU time and a lower part that displays for each of the top ten systems listed, a chart of CPU consumption with hourly accuracy. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have at least the following two policies assigned to the nodes (for at least 2 days): METAFSPI-ServicesLogging METAFSPI-ServerConfigLogging All other METAFSPI-Reporter policies are highly recommended

Category	Report

Top Servers	**Top 10 Servers with Highest MetaFrame Services Memory use (farm/last 28 days)**
	
	Filename: `g_METAFSPIUX_TOP_SRV_SVCSMEM_28DAYS_FARM.rpt`
	
	Description: This report consists of two parts: an upper part that depicts the top ten systems where MetaFrame services on average consumed most of the Memory, that is, physical memory and a lower part that displays for each of the top ten systems listed, a chart of Memory consumption with hourly accuracy.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have at least the following two policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServicesLogging`
	`METAFSPI-ServerConfigLogging`
	
	All other `METAFSPI-Reporter` policies are highly recommended

Top Servers	**Top 10 Servers with Highest MetaFrame Services Memory use (farm/yesterday)**
	
	Filename: `g_METAFSPIUX_TOP_SRV_SVCSMEM_DAY_FARM.rpt`
	
	Description: This report consists of two parts: an upper part that depicts the top ten systems where MetaFrame services on average consumed most of the Memory, that is, physical memory and a lower part that displays for each of the top ten systems listed, a chart of Memory consumption with hourly accuracy.
	
	IMPORTANT NOTE: This report takes into account only those MetaFrame servers that have at least the following two policies assigned to the nodes (for at least 2 days):
	
	`METAFSPI-ServicesLogging`
	`METAFSPI-ServerConfigLogging`
	
	All other `METAFSPI-Reporter` policies are highly recommended

Category	Report
Top Servers	**Top 10 Servers with Highest MetaFrame Services Swap use (farm/last 28 days)** *Filename:* g_METAFSPIUX_TOP_SRV_SVCSSWAP_28DAYS_FARM.rpt *Description:* This report consists of two parts: an upper part that depicts the top ten systems where MetaFrame services on average consumed most of the Swap, that is, virtual memory and a lower part that displays for each of the top ten systems listed, a chart of Swap consumption with hourly accuracy. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have at least the following two policies assigned to the nodes (for at least 2 days): METAFSPI-ServicesLogging METAFSPI-ServerConfigLogging All other METAFSPI-Reporter policies are highly recommended
Top Servers	**Top 10 Servers with Highest MetaFrame Services Swap use (farm/yesterday)** *Filename:* g_METAFSPIUX_TOP_SRV_SVCSSWAP_DAY_FARM.rpt *Description:* This report consists of two parts: an upper part that depicts the top ten systems where MetaFrame services on average consumed most of the Swap, that is, virtual memory and a lower part that displays for each of the top ten systems listed, a chart of Swap consumption with hourly accuracy. **IMPORTANT NOTE:** This report takes into account only those MetaFrame servers that have at least the following two policies assigned to the nodes (for at least 2 days): METAFSPI-ServicesLogging METAFSPI-ServerConfigLogging All other METAFSPI-Reporter policies are highly recommended

Services Map View Support

HP OpenView Services Map View is a component of the HP OpenView Operations GUI. This component enables you to manage your IT (information technology) environment while focusing on the IT services that you provide.

SPI for Citrix MetaFrame contains support for Services Map View; it automatically generates a MetaFrame service view of the Citrix MetaFrame enterprise configuration.

N O T E :

For additional information on the HP OpenView Services, refer to the *HP OpenView Operations Manual*.

Autodiscovery

SPI for Citrix MetaFrame offers autodiscovery of MetaFrame farms, zones, servers, and published applications, as well as the dependencies between them in a farm. SPI for Citrix MetaFrame also monitors any MetaFrame configuration changes, and allows you to update your service view once a day (this can be configured) if changes occurred.

N O T E :

You can also generate a service map whenever you desire by using a "Force Service Model Update" tool.

Before performing an autodiscovery, the following three issues should first be addressed:

1. SPI for Citrix MetaFrame must be configured.

2. The policy, METAFSPI-ChkServiceModel, should be deployed to the HP OpenView Operations for Windows managed node where the MetaFrame server is installed.

3. The policy METAFSPI-ChkServiceModel must be deployed to every farm on which you want to perform autodiscovery, for example, on the server(s) for the farm that you want a service model.

N O T E :

Refer to the section, *The METAFSPI-ChkServiceModel Policy Defined*, listed later in this chapter for detailed information on the METAFSPI-ChkServiceModel policy.

Once these conditions are met, perform the following steps for autodiscovery:

1. Login to your Windows machine where the HP OpenView Operations for Windows console is installed as the user administrator.

2. Select **Policy management** followed by selecting **Policy groups**. Then, select **SPI for Citrix MetaFrame** followed by selecting **METAFSPI-Discovery**.

3. From the right window pane, select and right-click the **METAFSPI-ChkServiceModel** policy.

4. From the menu displayed next, select **All Tasks…** followed by selecting **Deploy on**. The *Deploy policies on…*window opens.

5. From the *Deploy policies on…*window, select the node(s) on which you want the policy deployed. When your selections have been made, press [OK].

6. Wait for deployment to finish.

7. Typically, within the next 24 hours (this value is configurable – the time value listed here is the default), one of the two following message types will appear:

    A message stating that the service model does not exist.

    -or-

    A message stating that the service model has changed.

I M P O R T A N T   N O T E :

For a service map to correctly propagate the message status, you need to have DNS reverse lookup zones correctly configured at least for your MetaFrame servers. Check with your DNS administrator on the status of DNS reverse lookups in your environment.

When either message appears, you must select and right-click the message. From the menu that appears next, select **Commands**, followed by selecting **Start.** Then, select **Operator Initiated**.

By selecting **Operator Initiated**, the service model is uploaded into the *Services* group and a tree, similar to below, is displayed that includes the following elements:
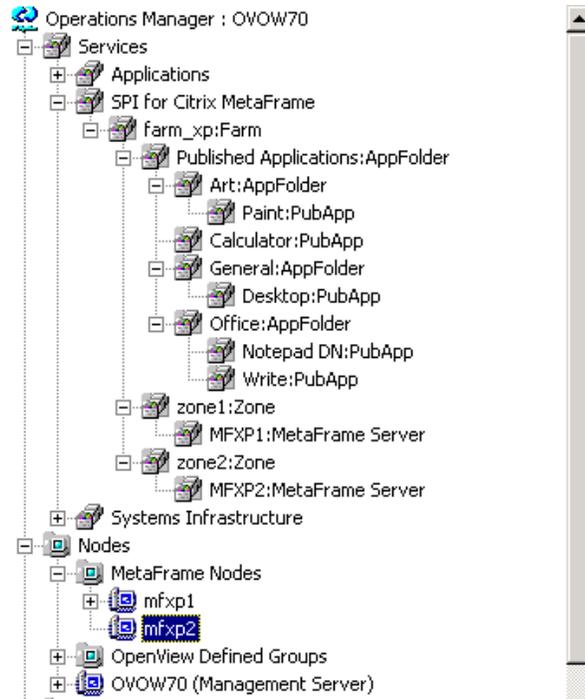
N O T E :

farm_xp would be replaced by your Farm Name;
zone1 and zone2 would be replaced by your Zone Name; and
MFXP1 and MFXP2 would be replaced by your Server Name

90

Sample Services Map View

Below is a sample MetaFrame service view.
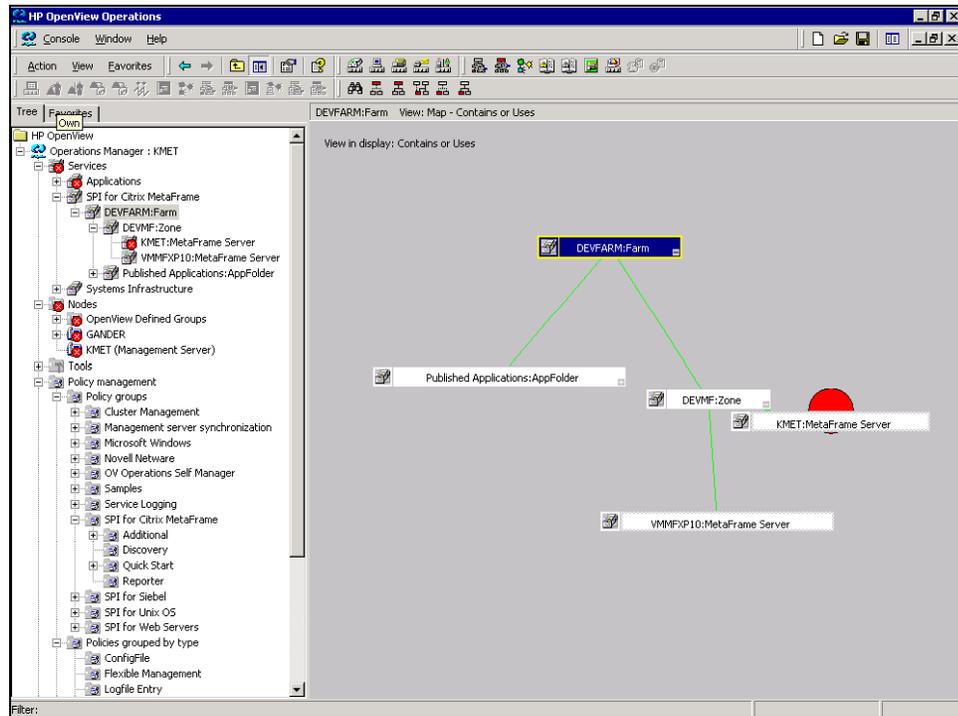
The METAFSPI-ChkServiceModel Policy Defined

The `METAFSPI-ChkServiceModel` policy is the center of the service model discovery functionality. It should be deployed to all MetaFrame Servers from which you want to retrieve service model information. This policy periodically executes the script. If the return values are either 1 or 2, the following occurs:

- If the return value is 1, then an OpC message is generated stating that the service model changed

- If the return value is 2, then an OpC message is generated stating that there is no service model available yet

Besides generating a message, an automatic action is performed (the policy executes `metafspiutil –dumpmodelmof`) and the output of the action is appended to the message in a form of an annotation. The instruction of the OpC message indicates that to upload the MetaFrame service model you must run the operator-initiated action of the OpC message, which calls the `METAFSPI-updsvcmodel.bat` batch script and the service model is uploaded to HP OpenView Operations for Windows console.

4

Reference Information

Helpful Facts

This section contains reference information, which can assist you when working with the SPI for Citrix MetaFrame product.

SPI for Citrix MetaFrame Components

On the HP OpenView Operations management server, SPI for Citrix MetaFrame installs the following default components:

- Tools and tools groups

- Policies and policy groups

Tools and Tools Groups

SPI for Citrix MetaFrame adds the top-level tools group, **SPI for Citrix MetaFrame**, to HP OpenView Operations folder **Tools**. Refer to *Figure 4-1, Tools*.

Figure 4-1: Tools
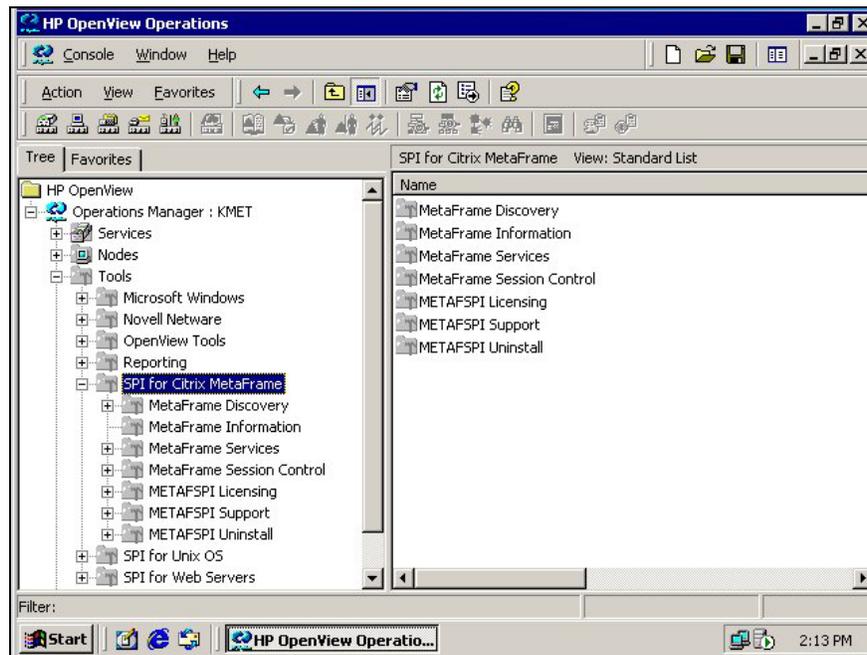
Tool Groups Available

Within the **SPI for Citrix MetaFrame** top-level tool group, the following tool groups are available:

- `MetaFrame Session Control`
- `MetaFrame Discovery`
- `MetaFrame Information`
- `MetaFrame Services`
- `METAFSPI Licensing`
- `METAFSPI Support`
- `METAFSPI Uninstall`

Each of these tool groups is described in detail in the sections that follow.

Additional Tools Available

A security configuration tool is also available for your use. This tool is accessible in the form of the executable file: `METAFSPIconfig.exe`. For information on using this tool, refer to the section *Tool for Security Configuration*, which follows later in this chapter.

MetaFrame Session Control Tool Group

This tool group contains tools for controlling Citrix MetaFrame sessions. It includes the following tools sub-groups:

- `Disconnect`

- `Logoff`

- `Logon Control`

- `Send Message`

Each of these tools sub-groups, and the tools contained within them, is described in the sections that follow.

Disconnect Tool Group

Five tools exist for disconnecting MetaFrame sessions as follows:

- `Disconnect Server Session by Name`

- `Disconnect Farm Sessions by Username`

- `Disconnect All Sessions in Farm`

- `Disconnect All Sessions in Zone`

- `Disconnect All Sessions on Server`

The tools differ in scope and must always be executed on a MetaFrame server with SPI for Citrix MetaFrame instrumentation installed. Tools will, after completion, display list of sessions that they affected. Each tool is described in detail below.

`Disconnect Server Session by Name`
The operator must specify the name of the MetaFrame session that the operator wants to disconnect on a MetaFrame server.

Disconnect Farm Sessions by Username

The operator must specify the username of the user whose sessions the operator wants to disconnect. This process works farm wide (for example, all sessions belonging to the specified user will be disconnected).

Disconnect All Sessions in Farm

The operator must run this tool on a server in a desired farm where the operator wants to disconnect sessions. The process works farm wide (for example, all sessions in a farm will be disconnected).

Disconnect All Sessions in Zone

The operator must run this tool on a server in a desired zone where the operator wants to disconnect sessions. The process works zone wide (for example, all sessions in a zone to which the server belongs to will be disconnected).

Disconnect All Sessions on Server

The operator must run this tool on a server where the operator wants to disconnect sessions. The process works server wide (for example, all sessions on the server will be disconnected).

Logoff Tool Group

Five tools exist for logging-off MetaFrame sessions as follows:

- `Logoff Server Session by Name`
- `Logoff Farm Sessions by Username`
- `Logoff All Sessions in Farm`
- `Logoff All Sessions in Zone`
- `Logoff All Sessions on Server`

The tools differ in scope and must always be executed on a MetaFrame server with SPI for Citrix MetaFrame instrumentation installed. Tools will, after completion, display list of sessions that they affected. Each tool is described in detail below.

Logoff Server Session by Name
The operator must specify the name of the MetaFrame session that the operator wants to logoff on a MetaFrame server.

Logoff Farm Sessions by Username
The operator must specify the username of the user whose sessions the operator wants to logoff. This process works farm wide (for example, all sessions belonging to the specified user will be logged-off).

Logoff All Sessions in Farm
The operator must run this tool on a server in a desired farm where the operator wants to logoff sessions. The process works farm wide (for example, all sessions in a farm will be logged-off).

Logoff All Sessions in Zone
The operator must run this tool on a server in a desired zone where the operator wants to logoff sessions. The process works zone wide (for example, all sessions in a zone will be logged-off).

Logoff All Sessions on Server

The operator must run this tool on a server where the operator wants to logoff sessions. The process works server wide (for example, all sessions on the server will be logged-off).

Logon Control Tool Group

Six tools exist for enabling/disabling logon to MetaFrame servers as follows:

- Disable Logons to Farm
- Disable Logons to Zone
- Enable Logons to Farm
- Enable Logons to Zone
- Status of Logons in Farm
- Status of Logons in Zone

The tools must always be executed on a MetaFrame server with SPI for Citrix MetaFrame instrumentation installed. Each tool is described in detail below.

Disable Logons to Farm

The operator must run the tool on the MetaFrame server in the desired farm. The tool disables logons to the farm where the server, on which the tool was executed, is located.

Disable Logons to Zone

The operator must run the tool on the MetaFrame server in the desired zone. The tool disables logons to the zone within the farm where the server, on which the tool was executed, is located.

Enable Logons to Farm

The operator must run the tool on the MetaFrame server in the desired farm. The tool enables logons to the farm where the server, on which the tool was executed, is located.

Enable Logons to Zone

The operator must run the tool on the MetaFrame server in the desired zone. The tool enables logons to the zone within the farm where the server, on which the tool was executed, is located.

Status of Logons in Farm

The operator must run the tool on the MetaFrame server in the desired farm. The tool displays whether logons are enabled/disabled for each server within the farm where the server, on which the tool was executed, is located.

Status of Logons in Zone

The operator must run the tool on the MetaFrame server in the desired zone. The tool displays whether logons are enabled/disabled for each server within the zone where the server, on which the tool was executed, is located.

Send Message Tool

Five tools exist for sending MetaFrame messages as follows:

- `Send Message to Farm Sessions`
- `Send Message to Server Sessions`
- `Send Message to Session`
- `Send Message to Zone Sessions`
- `Send Message to User Sessions`

The tools differ in to whom the message is sent. Additionally, the tools must always be executed on a MetaFrame server with SPI for Citrix MetaFrame instrumentation installed. Tools will, after completion, display list of sessions that they affected. Each tool is described in detail below.

Send Message to Farm Sessions

The operator must only specify the message enclosed in a backslash-double quote pair, for example:
```
\"This is a message\"
```

and select the desired MetaFrame server. A message is sent to all sessions in the MetaFrame farm to which the server belongs.

Send Message to Server Sessions

The operator must only specify the message enclosed in a backslash-double quote pair, for example:
```
\"This is a message\"
```

and select the desired MetaFrame server. A message is sent to all sessions on the MetaFrame server.

Send Message to Session

The operator must specify the name of the session to which the message is to be sent and the message must be enclosed in a backslash-double quote pair, for example:

```
\"This is a message\"
```

A message is sent to the session with the specified session name in a farm.

Send Message to Zone Sessions

The operator must only specify the message enclosed in a backslash-double quote pair, for example:

```
\"This is a message\"
```

and select a MetaFrame server in the desired zone. A message is sent to all sessions in the MetaFrame zone to which the server belongs.

`Send Message to User Sessions`

Here, the operator must specify the username of the user to whom the message is to be sent along with the message enclosed in a backslash-double quote pair. A message is sent to all sessions that belong to a specified username.

MetaFrame Discovery Tool

This tool group contains one tool currently: ***Force Service Model Update***. This tool is responsible for forcing the generation of the OpC message, which contains MetaFrame service model information.

N O T E :

For this tool to operate correctly, a node on which the tool is executed needs to have the METAFSPI-ChkServiceModel2 policy deployed from the *METAFSPI-Discovery* policy group.

MetaFrame Information Tool

This tool group was developed to retrieve and to display/return MetaFrame-specific information. It includes the following tools:

- `Display Application Information`

- `Display License Information`

- `Display MetaFrame Server Information`

- `Display Number of Servers in Farm`

- `Display Number of Servers in Zone`

- `Display Server Mode`

- `Display Session Information`

- `Display Session Information Grouped by User`

- `Display Zone Information`

Each of these tools is described in the sections that follow.

Display Application Information

Tool Name: Display Application Information

Executable: `METAFSPI-switch.bat displapps`

Actual call: `metafspiutil –applications`
Actual call represents the call that is being performed in the batch file.

Description: Display all published applications on the MetaFrame server

Display License Information

Tool Name: Display License Information

Executable: `METAFSPI-switch.bat displlic`

Actual call: `metafspiutil –licenses`
Actual call represents the call that is being performed in the batch file.

Description: Display license information on the MetaFrame server and farm

Display MetaFrame Server Information

Tool Name: Display MetaFrame Server Information

Executable: `METAFSPI-switch.bat displsrv`

Actual call: `metafspiutil –servers`
Actual call represents the call that is being performed in the batch file.

Description: Display detailed information about MetaFrame servers in a farm

Display Number of Servers in Farm

Tool Name: Display Number of Servers in Farm

Executable: `METAFSPI-switch.bat displsrv`

Actual call: `metafspiutil -farmsrvcount`
Actual call represents the call that is being performed in the batch file.

Description: Display number of servers in a farm

Display Number of Servers in Zone

Tool Name: Display Number of Servers in Zone

Executable: `METAFSPI-switch.bat displzonesrvcnt`

Actual call: `metafspiutil -zonesrvcount`
Actual call represents the call that is being performed in the batch file.

Description: Display number of servers in a zone

Display Server Mode

Tool Name: Display Server Mode

Executable: `METAFSPI-switch.bat displmode`

Actual call: `METAFSPIUtil.exe -mode`

Description: Displays whether the farm operates in direct or indirect mode with Data Store.

Display Session Information

Tool Name: Display Session Information

Executable: `METAFSPI-switch.bat displsessions`

Actual call: `metafspiutil -sessions`
Actual call represents the call that is being performed in the batch file.

Description: Display all sessions on the MetaFrame server

Display Session Information Grouped by User

Tool Name: Display Session Information By User

Executable: `METAFSPI-switch.bat displsessbyusr`

Actual call: `metafspiutil -sessionsbyuser`
Actual call represents the call that is being performed in the batch file.

Description: Display all sessions on the MetaFrame server, sorted by username

Display Zone Information

Tool Name: Display Zone Information

Executable: `METAFSPI-switch.bat displzones`

Actual call: `metafspiutil -zones`
Actual call represents the call that is being performed in the batch file.

Description: Display all zones and their corresponding Data Collectors in a MetaFrame farm

MetaFrame Services Tools

This tool group contains tools that relate to MetaFrame services. It includes the following tools:

- `Start/Stop/Status ADF Installer Service Service`

- `Start/Stop/Status Citrix WMI Service`

- `Start/Stop/Status Citrix XTE Server Service`

- `Start/Stop/Status Client Network Service`

- `Start/Stop/Status Encryption Service`

- `Start/Stop/Status IMA Service`

- `Start/Stop/Status MetaFrame COM Server Service`

- `Start/Stop/Status Resource Manager Mail Service`

- `Start/Stop/Status SSL Server Relay Service`

- `Start/Stop/Status Terminal Services Service`

Each of these tools is described in the sections that follow.

Start/Stop/Status ADF Installer Service Service

Tool Name: Start ADF Installer Service Service
Executable: `net start "ADF Installer Service"`

Tool Name: Stop ADF Installer Service Service
Executable: `net stop "ADF Installer Service"`

Tool Name: Status ADF Installer Service Service
Executable: `opcntmserv.exe /status "ADF Installer"`

Start/Stop/Status Citrix WMI Service

Application Name: Start Citrix WMI Service
Executable: `net start CitrixWMIService`

Application Name: Stop Citrix WMI Service
Executable: `net stop CitrixWMIService`

Application Name: Status Citrix WMI Service
Executable: `opcntmserv.exe /status CitrixWMIService`

Start/Stop/Status Citrix XTE Server Service

Application Name: Start Citrix XTE Server Service
Executable: `net start CitrixXTEServer`

Application Name: Stop Citrix XTE Server Service
Executable: `net stop CitrixXTEServer`

Application Name: Status Citrix XTE Server Service
Executable: `opcntmserv.exe /status CitrixXTEServer`

NOTE: Citrix XTE Server service is only available on Presentation Server 3.0.

Start/Stop/Status Client Network Service

Tool Name: Start Client Network Service
Executable: `net start CdmService`

Tool Name: Stop Client Network Service
Executable: `net stop CdmService`

Tool Name: Status Client Network Service
Executable: `opcntmserv.exe /status CdmService`

Start/Stop/Status Encryption Service

Tool Name: Start Encryption Service
Executable: `net start "Encryption Service"`

Tool Name: Stop Encryption Service
Executable: `net stop "Encryption Service"`

Tool Name: Status Encryption Service
Executable: `opcntmserv.exe /status "Encryption Service"`

Start/Stop/Status IMA Service

Tool Name: Start IMA Service
Executable: `net start IMAService`

Tool Name: Stop IMA Service
Executable: `net stop IMAService`

Tool Name: Status IMA Service
Executable: `opcntmserv.exe /status IMAService`

Start/Stop/Status MetaFrame COM Server Service

Tool Name: Start MetaFrame COM Server Service
Executable: `net start MFCom`

Tool Name: Stop MetaFrame COM Server Service
Executable: `net stop MFCom`

Tool Name: Status MetaFrame COM Server Service
Executable: `opcntmserv.exe /status MFCom`

Start/Stop/Status Resource Manager Mail Service

Tool Name: Start Resource Manager Mail Service
Executable: `net start ResourceManagerMail`

Tool Name: Stop Resource Manager Mail Service
Executable: `net stop ResourceManagerMail`

Tool Name: Status Resource Manager Mail Service
Executable: `opcntmserv.exe /status ResourceManagerMail`

Start/Stop/Status SSL Server Relay Service

Tool Name: Start SSL Server Relay Service
Executable: `net start "Citrix SSL Relay"`

Tool Name: Stop SSL Server Relay Service
Executable: `net stop "Citrix SSL Relay"`

Tool Name: Status SSL Server Relay Service
Executable: `opcntmserv.exe /status "Citrix SSL Relay"`

Start/Stop/Status Terminal Services Service

Tool Name: Start Terminal Services Service
Executable: `net start TermService`

Tool Name: Stop Terminal Services Service
Executable: `net stop TermService`

Tool Name: Status Terminal Services Service
Executable: `opcntmserv.exe /status TermService`

METAFSPI Licensing Tool Group

This tool group contains tools that relate to licensing your SPI for Citrix MetaFrame product. Within this group, three tools are available, as follows:

1. `Clear License Request File on Mgmt Server`

2. `Generate License Request for Node`

3. `Merge License Activation Codes on Mgmt Server`

`List License Activation Codes`

Each of these tools is described in the sections that follow.

1. Clear License Request File on Mgmt Server

This tool clears the METAFSPI license request file (`metafspi_license_requests.dat` file from the `%OvAgentDir%\bin\instrumentation` folder) on the management server. It is usually the first step when requesting METAFSPI licenses.

N O T E :

For this tool to work correctly, you need to deploy to the management server "SPI for Citrix MetaFrame Mgmt Server" instrumentation prior to executing the tool.

2. Generate License Request for Node

This tool generates the METAFSPI license request information for the managed node. The tool is usually executed on many nodes at once to quicken license request generation. Note that license request information for all nodes is collected on the management server in a single license request file (filename is `%OvAgentDir%\bin\instrumentation\metafspi_license_requests.dat`).

N O T E :

For this tool to work correctly, a node on which this tool is executed needs to have deployed all policies from the *METAFSPI-SPI Licensing* policy group.

3. Merge License Activation Codes on Mgmt Server

This tool merges newly obtained METAFSPI license activation codes to existing license activations. Once this occurs, license activation codes are ready to be deployed to the Citrix MetaFrame managed nodes.

N O T E :

For this tool to work correctly, you need to deploy to the management server "SPI for Citrix MetaFrame Mgmt Server" instrumentation prior to executing the tool.

For additional information on SPI for Citrix licensing, refer to the section *SPI for Citrix MetaFrame Licensing Overview* listed in *Chapter 2: Installing SPI for Citrix MetaFrame* of this manual.

List License Activation Codes

This tool lists and counts METAFSPI license activation codes on the management server.

For additional information on SPI for Citrix licensing, refer to the section *SPI for Citrix MetaFrame Licensing Overview* listed in *Chapter 2: Installing SPI for Citrix MetaFrame* of this manual.

METAFSPI Support Tool Group

This tool group contains tools that provide you with assistance when troubleshooting your SPI for Citrix MetaFrame product as well as to help you verify your SPI for Citrix MetaFrame requirements and configuration information. Both tools in this group create files under the following directory on the node where the tool is executed:

```
%OvAgentDir%\metafspi
```

Within the **METAFSPI Support** tool group, the following tools are available:

- Check Requirements/Configuration
- Collect Support Information

Each of these tools in described in the sections that follow.

Check Requirements/Configuration

This tool checks whether the MetaFrame server matches METAFSPI requirements and whether it is correctly configured. This tool should be executed on each node prior to using full SPI for Citrix MetaFrame features. For additional information on this tool's usage, refer to the section *Verifying Requirements and Configuration* listed in *Chapter 2: Installing SPI for Citrix MetaFrame* of this manual.

Collect Support Information

This tool is primary created as a support tool to collect various support information about the MetaFrame server and to copy it into the support directory. If a Support Engineer tells you to run this tool, after executing the tool on one or more nodes, you should copy the files from the following directory and its sub-directories:

```
%OvAgentDir%\metafspi
```

for further analysis.

METAFSPI Uninstall Tool Group

Tools in this group help you with uninstalling SPI for Citrix MetaFrame from managed nodes. At the moment, there is only one tool in this group, called:

- `Remove instrumentation from Managed Node`

This tool is described in the section that follows.

Remove Instrumentation from Managed Node

This tool deletes all of the SPI for Citrix MetaFrame-related files from the managed node. You must run this application during the uninstall process after removing all METAFSPI policies from the managed nodes and before uninstalling SPI for Citrix MetaFrame from the management server.

To use the tool, execute it and select managed node(s) from which you want to remove the METAFSPI-related files. Once this action is performed, all SPI for Citrix MetaFrame files and METAFSPI-specific directories are removed.

You should execute this tool also against the OVO/W management server node, if you want to remove Citrix SPI instrumentation from the %OvAgentDir%\bin\instrumentation directory on the management server.

Tool for Security Configuration

SPI for Citrix MetaFrame includes the `METAFSPIConfig.exe` configuration tool. This tool generates the `METAFSPIsec.dat` file, which is then deployed to the managed nodes in order for instrumentation to use information within when interacting with a MetaFrame server. Note that the contents of this file are encrypted and should only be manipulated on the management server using the `METAFSPIconfig.exe` tool.

Perform the following steps to run the `METAFSPIConfig.exe` configuration tool.

Run `METAFSPIConfig.exe` from this path (OvInstallDir is environment variable that holds management server installation location):

```
%OvInstallDir%\Instrumentation\Windows 2000\5.0\SPI
for Citrix MetaFrame\METAFSPIConfig.exe
```

Once `METAFSPIConfig.exe` is executed, the dialog box, which displays a *list view*, opens. Note that initially, the list view is empty.
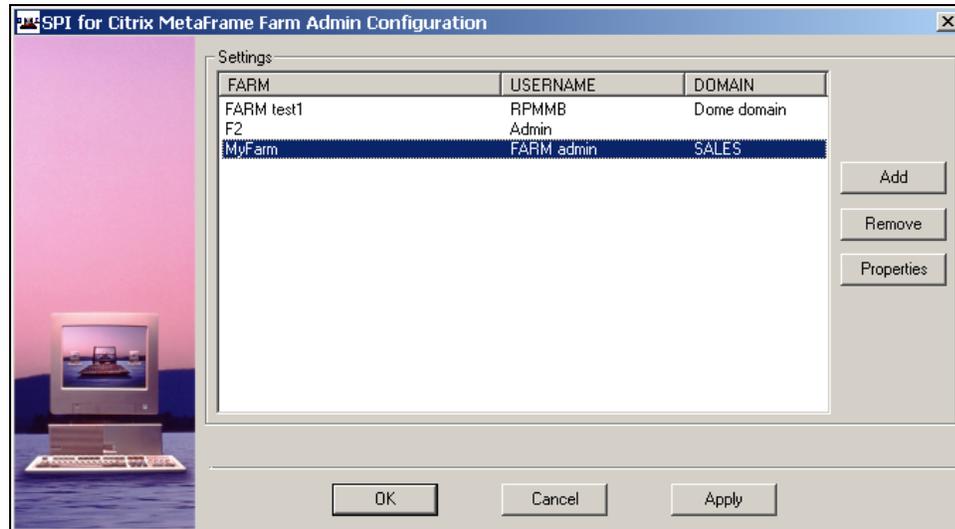
N O T E :

For each farm that you want to manage with SPI for Citrix MetaFrame, you need to enter the farm administrator account for that farm and then exit the dialog by pressing either [OK] or [Apply].

Six buttons are displayed on the dialog box. These buttons perform the actions as listed below.

Button	Action Performed
Add	Opens a new dialog box where you can add a new farm administrator account
Remove	Removes the currently selected farm administrator account from the list view
Properties	Allows you to change the currently selected farm administrator account in the list view
OK	Saves all changes made

Cancel	Exits with no changes made or saved
Apply	Ensures that any changes made were saved successfully

List view

In list view, you can view all farm administrator accounts that are stored in the file. Note that if nothing is displayed, farms administrator accounts have not been configured currently.

To remove or change a farm administrator account within the list view, perform the following steps:

1. Select the farm administrator account to be modified by highlighting it.

2. Depending on the action to be performed, select the appropriate button: [Remove] or [Properties]. Follow the instructions provided by the dialog box that opens when the button is selected.

3. Once all modifications have been made, select [Apply].

To add a farm administrator account to the list view, perform the following steps:

1. Select [Add]. Follow the instructions provided by the dialog box that opens when the button is selected.

2. Once the addition has been made, select [Apply].

N O T E :

The sections that follow provide detailed descriptions of the [Add], [Remove], [Properties], and [Apply] buttons.

Add

Selecting [Add] opens the following dialog box where you can add a new farm administrator account.

Once a farm administrator account has been added, select [OK] to accept the information and to have it display in list view. Note that selecting [Cancel] aborts any actions made on this screen. To ensure that the farm administrator account has been added successfully, select [Apply], which is listed at the bottom of the list view.

Remove

Selecting [Remove] deletes the currently selected farm administrator account from the list view. Once [Remove] is selected, a dialog box is displayed. This box asks you to confirm your action.
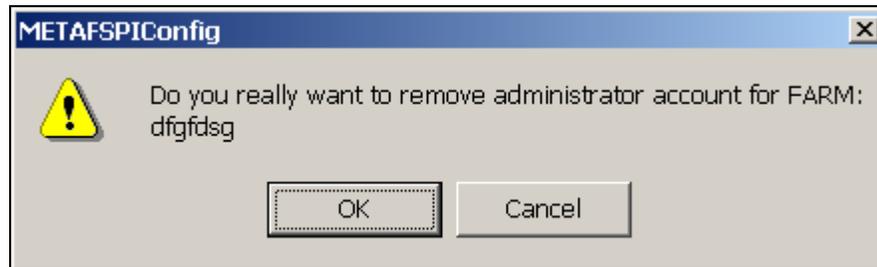
Select [OK] to confirm or [Cancel] to abort the action. Additionally, if farm administrator accounts have not been selected from the list view and [Remove] is pressed, you will receive a warning dialog box indicating that an item must be selected first before the removal process can occur. To ensure that the farm administrator account has been removed successfully, select [Apply], which is listed at the bottom of the list view.

Properties

Selecting [Properties] allows you to change information about the currently selected farm administrator account in the list view via the following dialog box:
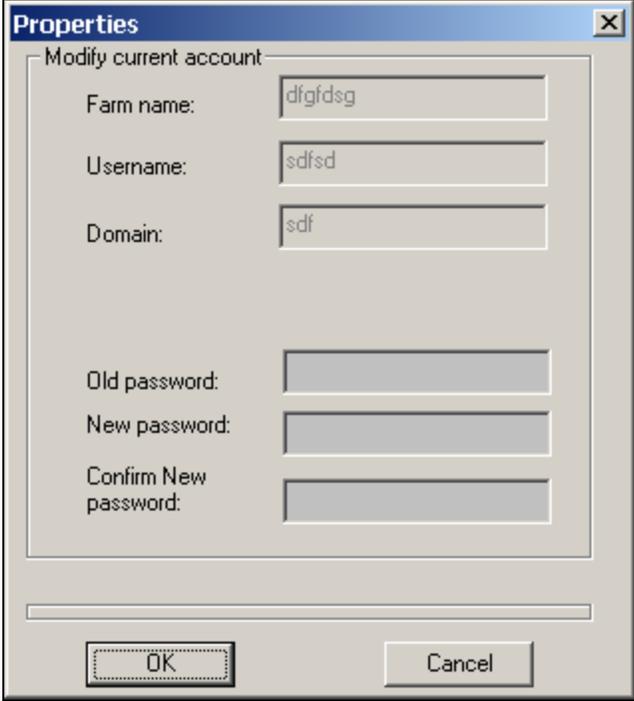
Once information has been added in this box, select [OK] to accept the changes. Note that selecting [Cancel] aborts any actions made on this screen. To ensure that information about the farm administrator account has been changed successfully, select [Apply], which is listed at the bottom of the list view.

Apply

When any additions, removals, or modifications occur, select [Apply], which is located at the bottom of the list view, to ensure that any changes made were saved successfully.

Policies and Policy Groups

SPI for Citrix MetaFrame installs the top-level policy group `SPI for Citrix MetaFrame`. This group contains policy groups for monitoring your Citrix MetaFrame environment.

Figure 4-2: View of the Policy Group "SPI for Citrix MetaFrame" in HP OpenView Operations for Windows, version 7.x
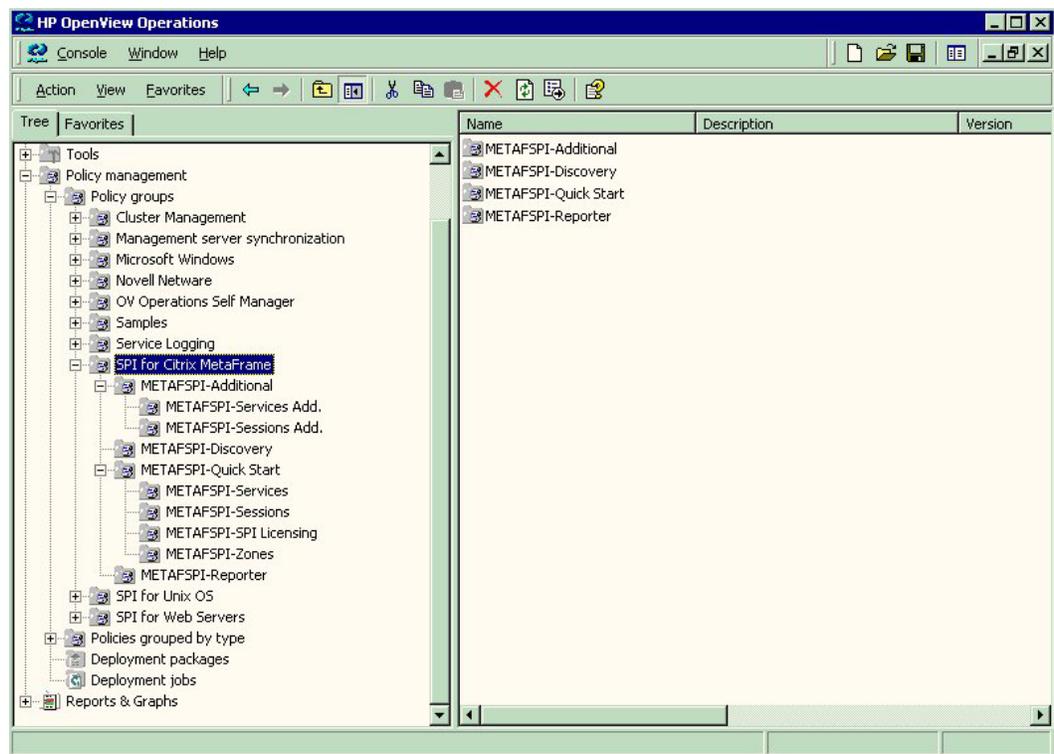
Types of Policies

The following policies have been established in SPI for Citrix MetaFrame:

- Policies for MetaFrame Server Services

- Policies for MetaFrame Sessions

- Policies for MetaFrame NT EventLog Entries

- Policies for Logging Performance Data of
  MetaFrame Services and Sessions

Descriptions of these policy types are included in the sections that follow.

Policies for MetaFrame Server Services

MetaFrame servers consist of several Windows Services. Failure in the system could cause a service not to start or could terminate it. This could lead to inoperability of the MetaFrame server. Because of this, such events need to be reported. SPI for Citrix MetaFrame monitors MetaFrame Windows Services and includes instruction text on the service purpose and the impact of its failure, and provides actions to remedy the situation.

Action Matrix for MetaFrame Services Policies

All messages contain operator-initiated actions and instruction text describing the impact of the failure. The table that follows indicates the actions that specific messages will have and the text displayed with each message.

Service Name	Operator -initiated Action	Automatic Action	Message Text
Client Network	X		Client Network service on node *nodename* is not running.
Encryption	X		Encryption service on node *nodename* is not running.
Independent Management Architecture (IMA)	X		Independent Management Architecture service on node *nodename* is not running.
MetaFrame COM Server	X		MetaFrame COM Server service on node *nodename* is not running.
ADF Installer Service	X		ADF Installer Service service on node *nodename* is not running.
Resource Manager Mail	X		Resource Manager Mail service is not running.
Terminal Services	X		Terminal Services service on node *nodename* is not running.
SSL Server Relay Service	X		SSL Server Relay Service service on node *nodename* is not running.
Citrix WMI Service	X		Citrix WMI Service service on node *nodename* is not running.
Citrix XTE Server service	X		Citrix XTE Server Service service on node *nodename* is not running.

Policies for MetaFrame Sessions

These policies monitor state and `perfmon` data, that is, % Processor Time, Private Bytes, and so on of MetaFrame sessions on a MetaFrame server.

Policies for Logging Performance Data of MetaFrame Services and Sessions

A policy is created for all MetaFrame service processes for logging their "% Processor Time", "Working Set", and "Page File Bytes" metrics. Additionally, for logging server farm membership and session data, two additional policies are implemented.

Note that the last two columns of each policy listed on the tables that follow specify the following:

- The name of the CODA Data Source
- The name of the Object within the Data Source used by this policy
- The names of the metrics within that object

N O T E :

At present, SPI for Citrix MetaFrame logs performance information only to the embedded performance agent (CODA). OpenView Performance Agent (MeasureWare agent) is not supported.

Policy Name	CODA Data Source/Object	CODA Metrics
METAFSPI-ServerConfigLogging	METAFSPIUX_FARM/ METAFSPIUX_FARM	FARMNAME ZONENAME
METAFSPI-ServicesLogging	METAFSPIUX_SVCS/ METAFSPIUX_SVCS	HINSTANCENAME PCTPROCESSORTIME PAGEFILEBYTES WORKINGSET
METAFSPI-SessionsLogging	METAFSPIUX_SESS/ METAFSPIUX_SESS	HINSTANCENAME WORKINGSET TOTALTIMEOUTS TOTALFRAMES TOTALERRORS PRIVATEBYTES PCTPROCESSORTIME PAGEFILEBYTES
METAFSPI-SessionsICALogging	METAFSPIUX_SICA/ METAFSPIUX_SICA	HINSTANCENAME LATENCYSESSIONAVERA LATENCYLASTRECORDED
METAFSPI-SessionsExLogging	METAFSPIUX_SESX/ METAFSPIUX_SESX	SESSIONID SESSIONNAME DOMAINNAME USERNAME LOGONTIME LASTINPUTTIME STATE APPDN ADDRFAMILY ISDESKTOPSESS ISMODEMSESS CPUTIME WORKINGSETSIZE PAGEFILESIZE
	METAFSPIUX_SESM/ METAFSPIUX_SESM	SUMMKEY NUMALLSESS NUMACTSESS NUMDISCSESS NUMAPPINST NUMIPSESS NUMIPXSESS NUMNETBIOSSESS NUMMODEMSESS NUMDESKTOPSESS NUMPROCS

Policy Grouping within SPI for Citrix MetaFrame

When you use SPI for Citrix MetaFrame, policies are grouped by type and they are also grouped by common usage. This structure helps you to quickly find the policies that you need to deploy. Common usage policy categories include the following:

- `METAFSPI-Quick Start`

- `METAFSPI-Additional`

- `METAFSPI-Discovery`

- `METAFSPI-Reporter`

Each of these categories, along with policies that they contain, is described in the sections that follow.

METAFSPI-Quick Start policy group

This group contains policies that can be deployed on every MetaFrame server. You should always deploy this whole group to get started quickly with the SPI. Policies within this group are categorized, as follows, into these folders:

- `METAFSPI-Services`

- `METAFSPI-Sessions`

- `METAFSPI-Zones`

- `METAFSPI-SPI Licensing`

METAFSPI-Services policy group

This folder contains the following policies:

- `METAFSPI-ChkIMASvc`
- `METAFSPI-ChkMFComSvc`
- `METAFSPI-ChkTermServiceSvc`
- `METAFSPI-ChkClientNetworkSvc`
- `METAFSPI-ChkEncryptionSvc`
- `METAFSPI-FwdAllSystemWarnError`
- `METAFSPI-FwdAllApplicationWarnError`
- `METAFSPI-ChkIMAServiceAdvanced`

Each of these policies is described in the sections that follow.

METAFSPI-ChkIMASvc

Policy Name: `METAFSPI-ChkIMASvc`

Service: IMAService

Process: `imasrv.exe`

Monitoring tool: `opcntservice_chk.bat`
(provided with HP OpenView Operations for Windows Agent)

Return value: If returned value is not 0, then a message is generated with an Operator-initiated action to start the service.

METAFSPI-ChkMFComSvc

Policy Name: METAFSPI-ChkMFComSvc

Service: MFCom

Process: mfcom.exe

Monitoring tool: opcntservice_chk.bat
(provided with HP OpenView Operations for Windows Agent)

Return value: If returned value is not 0, then a message is generated with an Operator-initiated action to start the service.

METAFSPI-ChkTermServiceSvc

Policy Name: METAFSPI-ChkTermServiceSvc

Service: TermService

Process: termsrv.exe

Monitoring tool: opcntservice_chk.bat
(provided with HP OpenView Operations for Windows Agent)

Return value: If returned value is not 0, then a message is generated with an Operator-initiated action to start the service.

METAFSPI-ChkClientNetworkSvc

Policy Name: METAFSPI-ChkClientNetworkSvc

Service: CdmService

Process: cmdsvc.exe

Monitoring tool: opcntservice_chk.bat
(provided with HP OpenView Operations for Windows Agent)

Return value: If returned value is not 0, then a message is generated with an Operator-initiated action to start the service.

METAFSPI-ChkEncryptionSvc

Policy Name: METAFSPI-ChkEncryptionSvc

Service: Encryption Service

Process: encsvc.exe

Monitoring tool: opcntservice_chk.bat
(provided with HP OpenView Operations for Windows Agent)

Return value: If returned value is not 0, then a message is generated with an Operator-initiated action to start the service.

METAFSPI-FwdAllSystemWarnError

Policy Name: METAFSPI-FwdAllSystemWarnError

Description: This event log monitoring policy forwards all Warning and Error System event log messages belonging to Citrix MetaFrame components from the managed node to the management server.

METAFSPI-FwdAllApplicationWarnError

Policy Name: METAFSPI-FwdAllApplicationWarnError

Description: This event log monitoring policy forwards all Warning and Error Application event log messages belonging to Citrix MetaFrame components from the managed node to the management server.

METAFSPI-ChkIMAServiceAdvanced

Policy Name: METAFSPI-ChkIMAServiceAdvanced

Service: IMAService

Process: imasrv.exe

Description: Occasionally, IMA service, although still running, stops responding to client requests, such as XML service. This monitoring policy periodically tries to enumerate published applications from the IMA service and if it does not receive a response within 50 seconds, sends a message to the management server indicating that most probably the IMA service has stopped responding.

METAFSPI-Sessions policy group

This folder contains the following policies:

- `METAFSPI-ChkSessionsActive`
- `METAFSPI-ChkSessionsDisconnected`
- `METAFSPI-ChkSessionsAll`
- `METAFSPI-ChkSessionPrivateBytes`
- `METAFSPI-ChkProcessesNum`
- `METAFSPI-ChkICASessionLatencyAverage`
- `METAFSPI-ChkSessionTotalErrors`
- `METAFSPI-ChkSessionPageFileBytes`
- `METAFSPI-ChkSessionTotalTimeouts`
- `METAFSPI-ChkSessionWorkingSet`
- `METAFSPI-ChkSessionTotalFrames`
- `METAFSPI-ChkSessionProcessorTime`
- `METAFSPI-ChkICASessionLatencyLast`

Each of these policies is described in the sections that follow.

METAFSPI-ChkSessionsActive

Description: Check number of active sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: `METAFSPI-switch.bat cntsess METAFSPI-ChkSessionsActive active`

Default threshold: 100 – major (*), 70 – warning (*)

```
* There are two threshold rules defined: one for major
number (100) of active sessions and one for warning
(70).
```

METAFSPI-ChkSessionsDisconnected

Description: Check number of disconnected sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: `METAFSPI-switch.bat cntsess METAFSPI-ChkSessionsDisconnected disconnected`

Default threshold: 50 – major (*), 30 – warning (*)

* There are two threshold rules defined: one for major number (50) of disconnected sessions and one for warning (30).

METAFSPI-ChkSessionsAll

Description: Checks the number of sessions in all possible states on a MetaFrame server.

Monitoring tool: `METAFSPI-switch.bat cntsess METAFSPI-ChkSessionsAll all`

Default threshold: 120 – major (*), 90 – warning (*)

* There are two threshold rules defined: one for major number (120) of sessions and one for warning (90).

METAFSPI-ChkSessionPrivateBytes

Description: Check private bytes size for all sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: Through HP OpenView Operations for Windows performance monitoring

Default threshold for Console session:
    768.000.000 – major (*), 640.000.000 – warning (*)
Default threshold for all other sessions:
    384.000.000 – major (*), 256.000.000 – warning (*)

* There are two threshold rules defined: one for major amount of private bytes consumed and one for warning.

METAFSPI-ChkProcessesNum

Description: Check number of processes across all sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: `METAFSPI-switch.bat cntprocs METAFSPI-ChkProcessesNum`

Default threshold: 500 – major (*), 300 – warning (*)

* There are two threshold rules defined: one for major number (500) of processes and one for warning (300).

METAFSPI-ChkICASessionLatencyAverage

Description: Check average latency of all sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: Through HP OpenView Operations for Windows performance monitoring

Default threshold: 700 – major (*), 400 – warning (*) milliseconds

* There are two threshold rules defined: one for major (700) average latency and one for warning (400).

METAFSPI-ChkSessionTotalErrors

Description: Check number of total errors for all sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: Through HP OpenView Operations for Windows performance monitoring

Default threshold: 10 – major (*), 3 – warning (*)

* There are two threshold rules defined: one for major (10) number of network errors and one for warning (3).

METAFSPI-ChkSessionPageFileBytes

Description: Check page file size usage for all sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: Through HP OpenView Operations for Windows performance monitoring

Default threshold for Console session:
    768.000.000 – major (*), 640.000.000 – warning (*)
Default threshold for all other sessions:
    384.000.000 – major (*), 256.000.000 – warning (*)

* There are two threshold rules defined: one for major amount of page file bytes consumed and one for warning.

METAFSPI-ChkSessionTotalTimeouts

Description: Check number of total timeouts for all sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: Through HP OpenView Operations for Windows performance monitoring.

Default threshold: 10 – major (*), 3 – warning (*)

* There are two threshold rules defined: one for major (10) number of network

timeouts and one for warning (3).

METAFSPI-ChkSessionWorkingSet

Description: Check working set size for all sessions and send `opcmsg` if
threshold is exceeded.

Monitoring tool: Through HP OpenView Operations for Windows performance
monitoring

Default threshold for Console session:
    512.000.000 – major (*), 384.000.000 – warning (*)
Default threshold for all other sessions:
    256.000.000 – major (*), 128.000.000 – warning (*)

* There are two threshold rules defined: one for major amount of working set
size consumed and one for warning.

METAFSPI-ChkSessionTotalFrames

Description: Check number of total frames for all sessions and send opcmsg if
threshold is exceeded.

Monitoring tool: Through HP OpenView Operations for Windows performance
monitoring

Default threshold: 512 – major (*), 256 – warning (*)

* There are two threshold rules defined: one for major (512) total number of
frames and one for warning (256).

METAFSPI-ChkSessionProcessorTime

Description: Check % of processor time used by all sessions and send `opcmsg` if
threshold is exceeded.

Monitoring tool: Through HP OpenView Operations for Windows performance monitoring

Default threshold for Console session:
   95 – major (*), 75 – warning (*)
Default threshold for all other sessions:
   90 – major (*), 70 – warning (*)

* There are two threshold rules defined: one for major % processor time and one for warning.

METAFSPI-ChkICASessionLatencyLast

Description: Check latest recorded latency of all sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: Through HP OpenView Operations for Windows performance monitoring

Default threshold: 1000 – major (*), 700 – warning (*) milliseconds

* There are two threshold rules defined: one for major (1000) latency and one for warning (700).

METAFSPI-Zones policy group

This folder contains the following policy:

- `METAFSPI-ChkDCChanges`

METAFSPI-ChkDCChanges

Description: Detects data collector change in a MetaFrame zone.

Monitoring tool: `METAFSPI-switch.bat chkdc METAFSPI-ChkDCChanges`

Default threshold: If the threshold reaches 0, which indicates a data collector change in a zone, a message is sent to the message browser indicating the old and new zone data collector.

METAFSPI-SPI Licensing

This folder contains the following policy

- `METAFSPI-LicOpcMsg`

METAFSPI-LicOpcMsg

Description: Filters METAFSPI `opcmsg` licensing-related messages and provides additional instruction text about possible errors.

METAFSPI-Additional

This group contains policies for those MetaFrame components that are optional to use. Policies within this group are as categorized into the following folders:

- METAFSPI-Services Add.

- METAFSPI-Sessions Add.

METAFSPI-Services Add. policy group

This folder contains the following policies:

- METAFSPI-ChkSSLServerRelaySvc

- METAFSPI-ChkResourceManagerMailSvc

- METAFSPI-ChkADFInstallerSvc

- METAFSPI-ChkCitrixWMISvc

- METAFSPI-ChkCitrixXTEServerSvc

- METAFSPI-FwdAllSystemInformation

- METAFSPI-FwdAllApplicationInformation

Each of these policies is described in the sections that follow.

METAFSPI-ChkSSLServerRelaySvc

Policy Name: METAFSPI-ChkSSLServerRelaySvc

Service: Citrix SSL Relay

Process: sslserverrelay.exe

Monitoring tool: opcntservice_chk.bat
(provided with HP OpenView Operations for Windows Agent)

Return value: If returned value is not 0, a message is generated with an Operator-initiated action to start the service.

METAFSPI-ChkResourceManagerMailSvc

Policy Name: METAFSPI-ChkResourceManagerMailSvc

Service: ResourceManagerMail

Process: mailservice.exe

Monitoring tool: opcntservice_chk.bat
(provided with HP OpenView Operations for Windows Agent)

Return value: If returned value is not 0, a message is generated with an Operator-initiated action to start the service.

METAFSPI-ChkADFInstallerSvc

Policy Name: METAFSPI-ChkADFInstallerSvc

Service: ADF Installer Service

Process: agentsvc.exe

Monitoring tool: opcntservice_chk.bat
(provided with HP OpenView Operations for Windows Agent)

Return value: If returned value is not 0, a message is generated with an Operator-initiated action to start the service.

METAFSPI-ChkCitrixXTEServerSvc

Policy Name: METAFSPI-ChkCitrixXTEServerSvc

Service: Citrix XTE Server Service

Process: XTE.exe

Monitoring tool: opcntservice_chk.bat
(provided with HP OpenView Operations Agent)

Return value: If returned value is not 0, a message is generated with an operator-initiated action to start the service.

METAFSPI-ChkCitrixWMISvc

Policy Name: METAFSPI-ChkCitrixWMISvc

Service: Citrix WMI Service

Process: ctxwmisvc.exe

Monitoring tool: opcntservice_chk.bat
(provided with HP OpenView Operations Agent)

Return value: If returned value is not 0, a message is generated with an operator-initiated action to start the service.

METAFSPI-FwdAllSystemInformation

Policy Name: METAFSPI-FwdAllSystemInformation

Description: This event log monitoring policy forwards all Informational System event log messages belonging to Citrix MetaFrame components from the managed node to the management server.

METAFSPI-FwdAllApplicationInformation

Policy Name: METAFSPI-FwdAllApplicationInformation

Description: This event log monitoring policy forwards all Informational Application event log messages belonging to Citrix MetaFrame components from the managed node to the management server.

METAFSPI-Sessions Add. policy group

This folder contains the following policies:

- `METAFSPI-LogOffSessions`
- `METAFSPI-ChkSessionsListening`
- `METAFSPI-ChkSessionsDown`
- `METAFSPI-ChkSessionsShadowing`
- `METAFSPI-ChkSessionsStale`
- `METAFSPI-ChkSessionsResetting`
- `METAFSPI-ChkSessionsIdle`
- `METAFSPI-ChkSessionsInit`
- `METAFSPI-ChkSessionsConnected`
- `METAFSPI-DisconnectSessions`
- `METAFSPI-ChkSessionsConnecting`

Each of these policies is described on the following pages.

METAFSPI-LogOffSessions

Description: This is a scheduled task policy that logs off all sessions that have last input time longer than specified default logoff time and are in disconnected state.

Executable: `METAFSPI-switch.bat logoffsessions 180`

Default scheduling: 15 minutes

Default log off threshold time: 3 hours

METAFSPI-ChkSessionsListening

Description: Check number of listening sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: `METAFSPI-switch.bat cntsess METAFSPI-ChkSessionsListening listening`

Default threshold: 15 – major (*), 8 – warning (*)

* There are two threshold rules defined: one for major number (15) of listening sessions and one for warning (8).

METAFSPI-ChkSessionsDown

Description: Check number of down sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: `METAFSPI-switch.bat cntsess METAFSPI-ChkSessionsDown down`

Default threshold: 15 – major (*), 8 – warning (*)

* There are two threshold rules defined: one for major number (15) of down sessions and one for warning (8).

METAFSPI-ChkSessionsShadowing

Description: Check number of shadowing sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: `METAFSPI-switch.bat cntsess METAFSPI-ChkSessionsShadowing shadowing`

Default threshold: 15 – major (*), 8 – warning (*)

* There are two threshold rules defined: one for major number (15) of shadowing sessions and one for warning (8).

METAFSPI-ChkSessionsStale

Description: Check number of stale sessions and send opcmsg if threshold is exceeded.

Monitoring tool: METAFSPI-switch.bat cntsess METAFSPI-ChkSessionsStale stale

Default threshold: 15 – major (*), 8 – warning (*)

* There are two threshold rules defined: one for major number (15) of stale sessions and one for warning (8).

METAFSPI-ChkSessionsResetting

Description: Check number of resetting sessions and send opcmsg if threshold is exceeded.

Monitoring tool: METAFSPI-switch.bat cntsess METAFSPI-ChkSessionsResetting resetting

Default threshold: 15 – major (*), 8 – warning (*)

* There are two threshold rules defined: one for major number (15) of sessions and one for warning (8).

METAFSPI-ChkSessionsIdle

Description: Check number of idle sessions and send opcmsg if threshold is exceeded.

Monitoring tool: METAFSPI-switch.bat cntsess METAFSPI-ChkSessionsIdle idle

Default threshold: 15 – major (*), 8 – warning (*)

* There are two threshold rules defined: one for major number (15) of idle sessions and one for warning (8).

METAFSPI-ChkSessionsInit

Description: Check number of init sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: `METAFSPI-switch.bat cntsess METAFSPI-ChkSessionsInit init`

Default threshold: 15 – major (*), 8 – warning (*)

* There are two threshold rules defined: one for major number (15) of sessions in init state and one for warning (8).

METAFSPI-ChkSessionsConnected

Description: Check number of connected sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: `METAFSPI-switch.bat cntsess METAFSPI-ChkSessionsConnected connected`

Default threshold: 15 – major (*), 8 – warning (*)

* There are two threshold rules defined: one for major number (15) of connected sessions and one for warning (8).

METAFSPI-DisconnectSessions

Description: This is a scheduled task policy that disconnects all sessions that have last input time longer than specified default disconnect threshold time.

Executable: `METAFSPI-switch.bat disconsessions 60`

Default scheduling: 15 minutes

Default disconnect threshold time: 1 hour

METAFSPI-ChkSessionsConnecting

Description: Check number of connecting sessions and send `opcmsg` if threshold is exceeded.

Monitoring tool: `METAFSPI-switch.bat cntsess METAFSPI-ChkSessionsConnecting connecting`

Default threshold: 15 – critical (*), 8 – warning (*)

* There are two threshold rules defined: one for major number (15) of connecting sessions and one for warning (8).

METAFSPI-Discovery

This group contains the following policies that can help you to continuously update your Citrix MetaFrame service view.

- `METAFSPI-ChkServiceModel`
- `METAFSPI-ChkServiceModel2`

Each of these policies is described in the sections that follow.

METAFSPI-ChkServiceModel

This policy periodically checks the MetaFrame model and updates the service map via an Operator-initiated command, if necessary.

METAFSPI-ChkServiceModel2

This policy retrieves an external signal to trigger the MetaFrame service discovery.

METAFSPI-Reporter

This group contains policies that are responsible for logging performance data for the reports that HP Reporter generates. For a list of these policies, refer to the section *Policies for Logging Performance Data of MetaFrame Services and Sessions*, which is listed earlier in this chapter.

Monitoring End-user Experience

SPI for Citrix MetaFrame monitors end-user experience by monitoring two performance counters that MetaFrame is exposing: *Average ICA Session Latency* and *Last ICA Session Latency*. These two counters are provided on a per-session basis on every MetaFrame server; thus, you receive a good overall view what the end-user experience is.

ICA Session Latency is, quoting Citrix, "...a measure of the round trip time of a keyboard or mouse event from client to server and back. It is the amount of time that elapses between the user clicking their mouse in an ICA session, and the result of that mouse click being seen on the client."

By monitoring Average ICA Session Latency, you can detect the degradation of end-user experience over longer periods of time, and perhaps limit the number of users on a server or add another server to the farm before the end-users start to complain about "slow" system response.

By monitoring Last ICA Session Latency of each session on a server, you can identify short-term degradations of end-user experience and correlate them to other events on the server/in a farm for better understanding of the impact that these events have on the overall farm performance in terms of end-user experience.

5

Troubleshooting

Troubleshooting Assistance

This section provides information relating to errors. It describes the possible errors that can occur during SPI for Citrix MetaFrame usage, and how to resolve any problems if encountered.

Citrix SPI Service Map Initially Does Not Propagate Status Information

When the "SPI for Citrix MetaFrame" farm service map is uploaded to the management server, it displays for each published application on which node this application is published. As soon as a Citrix SPI monitoring policy sends a message for this node, the node gets colored within the service map, but this status may sometimes not be propagated to published applications that are published on this node.

Perform the following steps for a workaround to this issue.

1. In the management console, open the **Service Configuration Editor**.

2. Select [Propagation Rules].

3. Locate the "METAFSPI default service dependency PR" shared propagation rule and select it.

4. Next, select [Edit].

5. Select the **Rule** tab.

6. Then, select the **Severity based rule** radio button and click back to the "Simple rule" rule type.

7. Select [Apply] followed by selecting [OK].

8. Next, select [Close].

9. Then, select [Apply] followed by selecting [OK].