



Dollar Universe SPI for HP Operations Manager

User Guide

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Automatic Software GmbH



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1 Release Notes

The following is the change history. Information on bug-fixes and known errors is available in the Dollar Universe Release Notes and by contacting Automic technical support.

| Date | Key Features |
|---------|---|
| 2014-11 | Dollar Universe user guides change their look to integrate the Automic world. |

2 Introduction

Welcome to the Dollar Universe V6 Smart Plug In for HP Operations Manager V9 for UNIX User Guide!

This guide addresses the needs of those who will install, configure and use the Dollar Universe V6 Smart Plug In for HP Operations Manager V9 for UNIX.

This guide details the installation, configuration, administration and use of Dollar Universe V6 Smart Plug In for HP Operations Manager V9.

2.1 Overview

HP Operations Manager Smart Plug-Ins (SPIs) are fully integrated, out-of-the-box solutions that seamlessly work with HP Operations Manager products. They expand existing HP Operations Manager investments adding service specific management capabilities.

Smart Plug-Ins is a natural extension of HP Operations Manager and is fully integrated with the HP Operations Manager environment. This tight integration gives IT organizations a cost-efficient, easily configurable, and time-saving way to rapidly expand HP Operations Manager to cover the entire application stack - from network services through storage, systems, internet middleware, databases to business applications.

The Dollar Universe Certified Smart Plug In for HP Operations Manager for UNIX (UNIV_MGR-SPI) brings fully integrated, out-of-the-box management capabilities for Dollar Universe from HP Operations Manager.

The user should assume that this guide introduces the integration between Dollar Universe and HP Operations Manager.

2.2 Features

The Dollar Universe Smart Plug In for HP Operations Manager for UNIX will be referred to below by its HP compliant code UNIV_MGR_SPI.

UNIV_MGR-SPI provides centralized tools to monitor and manage processes, file systems and jobs on all Dollar Universe Application Servers. DUAS (Dollar Universe Application Server) designates each installation of some/all automation services for background jobs managed by Dollar Universe. Generally, there is one DUAS per server; but there may be more than one in specific contexts like clusters for example.

The UNIV_MGR_SPI provides an integration of Dollar Universe with HP Operations Manager for UNIX. This integration allows centralized management of DUAS across a multi-platform network.

UNIV_MGR_SPI provides the following features for managing DUAS:

- HPOM tools for specific Dollar Universe administration tasks designed to simplify exception management of Dollar Universe Application Servers across a multi-platform network.
 - Subscription lists for clients and servers, i.e., the availability to manage many machines as if they were one.
 - HPOM messages, which are displayed in the message browser, and conditions customized for specific DUAS processes (i.e. a centralized and comprehensive source of information about the health of Dollar Universe Application Servers themselves).
-

- HPOM messages (displayed in the message browser) and conditions customized for jobs controlled by Dollar Universe Application Servers, i.e. a centralized and comprehensive source of information about operations controlled by DUAS.

The UNIV_MGR-SPI provides DCE and HTTPS agent platforms. The UNIV_MGR-SPI is compatible for both DCE and HTTPS agents.

2.3 Architecture

The environment is composed of a HPOM management server with UNIV_MGR_SPI objects dedicated to the Dollar Universe HPOM agent (local or remote). Objects are deployed from the management server to the HPOM agent. The Unviewer Console is used to configure the Dollar Universe Application Servers to use local HPOM agents. The HPOM console is for handling the HPOM Management Server, and the HPOM Message Browser interface to monitor alarms.

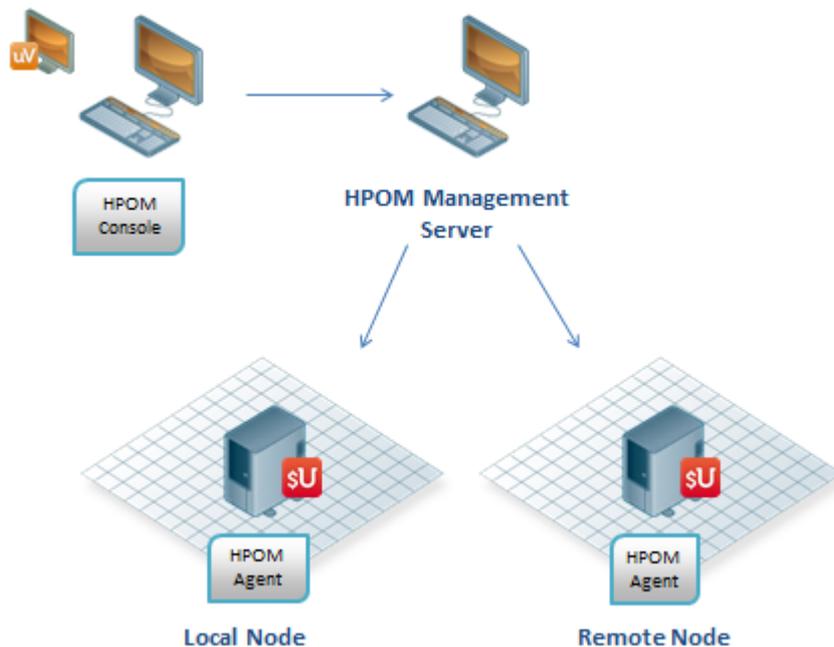


Figure 1: Dollar Universe Manager for HPOM Architecture

3 Installation

This chapter details the Dollar Universe V6 Smart Plug In for HP Operations Manager installation, and upgrade.

3.1 Prerequisites

Before installing the Smart Plug-In be sure to review the requirements in this section.

The installation procedure can only be carried out under a root account.

For more information on supported operating systems and compatibility with other Dollar Universe products, refer to the "compatibility matrix" which can be found on the Customer Service website.

The following table provides both client and server disk space requirements for the UNIV_MGR-SPI. This is in addition to the space requirements for HPOM Monitoring and the Dollar Universe Application Server.

UNIV_MGR-SPI is composed of two main types of objects:

- Database components: HPOM object definitions
- Binary components: Libraries, executables and shell scripts

The HPOM objects and object definitions are platform-independent, whereas libraries, executables and shell scripts are platform-dependent and may vary in size.

The UNIV_MGR-SPI is first installed on a Management Server then distributed to the Managed Nodes that support DUAS. Space requirements are the same for all types of machines. UNIV_MGR-SPI uses platform-dependent shell scripts and libraries that are managed by HPOM.

The UNIV_MGR-SPI is provided as a compressed Software Distributor tape file. The size of the SD tape file is 1MB.

| Platform | Binaries | Database |
|---|------------|----------|
| Platform-independent components (HPOM object definitions) | 0 | < 240 KB |
| Specific components for each UNIX Managed Node | < 240 KB | 0 |
| Windows 2000 and later specific components | < 1 390 KB | |

The UNIV_MGR-SPI requires the compatible HP Operations Manager Agent software on the Managed Nodes.

 A DUAS does not have to be present on the HPOM Management Server.

3.2 Preparation

Before the Smart Plug-In can be installed, the UNIV_MGR-SPI must first be installed on the HP Operations Manager Management Server and the UNIV_MGR-SPI has to be assigned to the Managed Nodes that support the Dollar Universe Application Servers. The SPI can then be deployed on HPOM agents to monitor Dollar Universe nodes.

Verify that the HP Operations Manager Management Server is installed and configured.

Install the UNIV_MGR-SPI on the HPOM Management Server.

Configure HPOM and the UNIV_MGR-SPI to manage Dollar Universe Companies on the Managed Nodes:

- Assign UNIV_MGR-SPI policies to the Managed Nodes (UNIV_MGR Nodes node group).
- Allow specific users to execute actions (Tools) for the UNIV_Scheduler message group and UNIV_MGR Nodes Node group.
- Distribute UNIV_MGR-SPI policies and instrumentation to the Managed Nodes.

3.2.1 UNIV_MGR-SPI Software

The UNIV_MGR-SPI software depot contains the UNIV_MGR_SPI product. Software components can be viewed using the SD-UX swlist GUI on an HP-UX Management Server or by using the swlist (1M) command:

- To use the swlist GUI, enter:

```
/usr/sbin/swlist -i
```

- To use the swlist command line, enter:

```
/usr/sbin/swlist
```

3.3 HP-UX Installation

On HP-UX, two installation modes are available:

- Interactive installation with the swinstall command
- GUI installation with the swinstall GUI

The methods differs but the result is the same.

3.3.1 Interactive Installation on the Management Server

The UNIV_MGR-SPI is provided as a compressed SD tape file.

- Log on to the HPOM Management Server as root and open a terminal window.
- Copy the SD file to a specified directory on the HPOM management server. For example:

```
/tmp/duas_manager_hpom9_6.5.01_hpux.depot.Z for HPOM Management Server 9.10  
(HPOMU 9.10)
```

- Uncompress the SD tape with the command uncompress (this command automatically remove the .Z suffix from the file name):

```
uncompress /tmp/duas_manager_hpom9_6.5.01_hpux.depot.Z
```

- Install the UNIV_MGR-SPI software from the SD tape file using the swinstall (1M) command. The ask parameter will run the Software Distributor swask (1M) command. This installation mode is interactive, but does not require the swinstall GUI. Key in the following:

```
/usr/sbin/swinstall -s /tmp/duas_manager_hpom9_6.5.01_hpux.depot  
-x ask=true \*
```

The installation procedure will prompt the confirmation.

Example of an interactive installation on the Management Server 9.10:

```

# swinstall -s /tmp/duas_manager_hpom9_6.5.01_hpux.depot-x
ask=true \*

----- 06/21/13 13:40:46 WETDST BEGIN swinstall SESSION
(non-interactive) (jobid=frsdhpi4-0198)
* Session started for user "root@frsdhpi4".
* Beginning Selection
* "frsdhpi4:/": There are other sessions in progress on
this
host that may affect the results of the Disk Space
Analysis
calculation.
* Target connection succeeded for "frsdhpi4:/".
* Software UNIV_MGR_SPI has a "request" script. It will be
executed and corresponding "response" file will be
generated.
-----
Dollar Universe Certified Smart Plug-In for HP Operations
Manager
Dollar Universe SPI V6 for HP Operations Manager
-----
This Smart Plug-In is not attached to a specific company name:
As soon as installation is performed, please, configure your
Dollar Universe
node settings as described inside documentation.
-----
Proceed installation ? (Y/N) :
Y
Proceeding installation ...
* Ask task succeeded.
* Source:
/tmp/duas_manager_hpom9_6.5.01_hpux.depot
* Targets: frsdhpi4:/
* Software selections:
UNIV_MGR_SPI.opccfgupld_files,r=6.5.01,a=HP-UX_
B.11.x_32/64/SunOS_5.x
* Selection succeeded.
* Beginning Analysis and Execution
* Session selections have been saved in the file
"/.sw/sessions/swinstall.last".
* The analysis phase succeeded for "frsdhpi4:/".
* The execution phase succeeded for "frsdhpi4:/".
* Analysis and Execution succeeded.
NOTE: More information may be found in the agent log file
using the
command "swjob -a log frsdhpi4-0198 @ frsdhpi4:/".
----- 06/21/13 13:42:13 WETDST END swinstall SESSION
(non-interactive) (jobid=frsdhpi4-0198)

```

If an error occurs during the software installation, check the log file `/var/adm/sw/swagent.log`, correct the problem and run `swinstall (1M)` again.

Example of an error in the interactive installation procedure from the Management Server 9.10:

```
# swinstall -s /tmp/duas_manager_hpom9_6.5.01_hpux.depot -x
ask=true \*

----- 06/21/13 13:46:52 WETDST BEGIN swinstall SESSION
(non-interactive) (jobid=frsdhpi4-0199)
* Session started for user "root@frsdhpi4".
* Beginning Selection
* "frsdhpi4/": There are other sessions in progress on
this
host that may affect the results of the Disk Space
Analysis
calculation.
* Target connection succeeded for "frsdhpi4/".
ERROR: There is currently no depot software on host "frsdhpi4"
at
location /tmp/duas_manager_hpom9_6.5.01_hpux.depot".
Make
sure that an absolute pathname is specified for location
(beginning with "/").
* Source connection failed for
"frsdhpi4/tmp/duas_manager_hpom9_6.5.01_hpux.depot".
WARNING: More information may be found in the daemon log file on
this
target (default location is
frsdhpi4:/var/adm/sw/swagentd.log).
* Selection had errors.
----- 06/21/13 13:46:52 WETDST END swinstall SESSION
(non-interactive) (jobid=frsdhpi4-0199)
```

3.3.2 Installation with the SD GUI

- Log on to the HPOM Management Server as root and open a terminal window. Make sure that the DISPLAY environment variable is set to your terminal window.
- Start the swinstall GUI:

```
/usr/sbin/swinstall
```

This displays the “SD Install – Software Selection” window, and opens the “Specify Source” form.

- In the “Specify Source” window of SD-UX:

In the Source Host Name field, enter the name of the host on which the software depot is located.

In the Source Depot Path field, enter the path to the software depot, for example:

```
/tmp/duas_manager_hpom9_6.5.01_hpux.depot
```

- Click OK when all options are set correctly.

The UNIV_MGR_SPI software should appear in the “Software Selection” window.

- Select the software in the “Software Selection” window and mark it for installation by selecting Actions>Mark for Install from the menu.
- Select Actions>Install (Analysis) from the SD-UX Install menu bar.

This starts the analysis part of the installation of the selected software.

Verify that the analysis phase of the installation completes without errors by clicking the Log file button in the “Install (Analysis)” window or view the log file: `/var/adm/sw/swagent.log`.

If the analysis phase fails, follow the recommendations given in the log file and rerun the analysis.

- Once the installation analysis has completed without errors, click OK in the “Install (Analysis)” window to install the selected software.
- Verify that the installation phase completes without errors by clicking the Log file button or viewing the log file: `/var/adm/sw/swagent.log`.
- Click the Done button in the “Install” window to complete the installation of the software.

If the installation execution fails, follow the recommendations given in the log and run the installation again.

3.4 Linux Installation

This section describes how to install the SPI on HPOM Linux Management Server.

For more information on any of the configuration steps described in this chapter, consult the following guides:

- HP Operations Manager Concepts Guide for UNIX
- HP Operations Manager Administrator’s Reference for UNIX
- HP Operations Manager Installation Guide for the Management Server for UNIX

The UNIV_MGR-SPI installation kit is provided as a compressed tar file. To launch the installation procedure, complete the following steps:

- Copy the installation kit to a temporary work directory on the HPOM Management Server:

```
/tmp/duas_manager_hpom9_6.5.01_linux.tar.Z
```

- Uncompress the installation kit:

```
uncompress /tmp/duas_manager_hpom9_6.5.01_linux.tar.Z
```

The command will automatically remove the `.Z` suffix from the file name. Run the `tar -xvf` command to extract the content:

```
tar -xvf /tmp/duas_manager_hpom9_6.5.01_linux.tar
```

- The extraction procedure will create a new folder named `UNIV_MGR_SPI_Linux`. Two files are placed in the new directory `UNIV_MGR_SPI_Linux`: `install.ksh` and `UNIV_MGR_SPI.tar`. The file `install.ksh` is the installation procedure that will uncompress the tar file containing the HPOM objects.
- Launch the installation in the directory `UNIV_MGR_SPI_Linux` with the following command:

```
./install.ksh
```

The following installation screen will appear:

```
Environment used by this procedure...
Current directory : /tmp/UNIV_MGR_SPI_Linux
Temporary directory used by installation : /tmp/tmp_spi_loc
TAR file name : UNIV_MGR_SPI.tar
Proceed installation ? (Y/N) : Y
```

- Once you have verified the listed information is correct. Enter “Y” to continue with the installation.

There are three phases in the installation:

- Phase 1: Data files settings
- Phase 2: Smart Plugin installation
- Phase 3: Clean-up installation

Once the installation has completed, the location of the installation log file is provided:

```
/opt/OV/univ_mgr/
```

3.5 Sun Solaris installation

This section describes how to install the SPI on HPOM Sun Solaris Management Server.

For more information on any of the configuration steps described in this chapter, consult the following guides:

- HP Operations Manager Concepts Guide for UNIX
- HP Operations Manager Administrator's Reference for UNIX
- HP Operations Manager Installation Guide for the Management Server for UNIX

The UNIV_MGR-SPI installation kit is provided as a package file.

- Copy the SD file to a directory on the HPOM management server. For example:

```
/tmp/duas_manager_hpom9_6.5.01_sunos.pkg.Z
```

- Uncompress the package file using the command `uncompress` (this command automatically remove `.Z` the suffix from the file name):

```
uncompress /tmp/duas_manager_hpom9_6.5.01_sunos.pkg.Z
```

- Install the UNIV_MGR-SPI software from the package file using the `pkgadd` command. This installation mode is interactive. Key in the following:

```
pkgadd -d /tmp/duas_manager_hpom9_6.5.01_sunos.pkg
```

The installation procedure will prompt the following question:

```
The following packages are available:
```

```
 1 UNIVSPI      Dollar Universe Smart Plug-in v6 for HP  
Operations Manager 9.x  
                  (sparc) 16
```

```
Select package(s) you wish to process (or 'all' to process all  
packages). (default: all) [?,??,q]:
```

Enter "All" and press Enter.

Next, the installation procedure will prompt the Smart Plug-In installation confirmation.

3.6 Verifying the Installation on the Management Server

If the installation completed successfully, new HPOM objects will have been uploaded to the HPOM database on the HPOM Management Server.

To review the new objects, start the HPOM Administrator GUI and open the corresponding windows (Node Bank, Policy Bank, Tool Bank, Message Group). If you had an HPOM administrator GUI session running while installing the UNIV_MGR-SPI, you might have to refresh your interface webpage from the main menu of the HPOM GUI.

The following configuration objects should now be visible for the HPOM administrator:

- Message group: UNIV_Scheduler
- Node group: UNIV_MGR nodes
- Tool group: UNIV_MGR Tools containing four tool groups:

| | |
|------------------------------------|---|
| Manager for SAP Tools | Start Manager for SAP Solutions Stop Manager for SAP Solutions |
| Manager GSI Tools | Start Generic Server for Integrations Stop Generic Server for Integrations |
| Manager for OAPP Application Tools | Start specified OAPP Manager Stop specified OAPP Manager |

- The Policy group UNIV_MGR Policies containing four policy groups and their respective policies

| | |
|-------------------------------|---|
| UNIV_MGR FileSystems (groupe) | UNIV_MGR_DirCheck UNIV_MGR_FSCheck UNIV_MGR_FSCollector |
| UNIV_MGR_Log files (groupe) | UNIV_MGR_ErrorLog_AIX UNIV_MGR_ErrorLog_WIN UNIV_MGR_ErrorLog UNIV_MGR_LogSize |
| UNIV_MGR Processes (groupe) | UNIV_MGR_PrcCheck UNIV_MGR_PrcCollector |

3.7 Additional Steps on the Management Server (Linux and HP-UX)

Verify that the UNIV_MGR-SPI tools are assigned to the HPOM user(s) (operator and / or administrator) who must use the UNIV_MGR-SPI instrumentation.

 You may add or remove tools to user profiles if required.

3.7.1 Adding Nodes to the UNIV_MGR Nodes Node Group

To ensure that the UNIV_MGR-SPI messages appear correctly in the HPOM message browser, verify that the UNIV_MGR-SPI target nodes are members of their corresponding HPOM node group.

It is possible to use the new HPOM node group UNIV_MGR Nodes by adding a node to the group. A node is added by selecting the node from the “Node Bank” window and assigning it to the “UNIV_MGR Nodes Node group” window.

To use UNIV_MGR-SPI instrumentation an HPOM user (operator or administrator) needs responsibilities assigned for both node groups and the new UNIV_Scheduler message group.

3.7.2 Assigning Responsibilities for HPOM Management Server 9.10

In order to assign responsibilities, the user must complete the following actions:

- Go to Browse > All Users and click on the action drop-down button on the line of your current user, then select Edit Responsibilities.

The message groups and node groups related and activated by a cross checkbox are displayed.

- Check all the boxes for the message group UNIV_Scheduler and click on Save button.

All messages generated by UNIV_MGR-SPI policies go into the UNIV_MGR-SPI message group: UNIV_Scheduler.

All HPOM messages containing information being generated by UNIV_MGR-SPI policies will use the message group UNIV_Scheduler.

3.8 UNIV_MGR-SPI Directory Structure

3.8.1 Directory Tree on the Management Server

The directory /tmp/tmp_spi_loc is created during the installation of UNIV_MGR_SPI on the HPUX OM Management Server. It contains multiple subdirectories holding the UNIV_MGR-SPI configuration files for HPOM and the UNIV_MGR-SPI scripts. This directory and its contents are removed at the end of the installation procedure.

When loading the configuration data and the scripts into HPOM with the SD installation package, the UNIV_MGR-SPI scripts are copied to the following standard HPOM /var/opt/OV/share/databases/OpC/mgd_node/customer subdirectories:

```
hp/{s700|s800}/{hp-ux10|hp-ux11}/{actions|monitor|cmds}
hp/pa-risc/{hp-ux11|hpux1100}/{actions|monitor|cmds}
hp/ia64/hpux1132/{actions|monitor|cmds}
hp/ipf32/hpux1122/{actions|monitor|cmds}
sun/sparc/{solaris|solaris7}/{actions|monitor|cmds}
dec/alpha/{unix|unix51A}/{actions|monitor|cmds}
ibm/rs6000/{aix|aix5}/{actions|monitor|cmds}
Linux/intel/{linux22|linux24}/{actions|monitor|cmds}
Linux/x86/linux24/{actions|monitor|cmds}
ms/intel/nt/}/{actions|monitor|cmds}
ms/x86/winnt/}/{actions|monitor|cmds}
sni/mips/{irix|sinix}/{actions|monitor|cmds}
```

3.8.2 Directory Tree on the Managed Node

When UNIV_MGR-SPI is distributed and run on the Managed Node(s) a local univ_mgr_hpom.log file is created in the standard HPOM log directory on the Managed Node:

| Managed Node OS | UNIV_MGR-SPI Log file pathname |
|---------------------------|--|
| Windows | %OvDataDir%\log\univ_mgr_hpom.log The default location is: C:\Program Files\Openview\data\log\univ_mgr_hpom.log |
| AIX | /var/lpp/OV/log/univ_mgr_hpom.log |
| HP-UX, Sun Solaris, Linux | /var/opt/OV/log/univ_mgr_hpom.log |

When instrumentation is deployed, the following files can be found under the instrumentation folder of the Managed node:

- Unix Managed nodes:
 - UNIV_MGR_ChkLogSize
 - UNIV_MGR_CtlComp
 - UNIV_MGR_CtlLogSize
 - UNIV_MGR_CtlPrc
 - UNIV_MGR_Env
 - UNIV_MGR_FSCollector
 - UNIV_MGR_ManageJob
 - UNIV_MGR_PrcCollector
- Windows Managed nodes:
 - UNIV_MGR_ChkLogSize.cmd
 - UNIV_MGR_CtlComp.cmd
 - UNIV_MGR_CtlLogSize.cmd
 - UNIV_MGR_CtlPrc.cmd
 - UNIV_MGR_FSCollector.cmd
 - UNIV_MGR_GetdirOcc.exe
 - UNIV_MGR_ManageJob.cmd
 - UNIV_MGR_PrcCollector.cmd
 - uxmanagewindowsinstance.exe

3.9 Uninstalling UNIV_MGR-SPI

The un-installation of the UNIV_MGR-SPI can be divided into several categories:

- [Disabling nodes monitoring](#)
- [Uninstalling from the Managed Nodes \(policies\)](#)
- [Deleting Components from the Management Server](#)
- [Uninstalling UNIV_MGR-SPI from the Management Server system](#)

3.9.1 Disabling nodes monitoring

Before uninstalling the UNIV_MGR-SPI from the HPOM Managed Node, the monitoring of a specific company can be disabled.

Change the [UNI_HPOM_ENABLE](#) variable in the Dollar Universe V6 Node Settings to value “No” to disable the DUAS node health monitoring.

This feature allows you to monitor only specified nodes installed on a hostname.

3.9.2 Uninstalling from the Managed Nodes

To uninstall managed nodes from the UNIV_MGR-SPI, complete the following actions:

- Select the UNIV_MGR-SPI Managed Nodes in the “HPOM Node Bank” window to be uninstalled from the UNIV_MGR-SPI.
- Select from the Action drop-down button menu Direct Policy (Group) Assignments.
- Check the checkbox related to the policy group and click De-assign from this node.
- Select Deploy Configuration from the Choose an action drop-down menu. In the “Deploy Configuration” window, check the following boxes to select components:

Policies

Force Update

Then click OK to start the distribution. If the distribution is successful, you will receive a confirmation message in the HPOM message browser.

The UNIV_MGR-SPI policies have now been uninstalled from the selected Managed Node(s). The next step is deleting components from the Management Server, which is described in the next chapter. The actions, commands and monitors must be removed manually from each Managed Node directory: <OvDataDir>/bin/instrumentation.

3.9.3 Deleting Components from the Management Server

UNIV_MGR-SPI components must be deleted manually. Delete the UNIV_Scheduler message group, the “UNIV_MGR Tools” Tool Group with contents, the UNIV_MGR Nodes node group, and the policies and Policy Groups contained in the Policy Group UNIV_MGR Policies. To speed up the process, use the SHIFT-click method to select multiple policies for deletion.

- To delete the UNIV_MGR-SPI policies and Policy Groups, open the “Message Source Policies” window.
 - Open the UNIV_MGR Policy Policy Group, and select Delete from the Choose an action drop-down menu. Click on the arrow next to the drop-down menu to delete the policies. Click OK.
 - Once you have deleted all policies from the UNIV_MGR Policies Policy Group, go into the Policy Bank and select the checkbox next to the UNIV_MGR Policies Policy Group and select Delete... from the Choose an action drop-down menu. Click on the arrow next to the drop-down menu to delete the policy group. Click OK.
-

- To delete the UNIV_MGR-SPI message group, open the HPOM Message Group Bank, select the checkbox next to the UNIV_Scheduler message group and select Delete... from the Choose an action drop-down menu. Click on the arrow next to the drop-down menu to delete the message group. Click OK.
- To delete the UNIV_MGR-SPI tool groups and tools, open the HPOM Tool Bank, select the checkbox next to the "UNIV_MGR Tools" Tool Group, and select Delete from the Choose an action drop-down menu. Click on the arrow next to the drop-down menu to delete the tool group. Click OK.
- To delete the UNIV_MGR-SPI node groups, open the HPOM Node Group Bank, select the checkbox next to the UNIV_MGR Nodes group, and select Delete from the Choose an action drop-down menu. Click on the arrow next to the drop-down menu to delete the node group. Click OK. When you have successfully deleted all UNIV_MGR-SPI components, continue with "[Uninstalling UNIV_MGR-SPI from the Management Server system](#)".
- To delete the instrumentation from the HPOM Management Server, open a terminal window as root and use the following command:

```
find /var/opt/OV/share/databases -name "UNIV_MGR*" -exec rm -rf
{} \;
```

3.9.4 Uninstalling UNIV_MGR-SPI from the Management Server system

Depending on the operating system, the procedure is different:

- [On the HP-UX Management Server](#)
- [On the Sun Solaris Management Server](#)
- [On the Linux Management Server](#)

3.9.4.1 On the HP-UX Management Server

To uninstall UNIV_MGR-SPI from the Management Server, complete the following actions:

- Open a terminal window as root.
- Uninstall UNIV_MGR-SPI interactively, using the swremove (1M) GUI. To start swremove (1M), enter:

```
/usr/sbin/swremove
```

Select the UNIV_MGR_SPI software, mark for removal, and proceed with the un-installation. Or you can run swremove (1M) from the command line, enter:

```
/usr/sbin/swremove UNIV_MGR_SPI
```

- Check the following log files for any problems that may have occurred during the un-installation:

```
/var/adm/sw/swagent.log
/var/adm/sw/swremove.log
```

Example of an uninstallation procedure from the HP-UX Management Server:

```
# swremove UNIV_MGR_SPI
WARNING: The log file, "/var/adm/sw/swremove.log" is in use by
process
    "7675". The log information will be intermixed unless a
different log file is given. To select a new log file,
specify
the "-x log file=<name>" option on the command line.
```

```

----- 06/21/13 13:34:31 WETDST BEGIN swremove SESSION
        (non-interactive) (jobid=frsdhpi4-0196)

* Session started for user "root@frsdhpi4".

* Beginning Selection
* Target connection succeeded for "frsdhpi4:/".
* Software selections:
        UNIV_MGR_SPI.opccfgupld_files,l=/,r=6.5.01,a=HP-UX_
B.11.x_32/64/SunOS_5.x
* Selection succeeded.

* Beginning Analysis
* Session selections have been saved in the file
  "/.sw/sessions/swremove.last".
* The analysis phase succeeded for "frsdhpi4:/".
* Analysis succeeded.

* Beginning Execution
* The execution phase succeeded for "frsdhpi4:/".
* Execution succeeded.

NOTE:   More information may be found in the agent log file
using the
        command "swjob -a log frsdhpi4-0196 @ frsdhpi4:/".

----- 06/21/13 13:35:03 WETDST END swremove SESSION
        (non-interactive) (jobid=frsdhpi4-0196)

#

```

3.9.4.2 On the Sun Solaris Management Server

- Open a terminal window as root.
- Un-install UNIV_MGR-SPI interactively, using the pkgrm command: pkgrm UNIVSPI

If an error occurs, it will be printed on the screen output.

Example of an uninstallation procedure from the SunOS Management Server:

```

# pkgrm UNIVSPI

The following package is currently installed:
  UNIVSPI          Dollar Universe Smart Plug-in v6 for HP
Operations Manager 9.x
                  (sparc) 16

Do you want to remove this package? Y
## Removing installed package instance <UNIVSPI>

This package contains scripts which will be executed with super-
user
permission during the process of removing this package.

Do you want to continue with the removal of this package
[y,n,?,q] y
## Verifying package dependencies.
## Processing package information.

```

```
## Removing pathnames in class <none>
## Executing postremove script.
## Updating system information.

Removal of <UNIVSPI> was successful.
```

3.9.4.3 On the Linux Management Server

As the installation procedure for Linux Management Server is not based on an Operating System tool, you have to remove manually the `/opt/OV/univ_mgr` folder:

- Open a terminal window as root.
- Go to the HPOM folder `/opt/OV` and remove the folder by the command:

```
rm -r ./univ_mgr
```

4 Configuring the Smart Plug In for HP Operations Manager

This chapter describes the required configuration for Dollar Universe V6 Smart Plug In for HP Operations Manager in HP Operations Manager and Dollar Universe.

4.1 Configuring the UNIV_MGR-SPI

The UNIV_MGR-SPI can be customized in the same way as all HP Operations Manager Smart Plug-Ins. The user can use standard HPOM processes to adapt default policy or tool definitions supplied with the UNIV_MGR-SPI. Refer to the HP Operations Manager for UNIX Concepts Guide for general information about customizing HPOM policies and tools.

The UNIV_MGR-SPI software provides:

- Policies to monitor a DUAS Company:
 - Monitor the processes of a DUAS Company (Process message object)
 - Monitor the file systems of a DUAS Company (FileSystem message object)
 - Monitor the jobs controlled by a DUAS Company (JobStatus message object)
- A policy to monitor the size of the UNIV_MGR-SPI log file (Log file message object)
- A Logfile policy to capture error messages from the UNIV_MGR-SPI log file
- Tools to manage a DUAS Company
- Tools to manage a Dollar Universe Manager for SAP Solutions
- Tools to manage a Dollar Universe Manager for Oracle Applications
- Tools to manage a Dollar Universe GSI
- Tool to configure another Dollar Universe Company in the UNIV_MGR-SPI

All UNIV_MGR-SPI components can be customized.

4.2 Configuring the Monitoring of Managed Nodes

After installing the SPI on the HP/OM Management Server, a few steps are required to configure and activate the monitoring of Dollar Universe nodes.

From the HP/OM Management Server, the operator deploys Policies to the Managed Nodes and turns on monitoring of Dollar Universe jobs.

On each Dollar Universe node, the operator configures and enables monitoring of Dollar Universe jobs.

4.2.1 Policies

To assign policies to managed nodes, complete the following actions.

- Go into the Policy bank and select the UNIV_MGR-SPI policy group.
- Select the checkboxes next to the Alerts, File Systems, Log Files and Processes policies.
- Select “Assign to Node / Node Group” from the Choose an action drop-down menu.
- Click on the arrow next to the drop-down menu. The configuration window will open.
- Select All Node Groups or use the filter options to search
- Expand the UNIV_MGR Nodes folder
- Select the managed node and click OK.

If the distribution is successful, a confirmation message is displayed above the list of policies.

4.2.1.1 Distributing Policies to Managed Nodes

To distribute policies to managed nodes select Deployment > Deploy Configuration from the main menu and the “Deploy Configuration” window will open.

- Select the Policies checkbox
- Click on Please select... and make a selection from the node window which appears
- Double click on your node
- Select the Force update checkbox
- Finally, click on Distribute button

If the distribution is successful, a confirmation message is displayed above the list of nodes.

The UNIV_MGR-SPI policies are now installed on the selected Managed Node(s) and should start to generate HPOM messages when any of the policy conditions are matched.

4.2.1.2 Policies

The policy group UNIV_MGR Policies contains four policy groups:

- UNIV_MGR Alerts
- UNIV_MGR FileSystems
- UNIV_MGR LogFiles
- UNIV_MGR Processes

Alerts Policies

Alert policies monitor job runs, sessions and Uprocs to ensure they complete successfully and within a set period of time.

The alert policies are:

- UNIV_MGR_JobDurationTooLong: Job runs that take too long to complete.
- UNIV_MGR_JobDurationTooLongWaiting: Job runs that stay in event wait for too long.
- UNIV_MGR_JobDurationTooShort: Job runs that complete too quickly
- UNIV_MGR_SessionStatus: Monitors the status of sessions
- UNIV_MGR_UprocStatus: Monitors the status of Uprocs

File Systems Policies

File System policies monitor the Dollar Universe directory and file system size and their associated messages.

The file systems policies are:

- UNIV_MGR_DirCheck: Matches Dollar Universe directory messages.
 - UNIV_MGR_FSCheck: Matches Dollar Universe file system occupancy messages.
-

- UNIV_MGR_FSCollector: Monitors the size of the file systems and directories of Dollar Universe companies.

Log Files Policies

Log File Policies monitor the size of UNIV_MGR-SPI log files of AIX and Windows servers and their associated error messages.

The log file policies are:

- UNIV_MGR_ErrorLog_AIX: Collects error messages from the UNIV_MGR-SPI log file on AIX servers.
- UNIV_MGR_ErrorLog: Collects error messages from the UNIV_MGR-SPI log file.
- UNIV_MGR_ErrorLog_WIN: Collects error messages from the UNIV_MGR-SPI log file on Windows servers.
- UNIV_MGR_LogSize: Monitors the size of the UNIV_MGR-SPI log file.

Processes Policies

Processes Policies monitor Dollar Universe instance engines and servers.

The processes policies are:

- UNIV_MGR_Prcheck: Matches the status of Dollar Universe instance engines.
- UNIV_MGR_PrcCollector: Monitors Dollar Universe instance services.

4.2.1.3 Policy Components

Policies are composed of three or four parts depending on the policy type:

- Attributes: Details all attributes that correspond to the message that is sent to the message browser.
- Message Defaults: The settings for the messages that will appear in the message browser.
- Data Source (for log files and processes policies): Details how to data will be sourced and which monitoring program will be used.
- Condition(s): The settings for the conditions that have to be matched for the message to be sent or suppressed.

Attribute Components

| Name | Description |
|------------------|--|
| Name | The name of the attribute |
| Type | The type of attribute (e.g. Open_Message_Interface) |
| Description | Describes the policy |
| Version | 1.0 |
| Latest version | 1.0 |
| Interval | For process policies. The interval each instance is processed |
| Log file path | Path of the log file (e.g.: /var/opt/OV/log/univ_mgr_hpom.log) |
| Read from | Last Position |
| Close after read | Yes/No: If the file should be closed after it is read. |
| Codeset | ASCII |
| Threshold type | The threshold level to be reached before a message is sent to the message browser (e.g. Maximum) |

| Name | Description |
|---------------|--|
| Instance mode | For process policies. The mode each instance is processed (e.g. Process each instance separately). |
| Attributes | e.g. checksum_header=733c0356b54b7c4a8d07f1d8de3ca099948988a2 |

Message Defaults Components

| Name | Description |
|---------------|---|
| Severity | The severity level of the condition (e.g. critical, major, minor or warning). |
| Message Group | Message group of the policy (e.g. UNIV_Scheduler). |
| Application | The instance the policy applies to. |
| Object | The object being monitored (e.g. process) |
| Help Text | Describes the policy for the operator. |

Data Source Components

| Name | Description |
|-----------------|-------------------------|
| Name | Source |
| Type | Program |
| Description | Data source description |
| Monitor Program | UNIV_MGR_CHKLogSize |

Conditions Components

| Name | Description |
|---------------------------|--|
| Match | If values or text are matched, a message is sent. |
| Suppress | If values or text are suppressed, a message is never sent. |
| Severity | The level of message that is sent to the operator (e.g. critical, high, medium, low and warning) |
| Match text | Text that must be matched for the message to be sent. |
| Message group | Message group the condition belongs to. |
| Application | The name of the tool group. UNIV_MGR Tools by default. |
| Object | The object the condition applies to that is taken from the policy type (ex. Log file). |
| Message text | The text for the operator to describe what the severity message is for. |
| Message key | <Computer Name>:<Node Name>;<Policy Name>:<Area>:DOWN |
| Message key relation | <Computer Name>:<Node Name>;<Policy Name>:<Area>:<*> |
| Operator initiated action | The action(s) the operator may take once the messages are displayed in the message browser. |
| Threshold | The threshold level that must be matched for a message to be sent (ex: maximum). |
| Automatic Action | Sends message after automatic action is completed. |

4.2.2 Tools

To install tools on managed nodes, complete the following actions:

Select Deployment > Deploy Configuration from the main menu.

The “Deploy Configuration” will open.

- Select the Instrumentation checkbox
- Click Please select... and make a selection from the node window which appears
- Double click on your node
- Select the Force update checkbox
- Finally, click Distribute button

If the distribution is successful, a confirmation message is displayed above the list of nodes.

The UNIV_MGR-SPI tools are now installed on the selected Managed Node(s). They can be used directly on the managed node by the interface.

4.2.2.1 UNIV_MGR-SPI Tools

“UNIV_MGR-SPI” adds the top-level Tool Group “UNIV_MGR Tools” to the HPOM Tool Bank.

The Tool Group “UNIV_MGR Tools” contains a member Tool Group.

The table below describes the tools in the “UNIV_MGR Tools” Tool Group.

| Tool Label | Description |
|------------------------|---|
| DUAS Tools | Tools to manage Dollar Universe V6 Companies |
| Manager for OAPP Tools | Tools to manage Manager for Oracle Applications |
| Manager for SAP Tools | Tools to manage the Manager for SAP Solutions |
| Manager GSI Tools | Tools to manage the Generic Server for Integrations |

The DUAS Tools Group contains tools to manage the Dollar Universe Company. The following table gives an overview of the HPOM tools in Tool Group DUAS Tools.

| Tool Label | Technical Name | Script Name | Description | Command |
|---------------------------------|------------------------|------------------|---|---|
| DUAS Tools | | | | |
| Start a Dollar Universe Company | UNIV_MGR Start Company | UNIV_MGR_CtlComp | Dollar Universe Company start-up procedure | START <COMPANY NAME> [<UNIVERSE NODE>] |
| Stop a Dollar Universe Company | UNIV_MGR Stop Company | UNIV_MGR_CtlComp | Dollar Universe Company shutdown procedure | STOP <COMPANY NAME> [<UNIVERSE NODE> <FORCESHUTDOWN>] |
| Reorg a Dollar Universe Company | UNIV_MGR RGZ Company | UNIV_MGR_CtlComp | Dollar Universe Company Cold Reorganization procedure | RGZ <COMPANY NAME> <UNIVERSE NODE> |
| Start a Dollar Universe Engine | UNIV_MGR Start Engine | UNIV_MGR_CtlPrc | Dollar Universe Start Engine procedure | START <COMPANY NAME> <AREA CODE> <ENGINE> [<UNIVERSE NODE>] |

| Tool Label | Technical Name | Script Name | Description | Command |
|---------------------------------------|-------------------------|-----------------|--|--|
| Stop a Dollar Universe Engine | UNIV_MGR Stop Engine | UNIV_MGR_CtlPrc | Dollar Universe Stop Engine procedure | STOP <COMPANY NAME> <AREA CODE> <ENGINE> [<UNIVERSE NODE>] |
| Manager for SAP Tools | | | | |
| Start Manager for SAP Solutions | UNIV_MGR Start SAP MGR | UNIV_MGR_CtlPrc | Start Manager for SAP Solutions | START <COMPANY NAME> <AREA CODE> SAP [<UNIVERSE NODE>] |
| Stop Manager for SAP Solutions | UNIV_MGR Stop SAP MGR | UNIV_MGR_CtlPrc | Stop Manager for SAP Solutions | STOP <COMPANY NAME> <AREA CODE> SAP [<UNIVERSE NODE>] |
| Manager GSI Tools | | | | |
| Start Generic Server for Integrations | UNIV_MGR Start GSI MGR | UNIV_MGR_CtlPrc | Start Generic Server for Integrations | START <COMPANY NAME> <AREA CODE> GSI [<UNIVERSE NODE>] |
| Stop Generic Server for Integrations | UNIV_MGR Stop GSI MGR | UNIV_MGR_CtlPrc | Stop Generic Server for Integrations | STOP <COMPANY NAME> <AREA CODE> GSI [<UNIVERSE NODE>] |
| Manager for OAPP Tools | | | | |
| Start Oracle Tool Manager | UNIV_MGR Start OAPP MGR | UNIV_MGR_CtlPrc | Dollar Universe procedure to start a Manager for Oracle Tool | START <COMPANY NAME> <AREA CODE> OAP [<UNIVERSE NODE>] |
| Stop Oracle Tool Manager | UNIV_MGR Stop OAPP MGR | UNIV_MGR_CtlPrc | Dollar Universe procedure to stop a Manager for Oracle Tool | STOP <COMPANY NAME> <AREA CODE> OAP [<UNIVERSE NODE>] |

4.3 HPOM Monitoring Node Settings

The UNIV_MGR-SPI configuration is done in the Dollar Universe V6 node settings concerned. No configuration is necessary in HPOM, except for the scan frequency.

As for Dollar Universe, the HPOM Monitoring variables are of Install (I), Static (S) or Dynamic (D) type. The Manager's variables related to Dollar Universe Installation cannot be modified. They are Install type. The other variables of Static or Dynamic type can be modified with Unviewer Console or with the unisetvar command. The change in static variables requires the HPOM Monitoring to be restarted for the changes to take effect. Dynamic variables are taken into account by the Manager without having to restart it.

4.3.1 Node Settings – HPOM Monitoring

The table below describes the HPOM Monitoring variables. These variables can be defined in the Node Settings > HPOM Monitoring Dollar Universe V6 Node supporting the Manager:

| Variable / Name | I/S/D | Description |
|--|-------|--|
| UNI_HPOM_ENABLE Enable HPOM Monitoring | D | Used by HPOM in order to know if the Company must be supervised Yes or No (No by default). This parameter does not have any influence on sending alarms during job execution (defined in the alert rules in Monitoring mode.) |
| UNI_HPOM_NODE (Optional) Determines the target host for the messages | D | In UNIX, if the variable is empty, the node field in the opcmsg command is ignored. In Windows, if the variable is set to “”, the value will be used for the node field in the opcmsg API. If the variable is set, its value will be used. |
| UNI_HPOM_OPCMSG Location of OPCMSG binary on UNIX systems | D | Locate the opcmsg binary to send alerts to HPOM on UNIX systems. Value by default: /opt/OV/bin/opcmsg |
| UNI_HPOM_SEVERITY_LOW Specify the OPCMSG severity of the message when alerting rule is set to LOW | D | Set the severity of the message body in OPCMSG when an alerting rule with LOW criticalness is fired. Possible values are: Normal, Warning, Critical, Minor, Major Default value is: Normal |
| UNI_HPOM_SEVERITY_MEDIUM Specify the OPCMSG severity of the message when alerting rule is set to MEDIUM | D | Set the severity of the message body in OPCMSG when an alerting rule with MEDIUM criticalness is fired. Possible values are: Normal/Warning/Critical/Minor/Major Default value is: Normal |
| UNI_HPOM_SEVERITY_HIGH Specify the OPCMSG severity of the message when alerting rule is set to HIGH | D | Set the severity of the message body in OPCMSG when an alerting rule with HIGH criticalness is fired. Possible values are: Normal/Warning/Critical/Minor/Major Default value is: Normal |
| UNI_HPOM_SEVERITY_SCRIPTS Specify the OPCMSG severity of the message for Smart Plug-In scripts | D | Set the severity of the message body in OPCMSG for Smart Plug-In scripts. Possible values are: Normal/Warning/Critical/Minor/Major Default value is: Normal |

 Message severity sent by DUAS and the SPI are can be changed. The severity can be configured using the UNI_HPOM_SEVERITY node setting.

 The set value in the DUAS node settings does not affect the severity of the message generated inside HPOM Operation UI.

4.3.2 Node Settings – HPOM – List of Engines to Monitor

The following engines can be supervised in each Area:

- IO: data server
- CDJ: display server
- CAL: Calculator engine
- EXC: Exchanger engine
- LAN: Launcher engine
- EEP: External Event Processor: first check of physical resources
- SUR: Supervisor engine: supervises the physical resources
- BVS: Business View Server: server responsible for calculating the status of a Job Chain
- DQM: Distributed Queue Management: batch queues management server
- ALM: Immediate undertaking of generic supervision
- SYN: Synchronization with UVMS

The following engines can be supervised in Area X only:

- SAP: Manager for SAP Solutions
- OAP: Manager for Oracle Application
- GSI: Generic Server for Integrations

The automate codes must be separated by ";" without spaces.

| Variable / Name | I/S/D | Description |
|--|-------|-----------------------|
| UNI_HPOM_PRC_X List of engines to supervise in area X | D | IO;LAN;DQM by default |
| UNI_HPOM_PRC_S List of engines to supervise in area S | D | IO;LAN;DQM by default |
| UNI_HPOM_PRC_I List of engines to supervise in area I | D | IO;LAN;DQM by default |
| UNI_HPOM_PRC_A List of engines to supervise in area A | D | IO;LAN;DQM by default |

4.3.3 Node Settings – HPOM – List of Directories to Monitor

The following directories can be supervised:

- Company Directory: UXDIR_ROOT
- Area Data Directory: UXDxx
- Area Log File Directory: UXLxx
- Area Uproc script Directory: UXPxx

Depending on the Area supervised, xx can have these values: EX (Production), SI (Simulation), IN (Integration), AP (Application).

| Variable / Name | I/S/D | Description |
|--|-------|-----------------------|
| UNI_HPOM_DIR_GEN General directory to supervise | D | UXDIR_ROOT by default |

| Variable / Name | I/S/D | Description |
|--|-------|------------------------------|
| UNI_HPOM_DIR_X List of directories to supervise in area X | D | UXDEX;UXLEX;UXPEX by default |
| UNI_HPOM_DIR_S List of directories to supervise in area S | D | UXDSI;UXLSI;UXPSI by default |
| UNI_HPOM_DIR_I List of directories to supervise in area I | D | UXDIN;UXLIN;UXPIN by default |
| UNI_HPOM_DIR_A List of directories to supervise in area A | D | UXDAP;UXLAP;UXPAP by default |

No other directories will be taken into account. The directory codes must be separated by a ";" without spaces.

4.3.4 Node Settings – HPOM – Area File Systems and Directories Thresholds

This section defines the supervising of Area directories, if they were listed in the Section “[Node Settings – HPOM – List of Directories to Monitor](#)”.

For each supervised Area, (according to the settings defined to the previous selection: “[Node Settings – HPOM – List of Directories to Monitor](#)”), these settings can be revised.

- <Area> value: Production, Simulation, Integration or Application
- Depending on the Area supervised, xx can have these values: EX (Production), SI (Simulation), IN (Integration), AP (Application)

| Variable / Name | I/S/D | Description |
|--|-------|--|
| UNI_HPOM_DIR_X_ THRESHOLD_MIN_UXLxx Size threshold of log filesystem on <Area> area in Kb (Minor alarm) | D | Minimum 1, 100000 by default minimum value of the UXLxx directory’s size; a minor alarm will be sent to the supervisor beyond this. |
| UNI_HPOM_DIR_X_ THRESHOLD_MAJ_UXLxx Size threshold of log filesystem on <Area> area in Kb (Major alarm) | D | Minimum 1, 300000 by default minimum value of the UXDxx directory’s size; a major alarm will be sent to the supervisor beyond this. |
| UNI_HPOM_DIR_X_ THRESHOLD_MIN_UXPxx Size threshold of Uprocs filesystem on <Area> area in Kb (Minor alarm) | D | Minimum 1, 100000 by default minimum value of the UXPxx directory’s size; a minor alarm will be sent to the supervisor beyond this. |
| UNI_HPOM_DIR_X_ THRESHOLD_MAJ_UXPxx Size threshold of Uprocs filesystem on <Area> area in Kb (Major alarm) | D | Minimum 1, 300000 by default minimum value of the UXPxx directory’s size; a major alarm will be sent to the supervisor beyond this. |

| Variable / Name | I/S/D | Description |
|---|-------|--|
| UNI_HPOM_DIR_X_THRESHOLD_MIN_UXDxx Size threshold of data filesystem on <Area> area in Kb (Minor alarm) | D | Minimum 1, 100000 by default minimum value of the UXDxx directory's size; a minor alarm will be sent to the supervisor beyond this. |
| UNI_HPOM_DIR_X_THRESHOLD_MAJ_UXDxx Size threshold of data filesystem on <Area> area in Kb (Major alarm) | D | Minimum 1, 300000 by default minimum value of the UXDxx directory's size; a major alarm will be sent to the supervisor beyond this. |
| UNI_HPOM_FS_X_THRESHOLD_MIN_UXLxx Size threshold of log filesystem on <Area> area in percentage (Minor alarm) | D | From 1 to 100, 95% by default minimum occupancy rate of the file system containing the UXLxx directory; a major alarm will be sent to the supervisor beyond this. |
| UNI_HPOM_FS_X_THRESHOLD_MAJ_UXLxx Size threshold of log filesystem on <Area> area in percentage (Major alarm) | D | From 1 to 100, 99% by default minimum occupancy rate of the file system containing the UXLxx directory; a major alarm will be sent to the supervisor beyond this. |
| UNI_HPOM_FS_X_THRESHOLD_MIN_UXPxx Size threshold of Uprocs filesystem on <Area> area in percentage (Minor alarm) | D | From 1 to 100, 95% by default minimum occupancy rate of the file system containing the UXPxx directory; a major alarm will be sent to the supervisor beyond this. |
| UNI_HPOM_FS_X_THRESHOLD_MAJ_UXPxx Size threshold of Uprocs filesystem on <Area> area in percentage (Major alarm) | D | From 1 to 100, 99% by default minimum occupancy rate of the file system containing the UXPxx directory; a major alarm will be sent to the supervisor beyond this. |
| UNI_HPOM_FS_X_THRESHOLD_MIN_UXDxx Size threshold of data filesystem on <Area> area in percentage (Minor alarm) | D | From 1 to 100, 95% by default minimum occupancy rate of the file system containing the UXDxx directory; a major alarm will be sent to the supervisor beyond this. |
| UNI_HPOM_FS_X_THRESHOLD_MAJ_UXDxx Size threshold of data filesystem on <Area> area in percentage (Major alarm) | D | From 1 to 100, 99% by default minimum occupancy rate of the file system containing the UXDxx directory; a major alarm will be sent to the supervisor beyond this. |

4.3.5 Node Settings – HPOM – General Root File System and Directory Thresholds

This section defines the supervision of the Company's root directory, if it was indicated in the section "[Node Settings – HPOM – List of Directories to Monitor](#)".

| Variable / Name | I/S/D | Description |
|---|-------|--|
| UNI_HPOM_DIR_GEN_THRESHOLD_MIN_UXDIR_ROOT Size threshold of data root filesystem in Kb (Minor alarm) | D | Minimum 1, 100000 by default minimum value of the Company's directory size; a minor alarm will be sent to the supervisor beyond this. |
| UNI_HPOM_DIR_GEN_THRESHOLD_MAJ_UXDIR_ROOT Size threshold of data root filesystem in Kb (Major alarm) | D | Minimum 1, 300000 by default minimum value of the Company's directory size; a major alarm will be sent to the supervisor beyond this. |
| UNI_HPOM_FS_GEN_THRESHOLD_MIN_UXDIR_ROOT Size threshold of data root file system in percentage (Minor alarm) | D | From 1 to 100, 95% by default minimum occupancy rate of the file system containing the Company's directory; a major alarm will be sent to the supervisor beyond this. |
| UNI_HPOM_FS_GEN_THRESHOLD_MAJ_UXDIR_ROOT Size threshold of data root file system in percentage (Major alarm) | D | From 1 to 100, 99% by default minimum occupancy rate of the file system containing the Company's directory; a major alarm will be sent to the supervisor beyond this. |

4.3.6 Logical Environment

On UNIX, the variable UNI_HPOM_OPCMSG must contain the absolute address of the HPOM command opcmsg.

On Windows, there is no environment variable to configure. To send messages to the HP Operations Manager Operations server, the opcmsg API is used.

5 Monitoring

This chapter describes the monitoring features of Dollar Universe V6 Smart Plug In for HP Operations Manager and the required actions to implement them.

5.1 Log File Monitoring

The UNIV_MGR-SPI provides a mechanism to monitor the UNIV_MGR-SPI log file on Managed Node(s).

The UNIV_MGR-SPI monitors and maintains univ_mgr_hpom.log via the UNIV_MGR_LogSize policy. The UNIV_MGR-SPI monitors the size of the log file and if it exceeds a set limit, it proposes manual/automatic actions to purge the contents. It also captures error messages from the univ_mgr_hpom.log via Log file policies.

5.1.1 Adapting Log File Policies

The UNIV_MGR-SPI contains a set of log file policies to monitor the univ_mgr_hpom.log. These Log file policies capture error messages in the univ_mgr_hpom.log via HPOM conditions.

The univ_mgr_hpom.log file is located in the standard log directory on the HPOM Managed Node. The UNIV_MGR-SPI provides three Log file policies which vary with the Operating System of the Managed Node:

- For Windows NT/2000 Managed Nodes: UNIV_MGR_ErrorLog_WIN. The log file is located in: C:\Program Files\HP OpenView\data\log\univ_mgr_hpom.log.
- For AIX Managed Nodes: UNIV_MGR_AIX_ErrorLog. The log file is located in: /var/lpp/OV/log/univ_mgr_hpom.log.
- For HP-UX, Solaris and Linux Managed Nodes: UNIV_MGR_ErrorLog. The log file is located in: /var/opt/OV/log/univ_mgr_hpom.log.

On Windows machines, actions, monitors and commands sends all log messages to the log file %OvDataDir%\log\univ_mgr_hpom.log, where the %OvDataDir% contains the directory of the HPOM agent installation.

 The %OvDataDir% is an environment variable defined during installation of the HPOM agent on Windows Managed Nodes. However, if the %OvDataDir% is not the standard HPOM path (i.e. C:\Program Files\HP OpenView) you must adapt the UNIV_MGR_NT_ErrorLog to analyze %OvDataDir%\log\univ_mgr_hpom.log file. If the %OvDataDir% is not defined, actions, monitors and commands use the standard location of HPOM log directory: C:\Program Files\HP OpenView\data\log\univ_mgr_hpom.log.

The Log file policy “polling interval” can also be changed. By default, the polling interval in the Log file policies is one minute.

The Log file policies should be configured before they are distributed to the UNIV_MGR-SPI Managed Nodes.

5.1.2 Log File Message Format

The UNIV-MGR-SPI log file respects a specific format to enable the pattern matching of the conditions in the Log file policies.

On UNIX, the format of the `univ_mgr_hpom.log` file is:

```
<YY/MM/DD>:<HHhMM>:<SEVERITY>:<PROCESS NAME>:<MESSAGE TEXT>
```

Example:

```
"10/03/22:12h40:ERROR:UNIV_MGR_CtlComp:Cannot monitor UNIV50  
Company. Bad parameter values for UNIV_MGR_CtlComp command"
```

Note that the separator between elements is ':'

On Windows, the format of the `univ_mgr_hpom.log` file is:

```
<day month hh:mm:ss year>-<SEVERITY>-<PROCESS NAME>-<MESSAGE TEXT>
```

Example:

```
"Tue Mar 2 18:06:58 2010-INFO-UNIV_MGR_CtlComp- The Dollar  
Universe library is linked with HPOM"
```

Note that the separator between elements is '-'

The SEVERITY field can contain "ERROR", "WARNING" or "INFO". Only error type messages will appear by default in the HPOM Message Browser.

The PROCESS NAME is the name of the action, monitor or command which generated the message text.

5.1.3 Adapting the Log File Monitor Policy

The UNIV_MGR-SPI provides a policy to monitor the growth of the `univ_mgr_hpom.log`. When the `univ_mgr_hpom.log` reaches a first threshold, a warning message appears in the HPOM message browser which proposes an operator initiated action: save the `univ_mgr_hpom.log` file and purge it. When the `univ_mgr_hpom.log` reaches a second threshold a warning message appears in the HPOM message browser indicating that the `univ_mgr_hpom.log` was purged by an automatic action.

The "UNIV_MGR_LogSize" can be customized as follows:

- Polling interval (by default, the polling interval is 30 minutes). Every thirty minutes, the monitor launches the UNIV_MGR_LogSize program to monitor the `univ_mgr_hpom.log` file on the Managed Node.
 - Threshold of the condition n°1: by default, the condition is matched when the threshold has reached 150000 Kilobytes.
 - Threshold of the condition n°2: by default, the condition is matched when the threshold has reached 100000 Kilobytes.
 - The automatic/initiated action: UNIV_MGR_CtlLogSize.
-

5.2 Policy Management

5.2.1 Adapting Policies to Monitor Dollar Universe Processes

The UNIV_MGR Process Policy Group contains two policies: UNIV_MGR_PrcCollector and UNIV_MGR_PrcCheck.

The following elements in each policy can be altered:

- The polling interval in the UNIV_MGR_PrcCollector
- The severity of the generated messages in the UNIV_MGR_PrcCheck policy. Correlation keys can also be modified if required.

The details on each policy are described below:

UNIV_MGR_PrcCollector is a measurement threshold policy that collects information about DUAS companies. It is configured with a polling frequency and will supervise the health of a process list defined in DUAS node settings. This policy launches an external script that executes the following actions:

- Verifies if there is a Dollar Universe node installed on the Managed Node
- If a node is found, verifies that the “Enable HPOM supervision” node setting is set to value “Yes”.
- Recovers the list of processes for each Area to supervise
- Verifies the process statuses (using the `uxlst fnc` command)
- Sends the process statuses to the open interface policy (UNIV_MGR_PrcCheck)

UNIV_MGR_PrcCheck is an Open Message Interface Policy that matches specific messages about processes and offers specific actions (either automated or operator initiated). This policy receives messages from the shell scripts triggered by the previous collector policy. A correlation key exists in order to automatically update the status of a HPOM alarm if the process status changed.

5.2.2 Adapting Policies to Monitor the Dollar Universe File System

The UNIV_MGR Policies Policy Group (in UNIV_MGR Policies) contains a UNIV_MGR FileSystems group which provides policies to monitor DUAS file systems.

The UNIV_MGR FileSystem Policy Group contains a measurement threshold policy UNIV_MGR_FSCollector and two open message interface policy: UNIV_MGR_DirCheck and UNIV_MGR_FSCheck, described below.

UNIV_MGR_FSCollector is a measurement threshold policy that collects information about files and directories of a DUAS for the Company. It is configured with a polling frequency. By default, the polling interval is set to 30 minutes. The policy will run a script that will check: the available free space on file systems and the size of directories. Thresholds and the list of directories are defined inside the DUAS node settings. This policy launches an external script that will perform the following actions:

- Check if there is a Dollar Universe node installed on the Managed Node
- If a node is found, check if the “Enable HPOM supervision” node setting is set to value “Yes”.
- Recover the list of directories and file systems per Area to supervise
- Check the file system usage for each listed directory
- Send the file system health (UNIV_MGR_FSCheck) to the open interface policy

- Check the size of each directory
- Send the directory size health (UNIV_MGR_DirCheck) to the open interface policy

When monitoring a directory, the size (in Kilobytes) of the directory is sent to the external threshold monitor. When monitoring a file system, the capacity (the percentage of used space) is sent to the open message interface policies.

UNIV_MGR_DirCheck and UNIV_MGR_FSCheck are two open message interface policies. Both policies will match messages created by the previous collector script. If the messages match, a message will be generated within the HPOM Message Browser.

The following elements can be adjusted in these policies:

- Polling interval in the UNIV_MGR_FSCollector policy.
- Conditions of threshold monitor policies (modify message text, remove conditions, and change the severity of generated messages) Please refer to the HPOM product documentation for information related to policy conditions.

 Alarm threshold sent to Open Message Interface policies are defined within the DUAS node settings.

5.2.3 Adapting Policies for Dollar Universe Job Monitoring

The UNIV_MGR Policies Policy Group (in UNIV_MGR Policies) contains a UNIV_MGR Alerts group. This group contains five different open message interface policies to respond to production events and to guide the operator to take adequate corrective action if required.

Policies are separated into two groups: alarms on status and alarms on duration.

Alarms on status: This group contains two policies: UNIV_MGR_UprocStatus and UNIV_MGR_SessionStatus. These two policies will match messages sent by the DUAS if the alert rule within the DUAS is set to the following definition:

- Criteria: Uproc or Sessions
- Monitor: Status (any of them)

 Only the UNIV_MGR_UprocStatus possesses automatic and operator initiated actions.

- The automatic action consists of displaying the output of the job execution (job log) and its history trace on the HPOM alarm.
- The operator initiated action consists of offering the possibility to relaunch the job.

Alarms on duration: This group contains three policies: UNIV_MGR_JobDurationTooLong UNIV_MGR_JobDurationTooLongWaiting and UNIV_MGR_JobDurationTooShort. These policies will match messages sent by the DUAS if the alert rule within the DUAS is set to the following definition:

- Criteria: Uproc or Sessions
- Monitor: Duration

The following elements in these policies can be modified:

- Message text of conditions
- Automatic / initiated actions of conditions (only for UNIV_MGR_UprocStatus)
- The severity and the generated message text
- Remove conditions

Please refer to the HPOM product documentation for information related to policy conditions.

 The default HPOM Message text severity generated depends of the Dollar Universe alert rule criticalness. It follows the following rule:

| Dollar Universe Alert Rule Criticalness | HPOM Message Severity |
|---|-----------------------|
| Low | Warning |
| Medium | Minor |
| High | Major |

5.3 UNIV_MGR-SPI Logging

Errors detected by the UNIV_MGR-SPI are written to the SPI log file.

The log file full path is defined by the LOGFILE variable value in the HPOM Agent UNIV_MGR_Env file. The default value for this variable is set to: LOGFILE=/var/lpp/OV/log/univ_mgr_hpom.log.

 Depending on the HPOM Management Server version, this value changes and should be updated to the value LOGFILE=/var/opt/OV/log/univ_mgr_hpom.log. The "UNIV_MGR_ErrorLog_AIX" policy should also be updated on the HPOM Management Server with this new value, and then redeployed.

Errors are also displayed in the HPOM message browser in the UNIV_Scheduler message group (except on AIX and Windows OS, refer to "[Adapting Log File Policies](#)").

The Dollar Universe node can be configured to send alerts to the HPOM Management Server. In Univiewer, enable the HPOM Supervision library's trace mode (Uproc status / Sessions) by adding the keyword IOSPVHPOM at the Main log level (Univiewer Console>Administration mode>DUAS>Node Settings>Logging). The HPOM library is then traced in the Dollar Universe universe.log file.

6 About Automic Software, Community and Services

This topic introduces the Automic Software company and how to leverage the full potential of our solutions to you.

You can also obtain Automic documentation online from docs.automic.com.

6.1 Automic Software Company

Automic Software is dedicated to business automation.

Automic is the world's most comprehensive platform in automating businesses. Founded 1985, Automic pioneered the largest, independent, globally deployed automation platform which powers the enterprise, application and infrastructure. Now, as the consumerization of IT accelerates, Automic is re-imagining how organizations integrate next generation service models such as Cloud, DevOps and Big Data. Today, our software automates tens of millions of operations a day for over 2,000 customers worldwide. We challenge conventional thinking, enabling our customers to be faster, smarter, in control. Automic – the standard in business automation.

Find out more at our website www.automic.com.

6.2 Automic Community

Want to connect with other Automic users to compare notes or learn how others are tackling problems that you're running into?

Talk with other users from around the world to learn how they optimize their business automation with Automic. Interact with the Automic Team to get ONE Automation Platform tips and tricks straight from the source.

Join the Automic Community and become an Automic Insider and be among the first to get news about new products and events, even before they are generally announced!

6.3 Download Center

Make sure that you are using our products to their fullest potential.

The Download Center is the place where you find product downloads, documentation and information on new releases and hot-fixes about your Automic solution. It's all in one place: from service hotfixes, release notes, and all guides. You will also find patch descriptions, known bugs or workarounds.

6.4 Technical Support

We have a support team you can trust.

Our team of professionals is ready to support you, anytime and anywhere. Three support centers located in Europe, the United States, and Asia Pacific build the core of the Automic support organization.

Our Technical Support Team makes sure that your closest Automic experts are never more than a few hours flight away, no matter on which continent your subsidiaries and data centers are located. Automic Software is designed to provide global connectivity for international companies. You are employing Automic software on a global scale and therefore you can expect global service.

6.5 Training and Services

Do you want to learn even more about Automic solutions?

We offer a range of training options on how to get the most out of your Automic solution. Depending on your location, either open training sessions at an Automic Software Service Center, or personalized training sessions at your company's site suits best. Visit the training site and get detailed information about currently offered courses.
