## **HP Operations Manager for UNIX**

## for the management server on Sun SPARC Solaris system

**Release Notes** 

**Software Version: 9.02** 

Release Notes Publication Date: February 3, 2010

This document provides an overview of HP Operations Manager for UNIX (HPOM) version 9.02. It contains important information not included in the manuals or in online help.

The first page of this document contains the version number, which indicates the software version and the publish date, which changes each time the document is updated. To check for recent updates or to verify that you are using the most recent edition, select Operations Manager for UNIX at the following location: http://support.openview.hp.com/selfsolve/manuals

This document provides information about the following topics:

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## **Media Kit Contents**

The HPOM for UNIX media kit contains a number of CDs and DVDs required to install the HPOM for UNIX foundation product and NNM i-series 8.1x for Solaris. In addition, you receive AlarmPoint Express. AlarmPoint is an interactive alerting application, designed to capture and enrich events and route those events to the right person on any communication device, and give that person the ability to solve, escalate, or enlist others to resolve.

The AlarmPoint integration allows the appropriate technician to be notified directly using voice, email, pager, BlackBerry or other devices. Information about the failure is presented to the event resolver and decisions about how to handle the event can be made in real-time.

#### **NOTE**

HP only distributes the AlarmPoint Express media, and does not provide support. AlarmPoint Express support and information may be obtained directly from AlarmPoint at: http://express.alarmpoint.com/hp

New HPOM customers also receive the media for HP Performance Agent 5.0, HP Performance Manager 8.20, and HP Reporter 3.8x. To use these products, you must also purchase a valid license.

## What's New in this Release

HPOM 9.02 contains new features, feature enhancements and other changes.

## **New Features**

HPOM 9.0x contains the following new features:

#### **Web-based Administration for HPOM**

HPOM provides a new web-based Administration UI which replaces the Motif UI. The key benefits of the new web-based Administration UI are:

- Web-based configuration of HPOM.
- Concurrent use by multiple administrators with different access rights.
- · Improved navigation and editing of HPOM configuration items.
- Policy (template) versioning and comparison capabilities to quickly identify configuration changes and differences.

You can install the Administration UI on the HPOM system after the server installation is complete. HPOM Administration UI user documentation is available online at the Support web site.

## **New Policy Types**

HPOM templates are now referred to as policies, and provide new monitoring capabilities:

- The **Windows Management Interface** (WMI) policy type monitors the properties of WMI classes and instances, and responds when a property matches a value you select, or when an instance you select is created.
- The **Nodeinfo** policy type allows you to configure some aspects of agent behavior, for example, buffer sizes, IP addresses, and port numbers for client-server communication.
- The **Service Process Monitoring** policy type monitors services and processes which are running on managed nodes and sends a message when the state of the service or the process changes.
- The **Measurement Threshold** policy type evaluates performance data and responds if the data does not remain within acceptable levels. This policy type is useful if you want to monitor parameters that are constantly changing, such as CPU load, disk space, number of running processes, and so on. You can also use VB Script or Perl to perform your own calculations and decide if the threshold has been crossed.
- The **ConfigFile** policy type is used by Smart Plug-Ins (SPIs) such as SAP or Microsoft Exchange to configure instrumentation after SPIs are deployed on nodes.
- The **Windows Event Log** policy type allows access to several event log sources.

## **Policy Versioning**

HPOM 8.xx templates are automatically converted into *policies* when uploaded to HPOM 9.0x. Policies serve the same purpose as templates, but policies are versioned. You can assign specific versions of a policy to managed nodes, node groups, or policy groups. You can also roll back to a specific version of a policy, and can distinguish between fixed version, always latest and always latest subversion assignments.

## **Category-Based Instrumentation Distribution**

You can associate instrumentation with policies by using *categories*. This association ensures that the management server automatically deploys instrumentation required by a policy when it deploys that policy. Categories increase your control over which instrumentation is distributed, and to which managed nodes, thus reducing the amount of instrumentation that needs to be distributed.

Category-based instrumentation enhances and replaces the selective distribution concept, which is still available for backward compatibility. Please plan your upgrade to category-based instrumentation, since selective distribution will be deprecated.

## **Policy and Instrumentation Compatibility**

Policies, policy groups, and instrumentation developed for HPOM are compatible with HPOM for Windows, and vice versa.

## **Subagent Management**

This version of HPOM introduces a new type of subagent registration based on policy management features. Subagent assignment is handled by assigning subagent policies. Different versions of subagents have different versions of the respective subagent policies. This allows you to see which subagent is assigned to a managed node.

The subagent policies are not meant to be edited and are provided by a subagent supplier. Assigning such a policy to a node and deploying it using new options of the operagt command installs the corresponding subagent on the node. The actual subagent policy is not deployed to the managed node and is not visible in the operaglate/ovpolicy output.

## **Online Configuration Synchronization**

This release of HPOM introduces automatic synchronization of configuration data between the HPOM management server and the Java GUI without forcing the operator to log in again to make the changes effective. Synchronization can involve changes to nodes, applications, policies, groups, user profiles, and so on. The configuration data uploaded using opccfgupld also does not require server restart.

#### **Auditing**

Auditing is redesigned to provide centralized event logging, four audit levels, and individual event logging configuration. Note that the audit information is no longer stored in a database, so old audit entries are lost when upgrading to HPOM 9.0x. The individual audit area variables are managed by  $\operatorname{opcsrvconfig}(lm)$  and  $\operatorname{ovconfchg}(lm)$ .

## **Unicode (UTF-8) support**

This version of HPOM 9.0x introduces Unicode support. Both the Oracle database and the management server work exclusively with the UTF-8 character set, which provides multilingual support.

#### **License Management**

License management is redesigned to allow other product components to easily and flexibly integrate with HPOM. License reports are enhanced to list the license requirements of integrated components.

#### **HPOM Web Services and Tool Web Service**

HPOM Web Services enable you to develop remote clients that access HP Operations management servers using industry-standard terminology and technical standards, instead of product-specific interfaces. HPOM provides the Incident Web Service and the Tool Web Service. The Incident Web Service enables clients to access HPOM messages. The Tool Web Service enables clients to execute tools from an HP Operations management server.

#### **Cockpit Views**

The HPOM cockpit view is a web-based interface that displays the state of the environment monitored by HPOM. Cockpit views help users to quickly assess the health and readiness of the environment to support the business.

The cockpit views consist of an indicator panel and the message browser. The indicator panel displays one or more message filter groups, the message browser displays messages for each filter.

## **ZFS File System Support**

HPOM can be installed on one or more Solaris ZFS file systems. Veritas Cluster Server 5.0 and Sun Cluster 3.2 are supported on the ZFS file systems.

A ZFS file system is created in a ZFS pool and is automatically mounted when created.

For more information about ZFS, see http://www.sun.com.

#### **Solaris Zones Support**

HPOM can be installed on Solaris global and non-global zones. A global zone is created when you install the Solaris operating system. Zones hosted by a global zone are known as non-global zones. There are two types of non-global zones: Sparse Zones and Whole Root Zones. HPOM 9.02 supports only Whole Root Zones.

## **Logical Domains Support**

HPOM can be installed on Solaris Logical Domains (LDoms). ZFS file systems within LDoms are also supported.

#### **New CLIs**

HPOM 9.0x includes the following new command line interfaces. Refer to the man pages for more information.

opcappl

• opcpoltype

• opcsrvconfig

- opcinstrumcfq
- opcpolicy

• ovolicense

#### **New Variables**

In addition to many variables introduced to support auditing, the following configuration variables are introduced:

- OPC\_XPL\_SQL\_TRACE
- OPC\_KILL\_OPCUIWWW
- OPC CFGUPLD BLOCK RETRY
- OPC\_OVHARG\_START\_LOCAL\_AGENT
- OPC\_SUPPRESS\_IF\_NO\_CORRELATION\_MSGAPPLICATION
- OPC SOURCE FORW NOTIF TO TT
- OPC\_TRUNC\_MSG

- OPC\_PING\_SIZE
- OPC\_JGUI\_VER\_DOWNLOAD\_URL
- OPC EMPTY NS CACHE
- OPC SUPPRESS IF NO CORRELATION
- OPC SUPPRESS IF NO CORRELATION MSGOBJECT
- OPC ENABLE FWDCHAIN FWDSENDER CMA
- OPC\_SUPPRESS\_IF\_NO\_CORRELATION\_MSGGROUP
- OPC MSG BULK INSERT RATE

For more information on the server configuration variables, see the *HPOM Server Configuration Variables* manual.

For the information on the audit-related variables, see the HPOM Administrator's Reference.

#### **New APIs**

Refer to the *HPOM Developer's Reference* guide for information about the following new APIs.

opcinstrum_get_categories()	opcpolicytype_add_from_xml()	opcpolicybody_modify()
opcinstrum_get_category()	opcpolicytype_get()	opcpolicybody_modify_by_name()
opcinstrum_add_categories()	opcpolicytype_get_template()	opcpolicy_get_categories()
opcinstrum_del_categories()	opcpolicytype_modify()	opcpolicy_assign_categories()
opcinstrum_modify_categories()	opcpolicytype_delete()	opcpolicy_deassign_categories()
opcnode_assign_policy_groups()	opcpolicytype_write_xml()	opcpolicy_assignment_mode_set()
opcnode_deassign_policy_groups()	opcpolicytype_get_name_by_uuid()	opcpolicy_copy_assignments()
opcnode_get_policy_groups()	opcpolicytype_get_uuid_by_name()	opcpolicy_list_assignments()
opcnode_assign_policies()	opcpolicy_add()	opcpolicy_update_assignments()
opcnode_deassign_policies()	opcpolicy_get()	opcpolicygrp_get()
opcnode_get_policies()	opcpolicy_get_data()	opcpolicygrp_add()
opcnode_assign_categories()	opcpolicy_modify()	opcpolicygrp_create()
opcnode_deassign_categories()	opcpolicy_delete()	opcpolicygrp_modify()
opcnode_get_categories()	opcpolicy_copy()	opcpolicygrp_delete()
opcnodegrp_assign_policies()	opcpolicy_edit()	opcpolicygrp_copy()
opcnodegrp_deassign_policies()	opcpolicy_edit_body()	opcpolicygrp_get_list()
opcnodegrp_get_policies()	opcpolicy_get_list()	opcpolicygrp_get_data()
opcnodegrp_assign_policy_groups()	opcpolicy_get_list_by_type()	opcpolicygrp_assign_policies()
opcnodegrp_deassign_policy_groups(	opcpolicy_header_create()	opcpolicygrp_deassign_policies()
opcnodegrp_get_policy_groups()	opcpolicybody_get()	opcpolicygrp_list_assignments()
opcpolicytype_add()		

#### **Feature Enhancements**

**HPOM** contains these enhancements:

#### **Enhanced Java GUI**

For a complete description of Java GUI functionality, read the *HPOM Java GUI Operator's Guide*. Highlights include:

Service Enhancements

A Service Map Table view is now available in addition to the graph and custom views. This view is similar to the message browser, listing services and their properties in a table. Service Map Table View is available for service submaps and custom maps, but not for service graphs.

Message Enhancements

The following enhancements are introduced with the current release:

- When performing exporting, dragging or printing of messages from a message filter browser, the messages are sorted in the same way as they were in the message filter browser.
- When using relative time filtering with enabled relative time recalculation, message browser is refreshed with new messages and drops the messages that become too old to satisfy the filter criteria. This behavior can be enabled by the administrator using the OPCUIWWW\_FILTER\_RELATIVE\_TIME\_RECALC server parameter.

#### · Java GUI Window Enhancements

A new option, Stay On Top, is added to the Preferences dialog. This option enables the Java GUI windows (main and detached) to stay on top of other windows. A parameter,  $stay_on_top$ , is introduced in itooprc. The default value is no.

## Miscellaneous

- Java GUI filtering now supports CMAs with HPOM style pattern matching.
- HPOM Java GUI can be launched with the WebStart. A link for the WebStart launch of Java GUI is added to the HPOM home page: http://<server\_name>:3443/ITO\_OP/.
- The Java GUI functionality is extended to support HTTPS and FTP hyperlinks in messages.
- For Java GUI clients connected in HTTPS mode, the listguis tool shows the following information: hostname (long name), IP address, connection type (https vs. socket), connection port (for example, 2531 for socket comm).
- Some terminology is changed to be aligned with the HPOM for Windows. For example, Applications are now called Tools.

## **Enhanced Message Forwarding in MoM Environment**

Message forwarding in MoM environment is enhanced as follows:

- Server-to-server message forwarding between HPOM 8.xx and HPOM 9.02 using the HTTPS protocol is supported.
- When no keyword (MSGCONTROLLINGMGR | NOTIFYMGR) is set with HPOM 9.0x, MSGCONTROLLINGMGR (normal messages) is assumed. With HPOM 8.xx, the default behavior was read-only messages without any keyword provided (NOTIFYMGR was assumed by default).
- Management server restart is no longer necessary to read a modified msgforw file.
- Enabled filtering on CMAs; CMA-name fix, CMA-value through pattern matching.

```
Syntax: CMA NAME "<name>" VALUE "<pattern>"
```

## **NOTE** CMA names can be used with an "|" (OR) operator.

Example of accepting all messages which have CMA cma1 or cma2 set:

```
CMA NAME "cma1|cma2" VALUE "<*>"
```

Construct patterns, like in template conditions.

Nodes can be filtered with a pattern:

Construct patterns like for external nodes. Any one of the patterns specified in one line will match.

```
Syntax: NODEPATTERN <pattern_type> "<pattern>" [ <pattern_type> "<pattern>" [ ... ]]
```

where <pattern\_type> can be either of IPPATTERN or NAMEPATTERN.

```
Example of matching all nodes having IP-address 192.168.*.*:
```

```
NODEPATTERN IPPATTERN "192.168.<*>.<*>"
```

Example of matching all nodes having hostname \*.hp.com:

```
NODEPATTERN NAMEPATTERN "<*>.hp.com"
```

Enabled filtering on node groups:

```
Syntax: NODE NODEGROUP "<node_group>" [ NODEGROUP "<node_group>" [ ... ]
```

## **Enhanced HPOM Backup and Restore**

HPOM backup and restore is enhanced. New backup scripts opcbackup\_online and opcbackup\_offline and restore scripts opcrestore\_online and opcrestore\_offline based on the Oracle Recovery Manager (RMAN) are introduced.

#### **Enhanced CLIs**

- opcack
- opccfgupld

opcnode

- opcagtdbcfg
- opccsa

- opchistdwn c
- opcragt

- opccfguser
- opcdelmsg
- opclaygrp

opchbp

• opctempl

opcpolicy

For details about command line interface changes and enhancements, refer to the corresponding man pages.

#### **Enhanced APIs**

New functions in APIs:

- Configuration Stream Interface (CSI) is an extension of the Message Stream Interface (MSI) for synchronizing the configuration changes. CSI provides registration for the configuration changes to the internal (server processes, Java GUI) and external (API clients) configuration consumers. It can be used within the <code>opcif\_open()</code> API. New interface types include:
  - OPCSVIF CFG CHG EVENTS: enables registration for all configuration changes.
  - OPCSVIF\_CFG\_CHG\_EVENTS\_GUI: used with Java GUI to enable registration of events related to a specific operator.
- OPCDATA\_CSI\_STRING (int) is added to the opcconn\_get\_capability() and opcconn\_set\_capability() APIs. Returns the name of the client that opened a CSI with the opcif open() call. Used to prevent this client to get back it's own configuration changes.
- opcsync\_inform\_server() is enhanced to inform the server and GUI processes of new configuration changes. The HPOM server and GUIs are kept up-to-date each time a change is performed.

## **Other Changes**

HPOM contains these changes compared with HPOM 8.3x.

#### **Installation of HPOM Management Server**

New installation and configuration scripts, <code>ovoinstall</code> and <code>ovoconfigure</code>, ensure fast and simple installation and configuration. The installation process now separates the software installation from the software configuration tasks, and break and re-entry points are available for easy customization and improved troubleshooting.

For detailed information about the prerequisites which must be met before installing and configuring HPOM, and the procedures themselves, refer to the *HPOM Installation Guide*.

#### **Configuration Settings on the HPOM Management Server**

The table below shows how configuration variables default values are changed with the HPOM 9.0x release in comparison with the 8.xx release. Note that these settings are not visible when using <code>ovconfget -ovrg</code> server if the default has not been changed or explicitly set.

Variable	HPOM 8.xx Default	HPOM 9.0x Default	
OPC_HTTPS_MSG_FORWARD	FALSE	TRUE	
OPC_NAMESRV_CACHE_SIZE	100	5000	
OPC_NAMESRV_RETRIES	3	1	
OPC_NAMESRV_MAX_TIME	unset	200	
OPC_USE_LOWERCASE	FALSE	TRUE	
OPCUIWWW_BULK_MODE	FALSE	TRUE	
OPCUIWWW_NEW_MSG_NO_DB	FALSE	TRUE	
OPC_JGUI_WEBBRW_APPL_RESULT	FALSE	TRUE	
OPC_UPDATE_DUPLICATED_SEVERITY	NONE	LAST_MESSAGE	
OPC_UPDATE_DUPLICATED_MSGTEXT	NONE	LAST_MESSAGE	
OPC_OPCCFGDWN_ALL_INCLUDE_ SELDIST_SERVICES	FALSE	TRUE	
OPCRAGT_USE_THREADS	FALSE	TRUE	
OPC_FORWM_MAX_BULK_SIZE	0	100	
OPC_TTNS_TIMEOUT	0	300	
OPC_MSG_BULK_INSERT_RATE	not supported	100	

## **Java GUI Support for Web Browsers**

The embedded web browser is no longer available with the Java GUI. The only valid browsers are browsers with ActiveX and external browsers. web\_browser\_type in itooprc also supports activex. Thus, the valid values are external and activex.

On Windows, a browser with ActiveX is the default browser. On Unix, only external browser is available. The valid values for the configuration variable <code>OPC\_JGUI\_INTERNBRW\_DISABLED</code> are <code>ACTIVEX</code> and <code>NONE</code>.

## **Node Management**

With this release of HPOM, nodenames must be unique. In previous product versions it was the combination of the nodename and network type which needed to be unique. You could have the same nodename for an IP-node and a non-IP node, for example, if the name-service was not accessible when the first message for the node arrived, and later it was accessible. HPOM 9.0x makes no difference in handling IP nodes and non-IP nodes (type "Other"). This is the same approach which was previously enforced with the OPC\_NEW\_NAMERES setting.

The handling of nodes for external events has also been changed. An external node of type "IP Name" also matches messages from non-IP nodes.

The external node type "IP Name" is changed to "Name" and the external nodes of type "Other" are converted to type "Name" during the upgrade.

The pattern matching of external nodes is now case-insensitive.

## **Changed License Passwords**

The HPOM 9.0x management server license password is different from the HPOM 8.xx management server license password. If you plan to upgrade from HPOM 8.xx to HPOM 9.0x, you must request a new license password from the Password Delivery Center (https://webware.hp.com/welcome.asp). HPOM 9.0x is not able to run with a HPOM 8.xx management server license password. All other HPOM 8.xx license passwords, such as Agent license passwords, can be re-used and might be migrated to the new IP address. For details, refer to the HPOM Installation Guide for the Management Server.

## **Event Correlation Services (ECS) Support**

ECS provided as Correlation Composer or ECS Designer is supported with HPOM 9.0x as follows:

## ECS Process Config File Location

The location of the configuration for the ECS process on the management server (opcecm) is moved to the shared disk. This avoids certain problems in HA cluster environments.

**Old location:** /var/opt/OV/conf/OpC/mgmt\_sv

**New location:** /var/opt/OV/shared/server/datafiles/policies/ec

#### Enhanced functionality of the symbolic nodename \$MGMTSV

The symbolic nodename \$MGMTSV can now be used in APIs and CLIs to:

Assign and deassign ECS policies or policy groups containing ECS policies to \$MGMTSV, for example:

```
# opcnode -[de]assign_pol node_name="\$MGMTSV" net_type=NETWORK_NO_NODE pol_type=ec
pol_name=<name> [ version=<ver> ]
```

— List assigned policies of \$MGMTSV, for example:

```
# opcnode -list ass pols node name="\$MGMTSV" net type=NETWORK NO NODE
```

The calls to deploy policies (opcragt -dist) and to deploy data/fact stores (ovocomposer) are unchanged compared to HPOM 8.xx.

#### Verification Status of ECS Circuits

In previous product versions, ECS circuits could not be deployed to an agent or the management server during the verification check, and were regarded as unverified. In HPOM 9.0x, the distinction between verified and unverified ECS circuits is dropped. It is expected that all ECS circuits are verified (checked for syntax correctness). For unverified HPOM 8.xx circuits uploaded during the configuration upload to HPOM 9.0x, a warning containing the relevant policy name and circuit is printed by <code>opccfgupld</code>. As opposed to HPOM 8.xx, the data can be deployed with HPOM 9.0x.

#### **Smart Plug-in (SPI) Support**

HPOM 9.0x is provided without any SPI (including the OS SPI). SPI support will be added over time.

The existing HPOM SPIs (from 2006.1 SPI CD and 2008.1 SPI CD) cannot be installed on HPOM 9.0x.

You can migrate your HPOM 8.xx configuration data to HPOM 9.0x. This also includes templates and instrumentation of SPIs from the 2008.1 SPI CD which are installed on HPOM 8.xx, downloaded, and uploaded on HPOM 9.0x.

## **Integration with Other HP Software Solutions**

HPOM 9.0x provides integrations with other HP Software solutions, such as Network Node Manager i, Business Availability Center, and Dependency Mapping Automation. For a complete list and more information, visit the Support web site: http://support.openview.hp.com/sc/integration\_catalog.jsp

## SiteScope 10.10

When using the HPOM SiteScope Adapter in conjunction with SiteScope 10.10 and newer versions, explicitly enable the creation of SiteScope group MG files, because t is not selected by default when SiteScope is installed. (See also the *SiteScope Release Notes.*) Enable the configuration files option in **Preferences -> General Settings -> Main Panel**. When upgrading from an earlier version of SiteScope that has this option selected, the MG configuration files are supported. The SiteScope discovery is not available, if the option is disabled.

## Co-existence with Other HP Software Solutions

HPOM 9.0x can co-exist on the same system with the following HP Software products:

- HPOM Java GUI 9.0x
- HP Operations Agent 8.60
- HP Performance Agent 5.00
- HP Performance Manager 8.20
- Infrastructure SPI DVD 1.0

HPOM 9.0x cannot be installed on the same system with some HP Software products. The following HP Software products can be used with HPOM but must be installed on a remote system:

- SiteScope 10.10
- Network Node Manager (NNM) 7.5x
- Network Node Manager i (NNMi) 8.xx

## **Obsolescence Announcements**

This section lists the obsolete features of this release of HPOM.

## **Obsolete Management Server Platforms**

The following Solaris management server platforms are obsolete:

- Sun Solaris 8
- Sun Solaris 9

#### **Obsolete Java GUI Platforms**

- HP-UX PA-RISC all versions
- HP-UX Itanium 11.23
- Sun Solaris 8 and 9
- Red Hat 8
- MacOS X 10.3 and lower versions

The HPOM Java GUI no longer supports the embedded browser capability.

## **Obsolete HPOM Agent Platforms**

- HP MPE/iX
- HP-UX 10.20, 11.00, 11.22 (Itanium)
- Linux Kernel 2.2 and 2.4, all derivatives
- Microsoft Windows 2000 (all editions; unless there is an extended Microsoft support contract)
- Microsoft Windows 2003 without SP

- Microsoft Windows NT 4.0
- Microsoft Windows XP (SP1 and prior)
- Novell NetWare 4.x
- OpenVMS 7.3.1
- RedHat Enterprise Linux 2.1, 3.x
- Tru64 UNIX

**NOTE** 

HPOM 9.0x is delivered with the 8.60 agent version. HPOM 9.0x can communicate with other 8.x HTTPS agents as well.

## **Motif UI**

The Admin Motif UI is obsolete. The Web-based Administration UI is used instead. For more information about the new Administration UI, see "Web-based Administration for HPOM" on page 2.

The operators Motif UI is obsolete; use the Java GUI instead.

## **Template Administrator**

The template administrator user is obsolete as a part of a Motif UI functionality. You cannot use template administrator users to log in to the HPOM Administration UI. If you upload or create a template administrator user on HPOM, it is not used for HPOM Administration UI.

Instead of template administrator, use <code>ompolicy\_adm</code> user to log in to the HPOM Administration UI or add a new HPOM Administration UI user and assign it to <code>ompolicy\_adm</code> user group. An HPOM Administration UI user has rights to view and edit all policies. You should first log in as <code>admin</code> or <code>opc\_adm</code> to the HPOM Administration UI, add a Policy administrator user, and assign that user the ompolicy\_adm user group.

A utility is also provided to convert template administrator accounts into HPOM <code>ompolicy\_adm</code> accounts. Refer to the *HP Operations Manager Administration UI Administration and Configuration Guide*, chapter "User Migration from HPOM 8.xx to AdminUI" for details.

#### **DCE Communication**

The DCE obsolescence includes the obsolescence of DCE-based agents, of communication to and from DCE-based agents, DCE-based message forwarding between management servers, escalating messages, the DCE security (the security library), the OpenAgent architecture, as well as Novell Netware agent, the RPC daemon agent, and Sun RPC agent. Also, the DCE RPC based communication on the HPOM management server has been changed to a queue and pipe mechanism.

## **HPOM Server to Server Configuration Upload with the opcmgrdist utility**

Server to server configuration upload with the opcmgrdist utility is no longer supported. You can download config data on server A with opccfgdwn, copy the config data, for example, with secure copy (scp) to server B, and upload it there with opccfgupld.

## **Operator-initiated Message Escalation**

The possibility to forward or escalate an HPOM message to another HPOM server by pressing the escalate button in the HPOM operational UIs is obsolete.

## **Obsolete Management Server Processes**

The following HPOM processes are obsolete:

ovoareqhdlropccmm

- opcctlm
- opcdistm

- opcmgrdist
- opcmsgrd

## libnspsv Library

The librspsv library is deprecated. However, it is still present on the HP Operations management server for the backward compatibility. You can still use the integrations, applications or scripts linked to this library in the previous product versions.

#### **Changed Control over HPOM Processes**

The HPOM Control Manager (opcctlm) is obsolete. The control over HPOM processes is moved to the OV Control facility (the ovcd process). Some of Control Manager's functionality is moved to the HPOM Request Sender (ovoareqsdr). The HPOM processes can be controlled by the ovc and opcsv CLI, but no longer by ovstart, ovstop and ovstatus CLIs, because Network Node Manager no longer runs on the same HPOM management server system.

## **NNM Local Integration**

NNM cannot be installed on the same system as HPOM, thus the local integration with NNM is obsolete. However, an integration package is provided with HPOM 9.0x to work remotely with NNM 7.xx and NNMi 8.xx. As a consequence of this, HPOM does not support integration with the OV\_PLATFORM type applications, for example, OV Applications and OV Services are not used anymore.

## **Service Navigator Value Pack (SNVP)**

No new version of SNVP is available with the HPOM 9.0x. Check the HP Dependency Mapping Automation software and HP Operations Manager i software as potential replacements.

## **Obsolete CLIs and CLI options**

All CLIs provided by NNM are no longer available on the HPOM management server. Therefore CLIs such as ovstart, ovstop, ovstatus, ovw, ovaddobj no longer exist. Check your working procedures and scripts for NNM commands and make the adjustments, where appropriate. Other obsolete CLIs:

- opc\_backup
- opc\_recover
- opcmgrdist
- opctmplrpt
- opcauddwn
- opccfgupld: the -ascii option
- opccfgupld: the -deloldtempls option
- opcmomchk: the -escalation option

- opcpwd
- opclic
- opcsvreg
- opcsvskm
- opctranm
- ovbackup.ovpl
- ovrestore.ovpl

## **Obsolete Configuration Variables**

- DCEMR PROG
- DISTM\_PROG
- OPC CFG KEY TAB
- OPC CFG SEC LEVEL
- OPC\_COMM\_PORT\_DISTM
- OPC\_DISABLE\_EXT\_DCE\_SRV
- OPC\_DOWNLOAD\_TEMPL\_INDIVIDUAL
- OPC SKIP DCE FORWARDING
- OPC FORWARD MGR DCE QUEUE
- OPC\_CHK\_DCE\_ADDR\_MISMATCH
- OPC\_FORWARD\_MGR\_DCE\_PIPE
- OPC\_COMM\_LOOKUP\_RPC\_SRV
- OPC COMM PORT RANGE
- OPC\_HBP\_USE\_ALL\_PROTOCOLS
- OPC\_HPDCE\_CLIENT\_DISC\_TIME

- OPC\_OPCCTLM\_KILL\_OPCUIWWW
- OPC OPCCTLM START OPCSVCAM
- OPC RESTART COUNT
- OPC RESTART DELAY
- OPC RESTART PROCESS
- OPC\_RESTART\_TIMEFRAME
- OPC\_SKIP\_DCE\_FORWARDING
- OPC\_USE\_DCE\_FORWM
- OPCTRANM\_TIMEOUT
- OPC\_MSGM\_USE\_GUI\_THREAD
- OPC COMM REGISTER RPC SRV
- OPC\_COMM\_RPC\_PORT\_FILE
- OPC DCE TRC OPTS
- OPC\_MSG\_FORW\_CHECKALIVE\_INTERVAL
- OPC\_MSGFORW\_BUFFERING

## **Obsolete APIs**

- opcsync\_inform\_user()
- opcmsg\_escalate()

#### **Miscellaneous**

Expressions <S> and <nS>

The pattern-matching expressions <S> and <nS> used in templates are obsolete.

- Obsolete itooprc parameters
  - which browser
  - auto and manual values for web\_browser\_type
  - ice proxy\*
  - web\_browser\_html\_appl\_result

- Obsolete values for configuration variable OPC\_JGUI\_INTERNBRW\_DISABLED
  - EMBEDDED
  - BOTH

## **Installation Notes**

Installation requirements, as well as instructions for installing HPOM, are documented in the *HPOM Installation Guide*. The document file is included on the product's DVD media at:

/Documentation/InstallationGuide.pdf

After installation the document can be found at:

/opt/OV/www/htdocs/ito\_doc/C/manuals/InstallationGuide.pdf

To check for recent updates or to verify that you are using the most recent edition, go to the Support web site.

HPOM 9.0x introduces a new approach to product installation and configuration. Installing and configuring the HPOM software on the management server are fast and easy procedures due to the HPOM installation and configuration scripts, <code>ovoinstall</code> and <code>ovoconfigure</code>, which guide you through the entire installation and configuration procedure.

For general installation requirements, see Chapter 2, "Management Server and Java GUI Installation Requirements."

For detailed information about the prerequisites, which must be met before installing and configuring HPOM, and the procedures themselves, refer to the *HPOM Installation Guide*.

The /README.txt readme file describes the HPOM media DVD contents and layout and help you to locate products and documentation.

## **Hardware Requirements**

Make sure that your system meets the following hardware requirements:

 The HTTPS Agent requires up to 300 MB of disk space, and up to 600 MB during the installation or upgrade.

## **Software Requirements**

This section lists additional software requirements that are not documented in the HP support matrices. To check for recent updates on the HPOM management server and HTTPS agent supported operating systems, visit the following URL: http://support.openview.hp.com/selfsolve/document/KM323488.

You will also receive updated or new editions if you subscribe to the appropriate product support service. Contact your HP sales representative for details.

#### **Management Server**

For detailed information about the management server software requirements, refer to the *HPOM Installation Guide for the Management Server*.

Refer to Chapter 2 of the HPOM Installation Guide for the Management Server for detailed instructions on how to install HPOM, and to "Known Problems, Limitations, and Workarounds" on page 19 for known problems and their workarounds.

## **NOTE**

It can be very helpful to set the PATH variable to include the following HPOM directories on the management server: /opt/OV/bin, /opt/OV/bin/OpC, /opt/OV/nonOV/perl/a/bin and /opt/OV/bin/OpC/utils.

Likewise, export the MANPATH variable to access HPOM manpages:

export MANPATH=\$MANPATH:/opt/OV/man

#### **Oracle Database**

The supported Oracle database version is 11.1.0.7. Oracle Database 11g Release 1 with 11.1.0.7 Patch Set and higher must be installed to provide important enhancements in security and reliability.

The Oracle compatible parameter specifies the release with which Oracle must maintain compatibility to. By default, an HPOM installation sets the Oracle compatible parameter to 11.1.0.0.

**IMPORTANT** Install the Oracle binaries *before* the HPOM 9.0x installation, but *do not* create any kind of database, because HPOM requires specific settings.

#### Java GUI

Before installing the HPOM Java GUI, ensure that your system meets the following hardware and software requirements described in this section.

HPOM bundles JRE for all supported MS Windows platforms. For all other platforms you must download the required Java Runtime.

Table 1 **Support Matrix - Java GUI** 

Java Runtime	JRE	JRE Plug-in	JRE Plug-in	JRE Plug-in
ТҮРЕ	as Application	Internet Explorer 5.5, 6, 7	Safari 1.3.2	Mozilla 1.7
Windows 2000 Windows XP Windows 2003 Windows Vista	1.6.0_12	1.6.0_12	N/A	1.6.0_12
Windows 2003 for Itanium	N/A	1.6.0_12	N/A	1.6.0_12
Red Hat Enterprise Linux 5.2, 5.3 Solaris 10	1.6.0_12	N/A	N/A	1.6.0_12
HP-UX Itanium 11.31	1.6.0_10	N/A	N/A	1.6.0_10
Mac Os	1.6.0_7	N/A	1.6.0_7	1.6.0_7

If the default JRE version installed with the operating system is not the same as the one required by HPOM, install the supported Java Runtime Environment JRE from the following location:

http://www.hp.com/products1/unix/java/

Set the location of the installed JRE directory to the <code>JAVA\_DIR</code> environment variable, for example.:

export JAVA DIR=/opt/OV/nonOV/jre/b

#### **HTTPS Agents**

HPOM 9.02 is delivered with HP Operations agent 8.60. HPOM 9.02 can communicate with other 8.xx HP Operations. For more information about the supported HP Operations agent versions, platforms, known problems and workarounds, refer to the HP Operations Agent Release Notes which can be found at the following location: http://support.openview.hp.com/selfsolve/manuals

As a prerequisite for the HP Operations agent installation, your system must meet operating system specific software and hardware requirements. Supported platforms and requirements can be found online at the following location: http://support.openview.hp.com/selfsolve/document/KM323488

IMPORTANT Make sure you have either REXEC, RSH, or SSH services enabled on the remote agent before you start the HPOM agent installation from the HPOM management server. Otherwise the agent installation fails.

#### **NOTE**

During the installation, make sure that you select the right machine type for Linux RedHat AS 4 64-bit operating systems (the agent from the linux/x86/linux26 directory must be used):

Platform Selector Machine Type OS Name linux/x86/linux26 Intel/AMD x86(HTTPS) Linux 2.6

#### **Known Installation Problems and Workarounds**

## **Symptom: Errors during uninstallation of some packages**

At the management server uninstallation, the following errors may occur, if some product that depends on the same packages as the HP Operations management server is left on the system:

```
ERROR:
           Error occurred while removing HPOvTomcatB package
    Please check /var/opt/OV/log/OpC/mgmt_sv/installation.log.error
for details
```

#### **Solution**

Use skip to continue uninstallation for every occurrence. For example:

[repeat,skip,back,exit,?] : skip

## **Symptom QCCR1A96895**

## Installation of local agent on ZFS failed

During the initial HPOM 9.02 installation, local agent installation on Solaris zones with ZFS file system may fail with the following error:

```
Installing local Agent . . . . . . . . . . . . . FAILED
ERROR: Agent installation failed. Please check
/var/opt/OV/log/OpC/mgmt_sv/installation.log for details.
```

#### **Solution**

You can safely ignore this error and continue with installation. However, you must perform the following action on the server node after the management server installation is finished:

```
# /opt/OV/bin/OpC/opcsw -installed <local_srv_node>
```

## **Symptom QCCR1A96767**

## Shared file systems are not mounted after removing HPOM in a Sun Cluster with ZFS environment

When removing the HPOM software from a Sun Cluster with ZFS environment, shared file systems on the active cluster node are unmounted during the unconfiguration phase and HPOM files located on these shared file system are not removed.

#### **Solution**

After unconfiguration phase is finished, manually mount shared directories:

```
/var/opt/OV/share
/etc/opt/OV/share
/var/opt/OV/shared/server
```

#### Symptom QCCR1A98812

## Remote database configuration fails with ORA-01450: maximum key length (6398) exceeded

After the HPOM is installed and the database is created as a remote database, the database configuration fails with the following error:

```
Error opcdbinst(6722) : Database: ORA-01450: maximum key length (6398) exceeded <
  (OpC50-15)
Aborting installation of HPOM tables in database. (OpC55-1)
ERROR: Error occurred in the program opcdbinst during creation of the database tables.</pre>
```

#### **Solution**

Instead of the default block size of 8K for the database, use the block size of 16K as documented in the *HPOM Installation Guide*:

```
db block size 16384
```

IMPORTANT You cannot change the specified block size afterwards. If you use the default block size, you will need to drop the database and create it again with the correct db\_block\_size.

## **Migration from Previous Product Versions**

If you have a previous version of HPOM installed on Solaris 8 or Solaris 9, HP-UX 11i v2 or 11i v3, you can migrate it to the HPOM for UNIX 9.02. For details, see HPOM Installation Guide.

## **Known Problems, Limitations, and Workarounds**

## **Management Server**

## Symptom QCCR1A92608

## Database creation on Solaris 10 may fail even if DISABLE\_NUMA is set to TRUE and exported

The creation of the database on Solaris 10 may fail with the following errors even if the DISABLE\_NUMA environment variable is set to TRUE and exported:

```
ORA-12853: insufficient memory for PX buffers
ORA-04031: unable to allocate ... bytes of shared
```

#### **Solution**

Increasing memory\_target solves this problem.

To increase memory\_target, modify /opt/OV/bin/ovdbsetupol\_opc.sh by changing the following line:

```
memory_target = 500M
to
memory_target = 750M
```

**IMPORTANT** This change must be made after installing the server patch, but before calling ovoconfigure or opcdbsetup. memory\_target can be set to an even higher value, if needed.

## **Symptom QCCR1A56839**

#### Implications of mgrconf/configsettings being policies

Since mgrconf and configsettings are policies with HPOM 9.xx, they are disabled by opctemplate -disable -all and ovpolicy -disable -all. This can have unexpected implications. For example, running a status or an action from a management server fails, even if the server is the primary manager, unless the requesting server is configured as the default manager.

## **Symptom QCCR1A58840**

## While purging policies in MOM setup, mgrconf policies also get purged

When purging policies in a MoM setup, all the policies on the node are purged, including the mgrconf policy. Because the HPOM for UNIX and the HPOM for Windows servers are in the MoM setup, you cannot switch the agent to the HPOM for UNIX server if the mgrconf policy is purged.

#### Symptom QCCR1A95152

#### HPOM 8.xx reports may fail on HPOM 9.xx because of missing condition tables

If you upgrade HPOM 8.xx to HPOM 9.xx, you can use the HPOM 8.xx reports. However, HPOM 8.xx reports (copied or customized from HPOM 8.xx or current OV Reporter and OVPI report pack reports) may fail if they query the HPOM 9.xx database. This happens because some template and condition tables were obsolete with the HPOM 9.xx (opc\_monitor\_cond, opc\_trap\_cond, and opc\_cond).

#### **Solution**

Update the HPOM 8.xx reports so that the condition from the opc\_monitor\_cond, opc\_trap\_cond, and opc\_cond tables are not queried.

## **Symptom QCCR1A97940**

## There is no policy storm ECS policy

Message storm detection functionality cannot be used properly because some message storm ECS policies are missing.

#### **Solution**

Hotfix is available at HP Support.

## Symptom QCCR1A99570

## Missing new Composer.eco on HPOM

There is an old Composer.eco file on the HPOM management server.

#### Solution

Update the Correlation Composer policy, as follows:

- 1. Remove existing policy:
  - # /opt/OV/bin/OpC/utils/opcpolicy -remove pol\_name="Correlation Composer" pol\_type=ec

#### **NOTE**

After removing this policy, node assignments are also removed.

- 2. Back up the existing Correlation Composer policy file:
  - # cd /var/opt/OV/share/tmp/OpC\_appl/defaults/C/POLICIES/
    # cp 5e295388-e461-11dc-b7d0-00306ef38b73 circuit \
  - 5e295388-e461-11dc-b7d0-00306ef38b73 circuit.ORIG
- 3. Update the Correlation Composer policy file:
  - # cp /var/opt/OV/share/tmp/OpC\_appl/defaults/C/TEMPLATES/EC/CIRCUITS/ecs\_comp.eco \
    ./5e295388-e461-11dc-b7d0-00306ef38b73\_circuit
- 4. Upload the updated Correlation Composer policy:
  - # /opt/OV/bin/OpC/utils/opcpolicy -upload \
    file=5e295388-e461-11dc-b7d0-00306ef38b73\_header.xml mode=replace
- 5. Assign and deploy Correlation Composer policy to the management server and managed nodes by using the openede and operagt commands.

## **Symptom QCCR1A97399**

#### opcecm is not able to load ecs circuit and associated fact/data store files

When you deploy an event correlation policy to the management server or when you restart the opcecm process, the following warning message is printed to the System.txt:

```
Cannot load policy. Reason: (xpl-85) open(/var/opt/OV/shared/server/conf/sec/seed.dat) failed. (OpC40-1867)
Ignoring the policies listed above. (OpC40-1899)
```

#### **Solution**

You can do one of the following:

• At runtime, manually send the SIGUSR1 signal to the opceom process (man kill (1M)). This reloads all configuration settings and loads the following circuit file associated with the assigned and previously distributed event correlation policy:

/var/opt/OV/shared/server/datafiles/policies/ec

• If the above workaround does not help, create an empty seed.dat file:

```
# mkdir /var/opt/OV/shared/server/conf/sec
# touch /var/opt/OV/shared/server/conf/sec/seed.dat
```

### **Symptom QCCR1A90489**

## Category instrumentation from the <OS\_VERSION> directory is not deployed

The instrumentation files for any category in the *<OS\_VERSION>* directory tree may not be deployed. After deployment of the instrumentation to the agent, the instrumentation files are not written to the directory on the agent.

## For example, after deployment of

/var/opt/OV/share/databases/OpC/mgd\_node/instrumentation/<category\_name>/Unix/Linux/x86/2.6/<any\_script.sh> to the Linux agent, the <any\_script.sh> files are missing from the /var/opt/OV/bin/instrumentation directory on the agent.

## **Solution**

A Hotfix is available at HP Support.

**IMPORTANT** The hotfix must be installed before the remote agent installation. The hotfix eliminates the problem only for the newly installed agents.

To resolve this problem for the agents that were installed before the hotfix, run the following command on the management server:

```
# ovdeploy -cmd ovodetect -host <agent_system>
```

Redeploy instrumentation to the agent system:

```
# opcragt -distrib -instrum <agent_system>
```

#### **Symptom QCCR1A98892**

#### Linux/2.6/x64 files get deployed to RHEL\_X86 node

During instrumentation deployment, instrumentation files for the x64 processor architecture are deployed to the nodes of the x86 processor architecture.

#### **Known Problems, Limitations, and Workarounds**

#### **Solution**

Hotfix is available at HP Support.

## **Symptom QCCR1A90549**

## During deployment, a warning message is written to System.txt

# 0: WRN: Thu Apr 2 10:56:49 2009: opcbbcdist (4327/7): [DBHandler.cpp:1790]: Error occurred while getting instrumentation value: Type is MAP\_CPU\_TYPE. Assd value is ia64. (OpC40-2700)

#### **Solution**

This message can be safely ignored.

#### **Symptom QCCR1A97562**

## opcnode -assign\_cat should not allow assignments per particular category/node combination, if pair already exists in the database

Assigning category to a node using the <code>opcnode</code> <code>assign\_cat cat\_list=<category></code> <code>node\_list=<node></code> command multiple times in a row will produce unexpected behavior during deployment. Consequently, you cannot de-assign a particular category or node.

#### **Solution**

Keep de-assigning the category or node until you get the following error message:

Error: 'Requested Object not found'

## **Symptom QCCR1A96113**

## Installing local agent on active node in cluster environment failed

Installing local agent on active node in cluster environment failed because the root's password could not be read.

#### **Solution**

You can manually install local agent:

- # /opt/OV/lbin/ovharg -monitor ov-server disable
- # /opt/OV/bin/OpC/agtinstall/inst.sh <node name>
- # /opt/OV/lbin/ovharg -monitor ov-server enable

#### **Symptom QCCR1A98561**

## The server processes cannot be started because the password of the Oracle user opc\_op expired

With Oracle 11g, password aging is enabled by default and passwords expire in six months. If the password of the Oracle user <code>opc\_op</code> expires, the HPOM processes are no longer able to connect to Oracle.

#### **Solution**

- 1. Change the password in the database and in the HPOM password file using the following command:
  - # /opt/OV/bin/OpC/opcdbpwd -set
- 2. Because of an Oracle defect (Bug 7462851) set the opc\_op password manually.

**IMPORTANT** Be sure to use the same password as for the /opt/OV/bin/Opc/opcdbpwd -set command:

```
# su - oracle
$ sqlplus /nolog
SQL> connect / as sysdba
SQL> alter user opc_op identified by <password>;
SQL> exit
```

- 3. Update the Admin UI with the changed password using the following commands:
  - # /opt/OV/OMU/adminUI/adminui clean
  - # /opt/OV/OMU/adminUI/adminui password -u ovodb -a -p <password>

Now you should be able to start the processes again.

4. Make sure that the processes that were started before changing the password can be restarted. Re-start the processes using the following commands:

```
# ovc -kill
# ovc -start
```

5. Change other Oracle passwords, for example, opc\_report, sys, and system as follows:

```
# su - oracle
$ sqlplus /nolog
SQL> connect / as sysdba
SQL> alter user opc_report identified by <new-password>;
SQL> alter user system identified by <new-password>;
SQL> alter user sys identified by <new-password>;
SQL> exit
```

If you want to disable password aging, do the following:

```
# su - oracle
$ sqlplus /nolog
SQL> connect / as sysdba
SQL> ALTER PROFILE default LIMIT PASSWORD_LIFE_TIME UNLIMITED;
SOL> exit
```

For more information about Oracle password aging and password complexity, see the Oracle documentation.

## **Symptom QCCR1A97558**

## During server upgrade "unknown test operator" error appears, basic cluster environment

During server upgrade in the cluster environment, the following errors appear:

```
- Do you want to re-use existing HA resource group configuration [exit,back,?,y|n,"y"] ? > /opt/OV/lbin/ovharg[70]: /var/opt/OV/hacluster/ov-server/trace.log: unknown test operator /opt/OV/lbin/ovharg[81]: /var/opt/OV/hacluster/ov-server/error.log: unknown test operator
```

#### **Solution**

These errors can be safely ignored.

## **Symptom QCCR1A57809**

## Templates are still assigned to physical nodes after changing name to Virtual Node

When you run the <code>opc\_node\_change.pl</code> script after changing the virtual node name, the old virtual node name is not deleted. Consequently, policy assignments to the old virtual node are not changed. If you unassign policies from the new virtual node, they are still assigned to old virtual node, and are still distributed to the physical nodes.

#### **Solution**

Unassign manually policies from the old virtual node group, delete nodes from that group, and delete the group, using the openede command:

```
# /opt/OV/bin/OpC/utils/opcnode -deassign_pol_group -node_name=<node_name> \
-net_type=<network_type> -pol_group=<policy_group_name>
# opcnode -deassign_node group_name=<nodegrp_name> node_name=<node_name> \
-net_type=<network_type>
# opcnode -del_group group_name=<nodegrp_name>
where <nodegrp_name> is the old virtual node name.
```

#### **Symptom QCCR1A89492**

## The opccfgupld -check option does not check policies and policy groups

#### Solution

For policies you can use the following command to perform a syntax check:

```
# /opt/OV/bin/OpC/utils/opcpolicy -check <policy_data_file>
```

Policy groups should only be modified using the opcoolicy command line utility or through GUI so that no syntax check becomes necessary.

#### Symptom QCCR1A90865

# Warning messages on the standard output and in System.txt during upload of HPOM 8.xx configuration:

```
Warning - Platform missing (net/machine=1/17).
Warning - Platform missing (net/machine=1/41).
Warning - Platform missing (net/machine=1/40).
Object already available in database (opc node defaults: 1/43).
Warning - Platform missing (net/machine=1/27).
Object already available in database (opc_node_defaults: 1/44).
Warning - Platform missing (net/machine=1/6).
Object already available in database (opc node defaults: 1/49).
Object already available in database (opc node defaults: 1/0).
Warning - Platform missing (net/machine=1/38).
Object already available in database (opc_node_defaults: 1/47).
Warning - Platform missing (net/machine=1/11).
Object already available in database (opc node defaults: 1/45).
Object already available in database (opc node defaults: 5/20).
Warning - Platform missing (net/machine=1/26).
Warning - Platform missing (net/machine=1/9).
Warning - Platform missing (net/machine=1/8).
Warning - Platform missing (net/machine=1/10).
Object already available in database (opc node defaults: 1/50).
Warning: not all requested objects were processed.
```

#### **Solution**

The warning messages can be safely ignored. All warnings appear when DCE platforms are uploaded.

#### Symptom QCCR1A90937

## During upgrade from HPOM 8.xx to 9.0x, opccfgupld on HPOM 9.0x aborts while processing template groups

This occurs on the HPOM 8.xx system when the configuration setting OPC\_DOWNLOAD\_TEMPL\_INDIVIDUAL is set to TRUE. Several lines of output similar to the following are produced to stderr and to the opccfgupld logfile /var/opt/OV/log/OpC/mgmt\_sv/opccfgupld.log on HPOM 9.0x before the program exits with 1: "Illegal value OSSPI\_SOL\_NP\_Filesystems\_1 (function upload: templ group conversion)"

Any data that should have been uploaded after the template groups is skipped.

#### **Solution**

- 1. Check to see if the HPOM 8.xx setting for OPC DOWNLOAD TEMPL INDIVIDUAL is set to TRUE:
  - # /opt/OV/bin/ovconfget -ovrg server opc OPC\_DOWNLOAD\_TEMPL\_INDIVIDUAL
- 2. If yes, repeat the download on 8.xx with the setting changed to FALSE:
  - # /opt/OV/bin/ovconfchg -ovrg server -ns opc -set OPC\_DOWNLOAD\_TEMPL\_INDIVIDUAL FALSE
  - # rm -rf previous download dir>
  - # /opt/OV/bin/OpC/opccfgdwn <options\_from\_last\_call> call> download\_dir>
- 3. Copy the download directory to the HPOM 9.0x system and repeat the upload:
  - # /opt/OV/bin/OpC/opccfgupld -replace -subentity <further options from last\_call>

After that, the HPOM 9.0x database should be consistent again.

#### **Symptom QCCR1A90622**

## Invalid network type for nodes of type PATTERN\_OTHER.

After a node with the network type PATTERN\_OTHER is added, its network type is set to PATTERN\_IP\_NAME.

#### **Solution**

This is expected behavior, as PATTERN\_OTHER is internally mapped to PATTERN\_IP\_NAME. Keyword PATTERN\_OTHER is deprecated. Use PATTERN\_IP\_NAME instead.

## **Symptom QCCR1A96746**

## Certificate request grant and add node functionality failing for AIX LPAR nodes

The add and grant functionality is failing for AIX LPAR nodes on AIX 5.3 and 6.1.

#### **Solution**

- 1. Manually add the node using the openode command. For example:
  - opcnode -add\_node node\_name=<nodename> net\_type=NETWORK\_IP group\_name=solaris mach type=MACH BBC AIX PPC
- 2. Manually grant the certificate request using the following command:
  - # opccsa -grant <certificate request ID>

You can obtain CertID using the following command:

```
# opccsa -list_pending_cr
```

#### **Symptom QCCR1A92899**

#### Install of agent on a Linux node with the latest glibc version (2.9 and higher) fails.

Installation fails due to incorrect recognition of the glibc version (versions higher than 2.9). When using the latest version (2.10.1), the installation script incorrectly recognizes it as version 2.1 and exits, because version 2.1 is too old.

## **Symptom QCCR1A95886**

#### Error message in System.txt during deinstallation of remote agent

During remote agent deinstallation or re-installation, the following errors appear in the System.txt file on the management server:

```
0: ERR: Wed Aug 26 13:18:48 2009: ovdeploy (8173/1): (depl-86) Unable to execute command
'opc_inst' on node '<node>'.
1: ERR: Wed Aug 26 13:18:48 2009: ovdeploy (8173/1): (depl-176) Message returned from host
'<node>':
2: WRN: Wed Aug 26 13:18:48 2009: ovdeploy (8173/1): (bbc-422)
HttpOutputRequestImpl::ReceiveResponse() caught OvXplNet::ConnectionRefusedException_t.
<null>
3: WRN: Wed Aug 26 13:18:48 2009: ovdeploy (8173/1): (bbc-71) There is no server process
active for address: https://<node>/com.hp.ov.depl/bbcrpcserver.
0: ERR: Wed Aug 26 13:20:21 2009: ovoareqsdr (9482/1): [rqshbp.cpp:1669]: OV Communication
Broker (ovbbccb) on nod <node> is down. (OpC40-1913)
```

#### Solution

These errors and warnings can be safely ignored.

#### **Symptom QCCR1A90155**

#### There is no localized manual on the management server.

If you are logged in to the Chinese Java GUI and click Operator's Guide (PDF), you will get an error, because localized manuals are not yet available.

#### **Solution**

Use the English version of manual which is located on server: /opt/OV/www/htdocs/ito\_doc/C/manuals/

#### **Symptom QCCR1A93476**

#### Get HBP error for node modified by opcchgaddr, although HBP is disabled

After changing node address using opcchgaddr, the following error displays in the browser, though HBP is disabled:

Node ovresx4-vm29.rose.hp.com is probably down. Contacting it with ping packages failed. (OpC40-436)

#### **Solution**

None.

#### Symptom QCCR1A61275

## During ovoremove, an error occurs while removing HPOvCtrl or some other package

During server removal using the ovoremove script, a message similar to the following appears:

```
HPOvCtrl (6.10.025) . . . . FAILED

ERROR: Error occurred while removing HPOvCtrl package

Please check /var/opt/OV/log/OpC/mgmt_sv/installation.log.error for details
```

After checking the installation log files, you find that the reason for this problem is package dependency.

#### **Solution**

This package cannot be removed because some other packages depend on it. For this reason, use skip to continue. This will skip package removal, and the package will stay on the system. For example:

[repeat,skip,back,exit,?] : skip

#### **Symptom QCCR1A90462**

#### opcconn\_cs\_reset() sometimes does not reset status message

It is possible that after calling <code>opcconn\_cs\_reset()</code> API function the status message is not reset.

#### Solution

To ensure that you always get the correct message, call <code>opcconn\_cs\_set()</code> with an empty string (not <code>NULL!</code>) as the 'message' parameter after calling <code>opcconn\_cs\_reset()</code>.

#### **Symptom QCCR1A90808**

**System.txt: There is no server process active for address:** 

'https://localhost/com.hp.ov.agtrep.notificationreceiver/bbcrpcserver'

This error message may be printed in System.txt every time the ovconfchq operation is executed.

#### Solution

If no policy of type svcdisc was deployed to an agent, the error message can be ignored.

#### Symptom QCCR1A89584

## All policies can be assigned to \$MGMTSV

Currently, there is no type checking when assigning policies to the management server using the \$MGMTSV keyword with openode command-line utility. Only event correlation policies are effective when deployed to management server, although there are no adverse effects if policies of other types are deployed as well. It may, however, lead to confusion.

## **Solution**

Make sure that only event correlation type policies are assigned to the management server when using \$MGMTSV keyword with openode <code>-assign\_pol</code>. Any types of policies can be assigned to the HP Operations agent running on the management server machine. For this assignment, use the local node name instead of the \$MGMTSV keyword.

## Symptom QCCR1A98226 opccfgupld is failing with error

When SPI is being installed, opccfgupld is invoked for uploading policies. If CONDITION\_ID is set to "" in the policy body, opccfgupld crashes.

#### **Solution**

A Hotfix is available at HP Support.

#### **Symptom QCCR1A99897**

#### Create message with Incident web-service not possible on Solaris

Some third-party products that use OPCDATA\_ESCAL\* definitions may not work properly.

#### Solution

Hotfix is available at HP Support.

## Symptom QCCR1A96506 MoM changes not detected

Sometimes the Message Manager does not detect changes to the msgforw file even after the ovconfchg utility was invoked. If the Message Manager does not automatically reread the configuration file, manually restart the Message Manager process.

#### Solution

Restart the Message Manager process with the following command:

```
# ovc -restart opcmsgm
```

#### **Symptom QCCR1A96748**

## Backup scripts may fail to recover DBID from database.

This happens if the opc\_op user does not have permissions to select data from the v\_\$database view.

#### **Solution**

Specify connection string in the backup command. For example:

# opcbackup\_online -v -c system/manager@ov\_net -s /backup1 -r /backupdb1

## **Symptom QCCR1A89335**

## System.txt: Certificate request with the id '<some\_id>' could not be found in the queue.

The following warning messages appear in System.txt if you automatically add a node to the HPOM database right after granting the certificate; for example, when using opccsa -grant -add\_node <hostname/CertreqId>:

```
0: INF: Tue Mar 10 01:18:17 2009: opccsad (29908/3): Deleting certificate request with id '0fbef264-9322-7538-0203-d2dd529263df'.
```

0: WRN: Tue Mar 10 01:18:17 2009: opccsad (29908/3): Certificate request with id '0fbef26 4-9322-7538-0203-d2dd529263df' could not be found in the queue.

#### **Solution**

The warning messages in System.txt can be safely ignored

#### **Symptom QCCR1A90244**

## OVO or ITO string can still be present

In API manpages and sql reports, some strings may contain old product names: OVO, ITO, or VPO.

#### **Solution**

Read these strings as "HPOM".

#### **Symptom QCCR1A96904**

## Manpages fail to show correctly if output is too wide

Some manpages are too wide and, when called on Solaris, do not display appropriately. For example, some lines are wrapped above the current line instead of below, and other.

#### Solution

Check those manpages using web interface, on http://<server>:3443/ITO\_MAN

### Symptom QCCR1A97947

## opciter\_api manpage is missing

The opciter api manpage is not available on the management server or through the web interface.

#### Solution

Use the opciter manpage or the http://<server>:3443/ITO\_MAN/opciter.3.html link instead.

## Symptom QCCR1A96977

## manpage for opcinstrum\_modify\_categories function is missing

#### **Solution**

None.

## **Symptom QCCR1A93476**

## Get HBP error for node modified by opcchgaddr, although HBP is disabled

After changing node address using opechgaddr, the following error displays in the browser, though heartbit polling (HBP) is disabled:

Node ovresx4-vm29.rose.hp.com is probably down. Contacting it with ping packages failed. (OpC40-436)

#### **Solution**

None.

### Symptom QCCR1A96972

## Utility opc\_chg\_ec does not list any event correlation policies

When running the <code>opc\_chg\_ec -list</code> command, event correlation policies are not listed and several errors occur.

Due to changes in policy handling and modifications to the HPOM database, this tool is no longer usable and has become obsolete.

#### **Solution**

Circuit name modification can be achieved by editing the corresponding policy body. The list of all event correlation policies can be retrieved using the opepolicy command line tool.

To obtain the list of all EC policies, run the following command:

# opcpolicy -list\_pols pol\_type=Event\_Correlation

#### **Symptom QCCR1A59453**

#### opetrapi reported as not running since NNM is no longer on the management server

The standard SNMP policy is deployed to the management server by default. However, opetrapi does not run because NNM is no longer on the same system as the management server. The following error occurs:

Error msg: "Can't connect to OV daemon 'PMD' to open SNMP session: connect failed"

#### **Solution**

To eliminate this error, set the SNMP\_SESSION\_MODE variable:

# ovconfchg -ns eaagt -set SNMP SESSION MODE NO TRAPD

#### Symptom QCCR1A98151

## ovoinstall: HPOvOSiS post-install issues

HPOvOSiS post-installation steps fail because the opcsvcm process is not running and the perl version is incorrect.

#### **Solution**

After installing the management server, run the following command:

# /opt/OV/bin/OpC/utils/mof\_cfgupld.sh \
/var/opt/OV/share/tmp/OpC\_appl/sitescope/C/SERVICEMODEL/DiscoverSiteScope.mof

#### **Symptom QCCR1A91820**

## HP Performance Manager tools executed on another HP Performance Manager server require clean-up before installing HP Performance Manager integration

After installing new version of HP Performance Manager or upgrading it, the old HP Performance Manager server name is still used for HP Performance Manager. The problem is that the HP Performance Manager installation script fails to change the HP Performance Manager server name in the database:

/opt/OV/contrib/OpC/OVPM/install OVPM.sh < new OVPM server>:8081

#### **Solution**

Before installing a new HP Performance Manager server on the HPOM management server, remove all the HP Performance Manager policies and tools. For example:

```
/opt/OV/bin/OpC/opcappl -del_app app_name="OVPM Global History"
/opt/OV/bin/OpC/opcappl -del_app app_name="OVPM HTML contrib"
/opt/OV/bin/ovconfchg -ovrg server -ns opc -clear OPC_OVPM_GRAPH
```

## **Symptom QCCR1A94498**

## How to configure HP Performance Manager if you didn't do it during installation

#### Solution

If you didn't install HP Performance Manager during the HPOM installation and you want to install it later, run the following command:

# /opt/OV/contrib/OpC/OVPM/install OVPM.sh <nodename>:<port>

For example:

# install\_OVPM.sh elisa.deu.hp.com:8081

#### **Symptom QCCR1A97123**

#### When PM is installed together with HPOM server "ovpm stop" shouldn't stop ovtomcatB process

When you install HP Performance Manager 8.20 on the system where HPOM server is installed and stop the ovpm process using the <code>/opt/OV/bin/ovpm</code> stop command, also the <code>ovtomcatB</code> process is stopped. When <code>ovtomcatB</code> is not running, the web access to the HPOM management server is not possible and you cannot browse HPOM html manpages, manuals, Java GUI launcher, etc.

#### **Solution**

None.

#### **Symptom QCCR1A95630**

## Deployment of PA on local node (mgmt sv) fails on HPOM server

The HPOM server which handles subagent installation (opcbbcdist) is stopped when PA installation script that is running on the node calls ovc -kill. Deployment of PA on local node fails, as HPOM server is stopped.

#### **Solution**

Install the subagent manually and then call opcragt -subagent -active to mark the subagent as installed. For example:

# opcragt -subagent -active PA\_Deploy\_HP < nodename >

#### **Symptom QCCR1A96745**

# ovoremove fails to remove HPOvXpl because of dependencies to HPOvLczC, HPOvLces, HPOvLcko, HPOvLcja

ovoremove fails when removing HPOvXpl with the following error:

```
HPOvSecCo (6.20.050) . . . . Removed

HPOvXpl (6.20.054) . . . FAILED

ERROR: Error occurred while removing HPOvXpl package

Please check /var/opt/OV/log/OpC/mgmt_sv/installation.log.error for details.
```

#### **Solution**

Ignore this error by selecting skip. After ovoremove finishes, remove the packages manually if they are not needed by other products. Use the following command:

# pkgrm HPOvXpl HPOvLczC HPOvLces HPOvLcko HPOvLcja

## **Symptom QCCR1A90795**

## SiteScope tools are not shown in Java GUI for any operator

The SiteScope integration uploads series of tools to the HPOM database, but these tools are not assigned by default to any operator, so these tools are not shown in the Java GUI.

### **Solution**

Manually assign the SiteScope tools to the operators using the operators command or Administration GUI. See the operators man page for more information.

## **Symptom QCCR1A96583**

## The maximum length for a node name may vary.

While the database accepts a maximum of 2048 characters for a given fully qualified domain name (FQDN), consider that there may be limitations on the DNS server, the operating system level, or other programs that may cause HPOM not to function properly with these nodes.

#### Solution

FQDNs should not exceed 256 characters. If they do, it may be helpful to add an IP/nodename entry in the /etc/hosts file.

#### **Symptom QCCR1A90167**

#### Non IP Node gets resolved if name is in DNS

When you try to add a non-IP node that is registered in the DNS, its network type is changed from OTHER to IP and you get a warning. The result is that the non-IP node has an IP network type.

For example:

```
# /opt/OV/bin/OpC/utils/opcnode -add_node node_name=ovruxt62.rose.hp.com \
net_type=NETWORK_OTHER mach_type=MACH_BBC_OTHER_NON_IP group_name=hp_ux layout_group=/
```

```
Warning: Mismatch between node name and IP address (according to the DNS) Please check to which IP address the hostname is resolved and if that IP is resolved back to the original hostname.
```

Operation successfully completed.

Checking with openode  $\mbox{-list\_nodes}$  shows that it was added as an IP node with the MACH\_BBC\_OTHER\_NON\_IP platform:

# /opt/OV/bin/OpC/utils/opcnode -list\_nodes node\_list=ovruxt62.rose.hp.com

#### **Known Problems, Limitations, and Workarounds**

#### **Solution**

It is not possible to add an IP node (a node that is resolvable and has an IP address) as non-IP node. Change the invalid platform from non\_ip/other/other using openode -chg\_machtype.

For example:

```
# /opt/OV/bin/OpC/utils/opcnode -chg_machtype node_name=ovruxt62.rose.hp.com \
net_type=NETWORK_IP mach_type=MACH_BBC_OTHER_IP
```

## **Symptom QCCR1A96655**

## Errors or unnecessary Java messages at the end of backup/restore scripts

When Admin UI is installed on the server, backup and restore scripts call integration scripts to back up and restore also Admin UI config. These scripts may fail with error messages during the backup or restore execution.

#### **Solution**

Check for an updated version of Admin UI.

#### **Symptom QCCR1A97290**

## If Oracle service (\$ORACLE\_HOME/network/admin/listener.ora) is disabled, the Admin UI cannot connect to the HPOM server

If you disable the Oracle service by modifying  $ORACLE\_HOME/network/admin/listener.ora$  using the OvProtect utility, Administration UI will not be able to connect to your management server.

#### **Solution**

Do not disable the Oracle service using the OvProtect utility.

## **Symptom QCCR1A92949**

## Non-IP Node gets resolved if name is in DNS

When creating a non-IP node, its name is registered in the DNS. Though the node is created, it overwrites the network type from OTHER to IP. The result is a non-IP node with machine type NON\_IP and network type IP. The following exception occurs:

Mismatch between node name and IP address (according to the DNS) Please check to which IP address the hostname is resolved and if that IP is resolved back to the original hostname.

#### Solution

None.

## Symptom QCCR1A92537 Cannot open pipe oprtjnitp

After installation of HPOM, the following error is seen in System.txt:

0: ERR: Fri May 15 19:03:23 2009: opcdispm (15894/1078278464): [mpisv.c:816]: Cannot open pipe

/var/opt/OV/share/tmp/OpC/mgmt\_sv/oprtjnitp. open(2) failed. No such device or address (OpC40-616)

#### **Solution**

None.

## **Symptom QCCR1A99535**

## **README.txt on DVD not updated for HPOM 9.02**

README. txt on DVD contains an outdated information. For example, the packages have SPARC extension instead of DEPOT, Catalogs folder is not mentioned though it exists on the DVD, and xml files are mentioned though they are not a part of DVD.

#### **Solution**

You can safely ignore this problem.

## **Symptom QCCR1A97498**

PAM Java GUI login with Kerberos authentication module does not work on systems with Solaris 10 update 4 or higher

#### **Solution**

None.

## **Java GUI**

#### **Symptom QCCR1A95972**

## Column filter from itoopbrw is not applied to quick filter

When you try to open a quick filter, the column filter from itoopbrw is not applied.

#### **Solution**

Manually apply the column filter to the opened browser.

#### **Symptom QCCR1A96567**

#### Deadlock when opening many filtered history browsers at once from object pane

The whole Java GUI stops responding when trying to open many filtered history browsers at once from the Object pane.

#### **Solution**

Open each filtered history browser separately.

#### **Symptom QCCR1A94819**

## Drag&drop of column filter always opens browser in workspace pane

When dragging a column filter from the Object pane to the Browser pane, it opens in the Workspace pane.

#### **Solution**

Manually put opened browser from the Workspace pane to the Browser pane.

## Symptom QCCR1A97287 opcuihttps multiple coredumps

Process opcuinttps sometimes core dumps when stopped. Consequently, Java GUI cannot connect through the secure communication layer (HTTPS).

#### **Solution**

In case of a core dump, start the opcuinttps process manually.

#### **Symptom QCCR1A57461**

## Wrong cursor shape after resizing Windows/Dialogs

When using the HP One Voice or Metal look and feel, the cursor stays in resizing shape when it is inside the window or dialog, after quickly resizing windows or dialogs and releasing the mouse button. This can be visible:

- In windows: when the cursor is on the title bar or on menu bar.
- In dialogs: in the whole dialog.

#### **Solution**

Use a different look and feel.

## Symptom QCCR1A97439

#### Problem with ITO OP shared folder on MGMT server

Java GUI configuration files (itoopro, itoopbrw and the console session setting files) cannot be accessed by the Global Setting mechanism, if they are shared through the URL location used by the Tomcat (for example, http://<mgmt\_srv>:3443/ITO\_OP). Thus, the Global Settings mechanism gets unusable.

#### **Solution**

Put Java GUI configuration files on some location which is not shared by the Tomcat.

#### **Symptom QCCR1A56713**

## No notification about error with https\_only enabled

When variable https\_only is set to "yes" in ito\_op.bat and secure connection cannot be established, the user is not notified, but the login dialog appears again.

## **Solution**

Check the console for an error message.

#### **Symptom QCCR1A57053**

#### Read-only messages are not entirely correctly handled when using Java GUI as opc adm

When read-only messages (with an  $\mathbb{R}$  flag set) are selected together with normal messages, the following actions can be done: acknowledge, unacknowledge, own, disown, unbuffer, running actions, adding annotations.

This is a defect, it should not be possible to do anything with read-only messages. These problems occur only with the <code>opc\_adm</code> operator and some happen only with bulk mode disabled (<code>OPCUIWWW\_BULK\_MODE=FALSE</code>).

#### **Solution**

Use an non-admin operator (for example, opc\_op) to perform the required tasks.

#### **Symptom QCCR1A57332**

#### Key accelerator feature breaks some default Java key assignments

Some of the default Java key assignments do not work due to the way key accelerators are implemented in Java GUI.

#### **Solution**

None.

#### **Symptom QCCR1A55909**

## Java GUI cannot Connect when the ito-e-gui Service is in Maintenance State

If Java GUI cannot connect to the HPOM management server running on Solaris 10, it is possible that the ito-e-gui service is in maintenance state.

On Solaris 10, inetd.conf is obsolete, and ito-e-gui must be registered as a service. This service is responsible for starting the opcuiwww.sh script when Java GUI starts connecting to the HPOM Management Server.

If something goes wrong with <code>opcuiwww</code>, <code>ito-e-gui</code> switches into maintenance, and manual intervention is needed to put the service back online. When the service is in maintenance state, it is not possible to make a connection from the Java GUI.

#### **Solution**

To get the current service status, use the following command:

```
svcs | grep ito
```

If the ito-e-gui service status is maintenance, switch it back online using the following command:

```
svcadm clear /network/ito-e-qui/tcp
```

The Java GUI should now be able to connect to the HPOM Management Server.

## **Symptom QCCR1A58168**

## Java GUI should start if TNS\_ADMIN is in use without any customization

If you choose to use a different folder for storing the tnsnames.ora file, you may have problems when trying to run Java GUI.

#### **Solution**

- 1. Modify the /etc/inetd.conf file to start opcuiwww by using the opcuiwww.sh script:
  - # ito-e-gui stream tcp nowait root /opt/OV/bin/OpC/opcuiwww.sh opcuiwww.sh
- 2. Edit the /opt/OV/bin/OpC/opcuiwww.sh file to export the TNS ADMIN variable at the beginning:
  - # export TNS\_ADMIN=<alternate location>
- 3. Reconfigure inetd by entering the following:
  - # inetd -c

#### **Symptom QCCR1A58386**

## OPC\_MAX\_JAVA\_GUIS parameter has no effect

The  $\parbox{OPC\_MAX\_JAVA\_GUIS}$  parameter does not limit the number of simultaneous Java GUI connections when specified.

#### **Solution**

Use the DoS features of opcuiwww to limit number of simultaneous Java GUI connections.

#### Symptom QCCR1A58437

## Warning in System.txt when starting Java GUI ("bad input character...")

When starting Java GUI, the warning appears in the System.txt on the server. Otherwise, no other problems with the Java GUI occur.

#### **Solution**

Ignore the error.

## Symptom QCCR1A91542 Exception when exiting JGUI

When Java GUI is closed, the following exception appears in the console:

# ERROR MSG, 1:54:34 PM, com.hp.ov.it.comm.OvEmbHttpsClient:
https status - InternalServerError:text/html, Message = Opcuiwww socket error while reading
ERROR MSG, 1:54:34 PM, com.hp.ov.it.ui.OvEmbApplet:
java.io.EOFException
There was a problem closing the communication link to the server.

#### Solution

Ignore the message.

## **Symptom QCCR1A97517**

## JGUI freezes when try to export message on detached window

Action for exporting messages can cause sporadic deadlocks, when called from detached window. In case of a deadlock, Java GUI becomes unusable.

#### **Solution**

None.

## **Documentation Errata**

The following items are listed incorrectly in the documentation.

LOCATION	Topics in the Java Online Help, "To Customize the Progress Dialog Box" and "Saving the Browser Layout".		
	HPOM Java GUI Operator's Guide, Edition 1, p. 277 and p. 315.		
ERROR	Solaris path is missing.		
CORRECTION	Solaris path is: /export/home/ <user>.</user>		
LOCATION	HPOM Installation Guide for the Management Server, Edition 2		
ERROR	Missing information on installing HPOM on non-global zone from the DVD media.		
CORRECTION	To install HPOM on non-global zone from the DVD media, you need to add a read access. Use the instructions from the following link: http://docs.sun.com/app/docs/doc/817-1592/gauck?a=view		

## **Local Language Support**

The HPOM 9.0x is not yet localized. However, it can be used in multilingual environments.

## **Certified Encoding and Character Sets on HPOM Management Servers**

Certified encoding and character sets need to be set for the HPOM management server and Oracle database host systems.

Encoding HPOM Node Character Set: UTF-8

Oracle Database Code Set: AL32UTF8

Solaris Language Variable LANG:

— English: en\_US.UTF-8, en\_GB.UTF-8

Spanish: es\_ES.UTF-8Japanese: ja\_JP.UTF-8Korean: ko\_KR.UTF-8

— Simplified Chinese: zh\_CN.UTF-8

Other locales are also supported, for example, German and French. For information about supported character sets, refer to the *HPOM Administrator's Reference*. Note, that this HPOM release is not yet localized, but can be used in multilingual environments.

**IMPORTANT** UTF-8 is the only encoding supported by the HPOM database.

## **HP Software Support**

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www.hp.com/go/hpsoftwaresupport

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- · Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts

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- Review information about available services
- · Enter into discussions with other software customers
- · Research and register for software training

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