HP OpenView Service Desk

For the Windows and Unix operating systems

Release Notes

For Service Desk 5.0 / Publication Date: 8 December 2005

This document contains a list of the most recent changes, enhancements, and known problems for Service Desk 5.0. The information in this document is not contained in the Service Desk 5.0 set of manuals or in the HP OpenView Online Help.

- Differences between Service Desk 4.5 and Service Desk 5.0
- User Documentation
- Documentation Updates
- Installation Notes
- Enhancements and Fixes
- Known Problems, Limitations, and Workarounds
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Differences between Service Desk 4.5 and Service Desk 5.0

For information on differences between Service Desk 5.0 and Service Desk 4.5, see the *HP OpenView Service Desk 5.0 Differences Between 4.5 and 5.0* guide.

User Documentation

The following guides will be available shortly after release on
http://ovweb.external.hp.com/lpe/doc_serv/:

- *HP OpenView Service Desk Differences Between 4.5 and 5.0*
- *HP OpenView Service Desk Concepts Guide*
- *HP OpenView Service Desk OpenView Operations Integration Administrator's Guide*

Draft versions of the following guides are available at the release date on
http://ovweb.external.hp.com/lpe/doc_serv/

- *HP OpenView Service Desk Differences Between 4.5 and 5.0*
- *HP OpenView Service Desk OpenView Operations Integration Administrator's Guide*

The remaining documents are included in the installation DVD.

Documentation Updates

The first page of all Service Desk 5.0 documents contains the following identification:

- Version number, which indicates the software version to which the release notes apply.
- Publication date, which changes each time the document is updated.

To check for updates or to verify that you are using the most recent version of a document, visit the following URL:

http://ovweb.external.hp.com/lpe/doc_serv/

1   In the Product list, click the product name.

2   In the Version list, click the version number.

3   In the OS list, click the OS type.

4   In the document list, click the document title.

5   To retrieve the document, click **Open** or **Download**.

NOTE: To view files in PDF format (*.pdf), Adobe Acrobat Reader must be installed on your system. Download Adobe Acrobat Reader from:

http://www.adobe.com

Installation Notes

Software and Hardware Requirements

Prerequisites

Database Server

- For details on supported databases, see the *HP OpenView Service Desk 5.0 Installation Guide*.

- The use of the Unicode character set AL32UTF8 is recommended on Oracle. If you wish to use the Unicode character set as your default character set, the Oracle instance must be created for supporting Unicode.

- For an Oracle database, you should possess the appropriate rights (DBA account and password) for creating new Oracle database users.

MS SQL Server configuration:

Configure SQL Server to accept non-Windows username and password logins. You can configure this in the properties window of the SQL Server instance. Set Authentication to "SQL Server and Windows".

Operating System patches required for Sun Java

The operating system of the machine on which SD will be installed must be patched with the most recent OS patches related to the Java Runtime Environment (JRE). Failure to do this may result in one or more subsequent components failing to install. This has been seen to be most critical on HP-UX 11.

Patches should be installed before you install the Java software. Some patches are absolutely necessary to run Java, others are recommended for optimum performance. HP recommends that you install all patches needed for your system configuration.

Supported Operating Systems

For details on supported operating systems, and corresponding system requirements, see the *HP OpenView Service Desk 5.0 Installation Guide*.

Installations

The following install scenarios are supported:

- Fresh
- Upgrade
- Secondary Server

For more details, see the *HP OpenView Service Desk 5.0 Installation Guide*.

Cleanup Operations Prior to Installation

If you have installed a previous version of Service Desk 5.0, remove the following environment variables before reinstalling:

OVXPL_DATA_DIR

OvDataDir

OvInstallDir

Post Installation Activities

Verification of the Tomcat installation on the HP OpenView Management Server (Windows platforms)

The following problem (Problem ID 227661) relates to the Tomcat configuration. During installation, after Tomcat is installed, the registry settings for JvmMx and JvmMs must be checked.

These settings can be found under .../`HKEY_LOCAL_MACHINE/Software/Apache Software Foundation/Procrun2.0/OvTomcatA/Java/Parameters`.

If JvmMx (max heap size) is less than 512 MB, set it to 512.

If JvmMs (start heap size) is less than 64 MB, set it to 64.

Installation Problems

See the following sections in this document: 'Known Problems, Limitations, and Workarounds' and 'Installation failed' in chapter 'Trouble Shooting'

Uninstall Steps

Windows Platforms

To remove a Service Desk component from your system, select Add/Remove Programs in the Windows Control Panel.

Alternatively, use the `uninstall.bat` file.

After you have uninstalled the software, perform the manual cleanup operations listed below:

Warning: the following cleanup operations must be done when *only* SD 5.0 has been previously installed on your system. If other OpenView products, for example OVIS, this cleanup operation should not be performed.

1 The location where you installed the software must be empty (default `C:\Program Files\HP OpenView`) if not, delete the contents of this folder.

2 The registry key `HKEY_LOCAL_MACHINE\Software\Hewlett-Packard\HP OpenView` must be removed.

3 Remove the following services:

   a. HP OpenView Shared Trace Service

   b. HP OpenView Apache(A) WebServer Service

   c. HP OpenView Ctrl Service

   d. HP OpenView Tomcat(A) Servlet Container Service

   e. HP OpenView Communication Broker

4 Delete the folder `C:\Documents and Settings\%USERNAME%\Application Data\HP OpenView`

5 Delete the following environment variables:

a. OvDataDir

b. OvInstallDir

c. OvXpl_data_dir

d. WAPP_HOME

6 Remove the `C:\Program Files\HP OpenView\bin` reference from the %PATH% environment variable

7 Delete the `ovinstallparams.ini` file located in the %TEMP% folder

8 Reboot the system. This is vital to remove the services from the system.

Enhancements and Fixes

HP OpenView Service Desk has been completely re-engineered for this 5.0 release.

It is a new product, so this section does not currently contain enhancements and / or fixes.

Known Problems, Limitations, and Workarounds

Frozen Installation

If your machine freezes during installation (the installation screen remains static for a very long time), run the file `scripten.exe`, restart your computer and run the `setup.exe` file again. Download `scripten.exe` from www.microsoft.com.

AutoPass User Interface Does Not Work on HP-UX

To be able to use the Autopass user interface, change the contents of **/opt/OV/bin/OvSdLic.sh** to

```
#!/bin/sh
# © Copyright 2005 Hewlett-Packard Development Company, L.P.
# Allow us to run from the installed bin directory
/bin/sh /opt/OV/bin/OvObsLic /opt/OV/misc/sd/pdfiles/OVSDESK5_pdf.txt
```

QXCR1000296181 - Oracle, Upgrade CDM 313, SEVERE / WARNING Errors on log file.

Wrong messages are logged in the log files during the installation.

SEVERE traces

...

Oct 18, 2005 9:01:48 AM;5;10;com.hp.ov.obs;SEVERE;SQL Exception: JDBC error 942: ORA-00942: table or view does not exist

, SQL state: 42000 for query: select 1 from itsm_personsjava.sql.SQLException: ORA-00942: table or view does not exist

The component which was installed was: CdmCo

WARNING Traces

....

Oct 18, 2005 9:02:15 AM;40;10;com.hp.ov.obs;WARNING;Module Sdc. Class com.hp.ov.sdc.gen.SdcObjectModel not found in CLASSPATH.

Oct 18, 2005 9:02:15 AM;41;10;com.hp.ov.obs;WARNING;Object Model class is not defined for module: Sdc, using default value for versioning.

.....

Oct 18, 2005 9:02:56 AM;55;10;com.hp.ov.obs.da;WARNING;Unable to create index for columns (sd_codes.cod_ordering, sd_codes.cod_subtype). java.sql.SQLException: Unable to execute:CREATE UNIQUE INDEX sd_24187153782257_uix ON sd_codes (cod_ordering, cod_subtype) TABLESPACE SLM554_DATA, Cause: ORA-01452: cannot CREATE UNIQUE INDEX; duplicate keys found

...

Oct 18, 2005 9:03:07 AM;5;10;com.hp.ov.obs;WARNING;Importing jar:file:/C:/Program Files/HP OpenView/java/obsmodules/OvCdm.jar!/com/hp/ov/cdm/data/ovcdm-234-235pre.xml. Errors during import will NOT lead to transaction rollback: they are logged as warnings.

.....

And the huge number of the other Warnings….

The component which was installed was: CdmCo

QXCR1000296160   patches installation

When patch installation fails the related components are left uninstalled.

Check the Patch installation in test system before applying on production system.

QXCR100028804 Installation Options

The application installer does not detect automatically the kind of installation that you need (fresh install or upgrade) - Take care to choose the right option according the case: default option for fresh installations and upgrade option is you already installed a previous version.

QXCR1000283231 Login after a Web start deployment

No Web Port and Server name in Logon display - Workaround: Edit the client settings, to let the default server have the right port number. The port number can be specified like this: server:30998 - On the Application Server side: In the configuration of the login server you have to specify the right port of the server. This file is called ovlogin.config. It can be found in {install path}\data\conf\sec\login.

Incorrect Messages in the Log Files during Installation

The following message will appear twice, consecutively, in the system0.0.en_US logfile.

"com.hp.ov.obs.security;SEVERE;441No Passwords in License File error code: 5997"

You can safely ignore this message as it does not indicate any severe problem with the software.

Login Exceptions

If you install the stack and encounter a login exception, please do the following:

To use SSL login "out of the box" first execute the `OvObsClientSettingsEditor.bat` file.

Failure to do this will result in the following error:

The following procedures assume the default server and client installations on the appropriate Windows platforms.

The authentication on HP-UX and for Web Start is not described here.

The procedures are not generic, but assume the following:

- username: `wbsmith`
- user domain: emea.cpqcorp.net
- Server name: `war.nld.hp.com`

To use LDAP via OvConsole:

1 Start `ovconsole` using the client settings editor

2 In the OV Configuration window, select Users &Security•Principle Mappings•Principle ClassName:
   `javax.security.auth.x500.X500Principal`

3 Using Quick Find, locate the Username.

4 Select Search code "LDAP user name". Select Choose, Save and Close.

5 Then go to account and create a new application account.

6 Set Display name to `your username-ldap.`

7 Set the Account name to `firstname_lastname@hp.com`

8 Set the password to any value; ensure that the password and confirm password are identical.

9 LDAP user name=UID=winston.smith@hp.com,OU=People,O=hp.com

10 Save and Close.

11 Exit the ovconsole

12 You now copy a valid LDAP certificate file to the server box, e.g. C:\.

13 On the server box run "keytool -import -alias <alias> -file <cert_file> -keystore <data directory>/conf/sec/login/ldap.truststore -storepass changeit"

14 On the client box edit ovconsole to have the following line JVM_ARGS="-Xms64m –Xmx128m - DJAASApplication=LDAPAuth –DJAASHost=war.nld.hp.com

15 On the server edit c:\program files\HP Openview\data\conf\sec\login\ovlogin.config

Make sure the LDAP section is not remarked and that the server settings are correct for your LDAP server. e.g.: LDAPAuth {

   com.hp.ov.sec.login.server.module.LDAPLoginModule required

   providerURL="ldap://ldap.hp.com:636"

   baseDN="ou=People,o=hp.com"

   uidAttr="uid"

   friendlyName="email"

   useSSL="true"

   debug="true";

};

and do an ovc –stop and ovc -start

16 On the client system start ovconsole and use your full email address and NT password to login

17 You should be able to login

18 If you are having problems login check the most current system log on windows C:\Program Files\HP OpenView\data\log

To use the Active Directory Service (ADS) via OvConsole:

1 To run ADS you need a windows system that is connected to a domain. In the following example the user (wbsmith) has an account on domain EMEA. In addition, the user account also needs to be in the administrator group of the local system. To do this, login locally as the Administrator: Go to: Start•Programs•Administrative Tools•Computer Management•Local Users and Groups•Groups•Administrator•Add (put in your NT account details) emea\wbsmith,   You should now have the account in the administrator group, if not, contact your local administrator and request them to add your domain account to the administrator group of the system.

2 Log off the system and login using the domain and the user used in step 1

3 Launch ovconsole using one of the to get an account setup for ADS.

4 In the OV Configuration window, select Users &Security. In the Users & Security window, select Principle Mappings, select Principle ClassName: javax.security.auth.kerberos.KerberosPrincipal.

5 Using Quick Find, locate the Username. Select Search code Active Directory user name. Select Choose. Then Save and Close.

6 Then go to account and create a new application account.

7 Set Display name to your username-ADSSSO.

8 Set Account name to username@domain.

9 Set the password to any value; ensure that the password and confirm password are identical.

10 Set Active Directory user name= wbsmith@emea.

11   Save and Close.

12   Exit the ovconsole.

13   On the client edit ovconsole to have the following line `JVM_ARGS="-Xms64m -Xmx128m -DJAASApplication=ADSAuth -DJAASHost=war.nld.hp.com.`

14   On the Server, edit Windows C:\Program Files\HP OpenView\conf\sec\login\ovlogin.config.

15   Make sure the ADS section is not remarked, if so remove the remarks.

ASDAuth {

com.hp.ov.sec.login.server.module.ADssoLoginModule required

realm="emea"

kdc="emea.cpqcorp.net"

debug="true

};

and do a ovc –stop and ovc -start

16   On the client system, start ovconsole and use your Domain login username and password.

17   If you are having problems login check the most current system log c:\program files\HP OpenView\data\log You should be able to login

Problem when mounting the test DVD-Rom on HP-UX

A problem arises when the software DVD-Rom is mounted on HP-UX.

To mount the DVD-Rom on a HP-UX system, use the following commands:

nohup pfs_mountd&

nohup pfsd&

pfs_mount -o soft <DVD-Rom ID> /cdrom

DVD-Rom ID is the ID of your actual DVD-Rom.

You can find this ID using:

ioscan -funC disk

288246 – "ISSscript too old" message displays, but the install procedure continues

When you encounter any of the following error messages in the log files:

(C:\Program Files\HP OpenView\data\ HPOVInstall\ovapp_msi_HPOvSecLoginCo_install.log)

Do not be alarmed. The following messages will not impact the behavior of the application:

"******* GetCustomDataDic() - key added : ISSCRIPT_VERSION_MISSING = The InstallScript engine is missing from this machine. If available, please run ISScript.msi, or contact your support personnel for further assistance. -

9/7/2005 2:00:46 PM - VBS message

******* GetCustomDataDic() - key added : ISSCRIPT_VERSION_OLD = The

InstallScript engine on this machine is older than the version required to run this setup. If available, please install the latest version of ISScript.msi, or contact your support personnel for further assistance. - 9/7/2005 2:00:46 PM - VBS message"

These messages originate from the Windows MSI installer. These are not messages for users. These are defined strings that can be used if a problem occurs, and do not indicate a problem. There is no way for OVII to remove or to suppress the messages. This log file is not designed to be viewed by a customer.

Licensing software co-existence (AutoPass: 285200)

SD 5.0 uses a new version of AutoPass. If you install SD 5.0 on a system on which an existing OpenView Product uses an older version of AutoPass, you encounter a co-existence issue; any SD 5.0 process using AutoPass (Obs, SLM core, Metric adapter) will not start and traces such as the following will appear:

```
Sep 23, 2005 1:56:14 PM;15;10;com.hp.ov.obs;SEVERE;An error occurred during the invocation of
method "main" on class com.hp.ov.sd.slm.main.Slm.
Sep 23, 2005 1:56:15 PM;16;10;com.hp.ov.obs;SEVERE;Error:

java.lang.reflect.InvocationTargetException
        at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
        at sun.reflect.NativeMethodAccessorImpl.invoke(Unknown Source)
        at sun.reflect.DelegatingMethodAccessorImpl.invoke(Unknown Source)
        at java.lang.reflect.Method.invoke(Unknown Source)
        at com.hp.ov.obs.startup.Launcher.invokeNormal(Launcher.java:288)
        at com.hp.ov.obs.startup.Launcher.invoke(Launcher.java:264)
        at com.hp.ov.obs.startup.Launcher.main(Launcher.java:167)
        at com.hp.ov.obs.startup.Launcher.main(Launcher.java:68)
Caused by: java.lang.NoClassDefFoundError: com/hp/ov/lic/sm/OvLicException
        at com.hp.ov.sd.slm.main.Slm.main(Slm.java:170)
        ... 8 more
Sep 23, 2005 1:56:15
PM;17;11;com.hp.ov.sd.slm.util.SlmLogger;log;com.hp.ov.sd.slm.main;SEVERE;SLM Server
terminating...
```

Please apply the following workaround:

Run Regedit

Go to: HKEY_LOCAL_MACHINE\SOFTWARE\JavaSoft\Prefs\com.hp.ov

Modify the value of /Lic/Dir

From: /C:///Program /Files///Common /Files///Hewlett-/Packard///H/P/Ov/L/I/C"

To: /C:///Program /Files///Common /Files///Hewlett-/Packard///H/P/Ov/L/I/C

(Remove the double quote at the end of this string)

Error messages in the log files

When you encounter any of these error messages in the log files (C:\Program Files\HP OpenView\data\log\system0.0.en_US) do not be alarmed. These messages will not impact the behavior of the application:

```
Oct 18, 2005 9:01:48 AM;5;10;com.hp.ov.obs;SEVERE;SQL Exception: JDBC error 942: ORA-00942:
table or view does not exist, SQL state: 42000 for query: select 1 from
itsm_personsjava.sql.SQLException: ORA-00942: table or view does not exist
```

Incorrect log file messages during installation

The following message will appear twice consecutively in the system0.0.en_US logfile. You can safely ignore this message as it does not indicate any severe problem with the software. The error message is: "com.hp.ov.obs.security;SEVERE;441No Passwords in License File error code: 5997"

288604 - OVConsole Dead lock after an exception with Child Service Relation

A Dead lock will occur after an exception during the creation of a child service for a service type "Business". Here is the use case that generates a deadlock:

1 Create a new service type "business"

2 Enter the name

3 Go to the tab Child service

4 Select the button new

5 In the new service window input a service name

6 Go to the tab "Availability SLO's"

An error window is displayed "`To continue it is necessary to save the current Service. Do you want to save it now?`"

The "No" button does nothing and the "Yes" button generates an exception but you cannot close the window, and you must kill the OVConsole process.

The issue is linked to the fact that a Child Service is edited in the context of its parent. If you do not edit it in its parent context, it works fine. Take also into account that this use case should never happen as SLM designer forms are not meant to generate CMD for non business service rather they are only available for monitoring.

289191 - Help only available when using default port

The online help is not available when apache is installed on a non-default port. Since the Application Installer offers the customer the option to set another port for Apache, this could affect customers.

244984 The incidents generated by the alarm engine are not correctly filled.

For all incidents created by the alarm engine, the associated service level is not correct. It is always the same service level for all the incidents.

The CI, linked to the incident can be modified. Since the incident is created automatically for the specific CI, the user should not be able to modify the CI.

Expected behavior:

- The Service level must be set with the right service level name

- The user should not be able to modify the value of the incident's CI field.

283641 - Searching for text from 'Localized Text' doesn't work.

It is by default not possible to search for text in 'Localized Text' or its subfolders. In Service Desk 4.5 you could select the 'Localized Text' subfolder and run Advanced Find. In Advanced Find you could also select to search within one of the subfolders.

Note: Some strange behavior exists around this. If you select one of the subfolders of Localized Text and run Advanced Find, this subfolder becomes available to search in and is added as a searchable folder in Advanced Find, added to the bottom of the list. You can do this for all subfolders. These changes are lost again after restarting the client. (This indicates that the rudimentary functionality is implemented.)

This defect makes it very user unfriendly to search for a localizable attribute to manually translate.

How to reproduce:

- Go to 'OV Configuration: Presentation > Localized Text' and select the Localized Text folder.
- Open the Advanced Find form by both pressing 'F2' and pressing 'Advanced Find' in the menu bar.
- Search for localized text in Localized Text and in one of its subfolders.

Expected results:

The Advanced Find form opens in both cases. The 'Show' field contains 'Localized Text' and I am able to select one of its subfolders (e.g. Label Text). I can run a search in Localized Text and in one of its subfolders.

Actual results:

Pressing 'F2' does not open the Advanced Find form. Pressing the 'Advanced Find' button in the menu bar opens Advanced Find, but Localized Text or its subfolders are not available for search; it cannot be selected in the 'Show' field.

284029 - Agent does not show banner

Agent does not show banner

How to reproduce:

1 OV Configuration> Actions & Rules> Rules> database Rules> Incident
2 Create a new database rule:
3 When Incident is create or modified, click Next
4 Click Condition, click New criterion
5 Select Field Description, Operator 'contains (AND)', Value 'agenttest'
6 Click OK, OK, Next

7   Click New> Command Exec action. Set Name 'agenttest', set Command line to "%OvInstallDir%/bin/OvSdBanner.bat" (including the quotes)

Note: if 284028 is solved, command line should be "%OvInstallDir%bin/OvSdBanner.bat"

8   Next to 'Parameters' click 'Insert Attribute' and select Description

9   Click OK, Next

10 Set Name to 'agenttest' and click Finish

11 Click on workspace Incident (in the Service Desk group) and press ctrl+N. This should open up a new Incident form

12 Fill in Description and set it to 'agenttest'

13 Save&Close the Incident.

Expected results:

- Banner shows.

- If the banner cannot be shown, the agent should report a warning, or better: queue the execution of the action until a user logs on and the banner can be shown.

Actual results:

Banner does not show, banner process is hanging in the background.

Log-file from server:

```
Aug 15, 2005 7:31:04
PM;75;19;com.hp.ov.obs.impl.util.AppLog;log;com.hp.ov.obs;INFO;<RuleManager>:
Rule "agenttest", item: 190737533980939914 condition: Description (*) contains agenttest
(value: agenttest): true
Aug 15, 2005 7:31:04 PM;76;19;com.hp.ov.obs;INFO;<DBRuleManager>: Rule
Executing: agenttest, item: 00000000-0000-0000-02a5-a2c6ce44968a.
Aug 15, 2005 7:31:04 PM;77;19;com.hp.ov.obs;INFO;Dispatching action. Rule:
agenttest,  Action: agenttest (Command Exec Action) host: fcstevel command:
"C:/Program Files/HP OpenView/bin/OvSdBanner.bat" agenttest
```

Log-file from agent:

```
Aug 15, 2005 7:31:06
PM;0;10;com.hp.ov.xpl.log.OvLogConfig;<init>;com.hp.ov;INFO;Logging system is
initialized
Aug 15, 2005 7:31:07 PM;1;10;com.hp.ov.obs;INFO;Starting class
com.hp.ov.sd.impl.banner.Banner from C:\Program Files\HP
OpenView\bin\..\java\OvSdBanner.jar.
Aug 15, 2005 7:31:07 PM;2;10;com.hp.ov.obs;INFO;Arguments passed to main:
{agenttest}.
```

So everything looks OK, but the banner does not show!

A javaw process is started that users can only close with the task manager. This kind of behavior can consume all memory on a Client PC.

245649 - OvJre does not remove Installdir and Datadir preferences during uninstallation

OvJre does not remove the Installdir and Datadir preferences. Because of this the following problem might occur:

1   Install OvJre on the E:\ drive and uninstall it. The Preferences Installdir and Datadir are set to `E:\program files\HP OpenView` and `E:\Program Files\Hp OpenView\data`. These preferences are not removed during uninstallation of OVJre.

2   After uninstalling OvJre, install XPL and JXPL on the C:\ drive. The preferences installdir and datadir will still be `E:\Program Files\HP OpenView` and `E:\Program Files\HP OpenView\data`. Installation of XPL will return wrong Installdir and datadir as preferences are set wrong.

289979 - No data is presented on a web start client after an Objectserver failover.

No data is presented on a web start client after an Objectserver failover.

Prerequisites:

Two management servers installed refer to 1 database.

How to reproduce:

2   Start two web start clients on two different machines, referring to different management servers

3   Stop one off the management servers.

Expected results:

After the failover, the web start client that referred to the stopped management server is connected automatically to the running management server. All data is still accessible.

Actual results:

After the failover, the web start client that referred to the stopped management server is connected automatically to the running management server. All data is NOT accessible anymore. Also no creation is possible.

Workaround:

Re-download the Client part by using the URL connecting the second application server.

Service Pages installation hangs when Apache and Tomcat are already running.

When trying to install Service Pages, the installer hangs and does nothing.

Prerequisites:

A system for Service Pages with the Apache web-server and Tomcat Servlet container already running.

How to reproduce:

3   Attempt to install the Service Pages installer

Expected results:

The installer runs and installer splash-screen is displayed etc...

Actual results:

Nothing happens, the installer UI is not displayed.

Workaround:

Stop Apache and Tomcat before running the installer.

QXCR1000294601 - Web start: Service Level created from web start, not visible on the ovconsole

The Service levels created on the Web start console are not visible from the OvConsole.

How to reproduce:

1   Start the java web start
2   Create 1 service Level
3   Start an OVConsole
4   Open the list of the service Level
5   You cannot see the service level create through the Web start console.

It is recommended to reconnect to see other's entities - might be fixed in fact by SL not cached anymore.

If some client updates a cached entity, other connected clients do not automatically update their cache. The design decision was made like this for performance reasons and since cached entities should be fairly static, at the time the functional impact was considered to be low.

242246 - {I18N} Apache service not registered in OS when installed in non-ASCII path

When a Service Desk installation is done that includes the Apache server (such as the Service Desk 5.0 Server installation) and it is installed in a path that contains non-ASCII characters (such as Chinese, Japanese or Russian) the Apache server will not be installed properly. As a result all functionality that relies on the Apache server will not work:

- Web start Client
- Web UI
- Service Pages
- Attachments
- Online Help

Stopping Tomcat with ovc

The Tomcat process does not stop perfectly using the ovc command. This issue has been recorded with the following defect id:

224239 (S) ovc -stop ovtomcatA does not cleanly stop tomcat

Workaround:

Use the `shutdown.bat` file for stopping Tomcat located under `C:\Program Files\HP OpenView\bin` (will be fixed in Tomcat 285)

247595 - Failure to write log-file corrupts Object Server.

When a log-file for the Object Server fails to be created, the Object Server starts but does not function properly. This problem can be reproduced by storing the log-files on a disk that is full.

There are two issues here:

When a log-file is not created, the user is not notified at all. Normally, an entry would be placed in the operating system's log files. For example, in Windows you would expect an error message in Start> Settings> Control Panel> Administrative Tools> Event Viewer. When ovc is used to start the processes, ovc can output the errors. But this ONLY works when the processes are not automatically started during boot. At the moment, there is no way of knowing that anything is wrong.

The XPL-component that provides the log-file functionality may not throw back errors to calling processes. This is to prevent the calling (Java) process from stopping execution.

For an actual example:

The Object Server is started.

The log-file for the Object Server is not created.

The Object Server executes a database rule and wants to log some information about it.

The Object Server receives an error from the log-file component.

The Object Server does not know what to do with the error and stops executing the database rule.

QXCR1000305283 - relation field not updated

ParentChildRelationField does not update relation when a child is opened and the parent attribute is modified. The relation is not removed from the set.

How to reproduce:

Use Service:Child Services

1   Create a service ombase set the type to operations management

2   Go to the child services tab

3   Create a new child service om1 with type operations management.

4   Save and close

5   Create a new service ombase2 set type to operations management.

6   Save and close

7   Re-open ombase go to child services tab.

8   Open om1 from parent relation field and set the parent to ombase2.

Actual results:

The child field still shows om1.

Expected results:

It should no longer show om1 since its parent is now ombase2.

Workaround:

It is not recommended to use the All Your Tasks (Combination) view on service today. It is the only view where Refresh does not work. Switching between this view and another on the drop menu will refresh the views.

QXCR1000244548   Traces using Web start

Using a Client deployed using Web start, some logs will not be recorded.

Some of the GUI log messages are getting logged to the Object Server's log file.

302098 - ITP port not default gives problems

The Client can not connect with client to management server which is installed with a non-default value for the ITP port number (for instance: 30998).

Workaround on the client side:

Edit the client settings, to let the default server have the right port number. The port number can be specified like this: "server:30998"

Workaround on the management server side:

In the configuration file of the login server you must specify the correct server port. This configuration file is called `ovlogin.config`. The file can be found in `{install path}\data\conf\sec\login`

303329 - Open Error when opening attachments and log files

Description

Open Error when opening attachments and log files.

How to reproduce:

1   Setup attachment and attach the following files to an item (for example a service call): *.html, *.log, *.doc

2   Save and Close the service call

3   Re-open the service call and open the attachments.

Expected results:

The files open and are readable without any error.

Actual results:

An open error is generated.

/var/tmp/open_attachmentxxxxx.sh[7]: /apps/bin/netscape: not found

Workaround:

The attachments can not be opened directly through the ovconsole, but users can save the attachments, and use their favorite editor to open them.

301841 - Unable to start the console with two different users.

It is impossible to start the console with two different users on the system on which the management server has been installed.

Description:

I Logged on as one user and started the ovc. I then log out and log on as a different user. All this sounds like the login server does not healthily survive logout and then login.

Workaround:

Change one parameter of the "jmc" configuration.

Edit the `ovjmc.xml` file [`$OvDataDir/conf/ctrl/ovjmc.xml`] and set -Xrs in the Command Line used to start ovjmc. This line looks like this:

ovc:CommandLine>C:/Program Files/HP OpenView/nonOV/jre/1.4/bin/java -Xrs -DjmcId=ovjmc -DOvTmpDir="C:/Program Files/HP OpenView/data/tmp" -Djava.util.logging.config.class=com.hp.ov.xpl.log.OvLogConfig -jar "C:/Program Files/HP OpenView/java/jmc_server.jar" -main com.hp.ov.jmc.JmcServer -uri com.hp.ov.jmc.ovjmc -dc</ovc:CommandLine>

287868 {I18N} Multibyte characters displayed corrupted in Reports.

Printing a report from a record ('memo' format) incorrectly displays the multibyte field content in ASCII characters.

QXCR1000291455   Tooltips

Tooltips do not remain visible long enough in Diagram Views.

QXCR1000305981 - SDSLM628 / CI form rights issues with only HelpDesk or/and Change License installed

Using the factory Forms, we cannot create a CI when the SLM license is not there but the SD Helpdesk or Change license is there. This means that you must customize your forms. To do so, copy/paste the SD/SLM CI Forms, and in the copied version, remove the attribute "lowest availability".

QXCR1000306006 - Service Pages installer needs OvSdCommon.jar for stand-alone install

On line request for service pages account does not work when service pages is installed on a machine that does not contain the application server.

There is a missing ovsdcommon.jar file in the Java directory.

Workaround:

Copy/ftp the file 'OvSdCommon.jar' from the app/management server machine to the Service Pages stand-alone machine.

This file is found in either `C:\Program Files\HP OpenView\java\obsmodules` (for Windows) or `/opt/OV/java/obsmodules`' (for UNIX) on the management server machine, and should be copied to either `C:\Program Files\HP OpenView\java` or to `/opt/OV/java` on the Service Pages stand-alone machine.

Service Level Management

Metric Adapters: Tuning the Query limitations

The query restriction in OV console can be set to display no more than 500 metric definitions and 1000 metrics. Here is a way to disable the query restriction (mandatory to be able to use OVPA metrics or any other with big volume):

In "OV Configuration" workspace, select "Presentation", then in the panel select "Search".

For each of the following objects:

> Metric
>
> Metric Definition
>
> OVxx Metric
>
> OVxx Metric Definition

Double click, and select "No restriction" instead of "Restricted to ..."

245541 - The Merge on SLM Administration after an update fails

If you change the Life Cycle Status Mapping of SLM, and your modification takes more than 60s (default value for the server heartbeat), you cannot save your modifications. The merge action fails, in the merge windows, the result is "`merge operation impossible`".

How to reproduce:

2   Open the SLM Administration instance

4   Remove an SLA Life Cycle Status and recreate it

5   Wait for more than 60 seconds

6   Save and close.

On the Form "Merge result" all the merge actions failed.

QXCR1000303070 - afterCancel() called unexpectedly on the Client side

How to reproduce:

1- Create a Hierarchy Filter (this filter requires at lease the mandatory fields 'name' and 'root entity' which must be set to 'Service')

2- Create a Service

  - Set the name

  - Set the Hierarchy Filter to the one just created.

2- in this service form. got to the parent/child tab

3- Use the NEW button to create a child service.

4- in the child service

  - set the name

  - set the Hierarchy Filter (same as above)

5- Save and close this form

<= at this time the afterCancel() hook of the child service entity is called... It should not.

6- Save and close the parent service

<= this lead to an SQL error which is a consequence of the above error.

Description

In some particular circumstances the afterCancel() hook is called when it should not.

In our case use case we are creating a service from a top service form.

The business logic of the SLM extension of the Service entity needs to create some additional related entities, which entities are deleted in the case the edition of this child service is canceled using the afterCancel() hook.

In a normal use, the child service is saved; it is then committed to the database when the parent service is committed. However we observe that as soon as the child service is saved, the afterCancel() hook is called by the GUIF. this leads to some consistency errors at the time the parent service is committed because the required entities have been cleanup by the afterCancel() hook.

After investigation is seems that the problem comes from the following method: com.hp.ov.ui.client.common.form.BaseFormImpl.isModified()

This method is called when the form is closed (and after the save() method was called). After the save operation it is expected that the isModified() returns false. However in our case it returns true. The reason is that the underlaying IEntity.isChanged() sometimes return true even after having saved the IEntity. The OBS documentation says it will return false only if no changed is done since the last change in datatbase (i.e commit() but in our case we only did a save()).

Workaround:

If you create a new service (type operation management) from the service workspace, link it to the same hierarchy filter as the first service, then you can add it as a child service by clicking on the Relate button.

QXCR1000303290 New discovery interval does not take effect until MA is restarted

When a metric adapter is running, if you update its parameter "Metric Discovery Interval" or "Metric Definition Discovery Interval" with a new value, the changes do not take effect (i.e. metric / metric definition discovery does not start according to the new interval).

How to reproduce:

Choose the OvisMA as an example.

1. Start OvisMA, whose initial value of "Metric Discovery Interval" is 3600 (seconds).

2. Wait untill the first discovery is done.

3. Change the attribute "Metric Discovery Interval" of the metric adapter to a new value, e.g. 180 (seconds).

Expected results:

The OvisMA starts metric discovery every 180 seconds.

Actual results:

The OvisMA starts metric discovery every 3600 (the old interval) seconds.

Workaround:

Re-start the ovisma process using the ovc tool (ovc -restart ovisma)

QXCR1000292401 MAs can not work well when discovering huge metrics for one poll

If the number of discovered metrics is huge (up to 30000), the Metric Adapters do not support the this volume of objects (out of memory exception)

Workaround:

Increase the memory size of the JVM used by the Metric Adapter process.

The following steps explain the way to change the parameters used by ovc to launch the application.

Edit the file corresponding to the process you want to change (for instance: ovpmma.xml)

It is located into "C:\Program Files\HP OpenView\data\conf\ctrl"

Change the Xmx256m value with the adjusted value of the memory used by the JVM of the following entry:

<ovc:ComandLine>"C:/Program Files/HP OpenView/nonOV/jre/1.4/bin/java" -Xrs -DOvpmMA -Xmx256m -cp "C:/Program Files/HP OpenView/java/OvBbc.jar;C:/Program Files/HP OpenView/java/xpl.jar;C:/Program Files/HP OpenView/java/OvSecCore.jar;C:/Program Files/HP OpenView/java/OvSlmCommon.jar;C:/Program Files/HP OpenView/java/OvSlmMaCommon.jar;C:/Program Files/HP OpenView/java/OvSlmMaOvpm.jar" com.hp.ov.sd.slm.sa.perf.OvpmMain</ovc:CommandLine>

Register the new configuration that will be used by ovc:

ovcreg -add "C:\Program Files\HP OpenView\data\conf\ctrl\ovpmma.xml"

QXCR1000304897 Configuration for OVPM MA is not compatible with OVPM HP-UX

The URL provided by default in the installed OvpmMA.xml does not work with OVPM (5) on HP-UX:

http://$OVPM_HOSTNAME$/HPOV_IOPS/cgi-bin/Analyzer.exe

Workaround:

Using startMaConfigGui, or by modifying <OV data dir>/conf/slm/OvpmMA.xml, change the URL to:

http://$OVPM_HOSTNAME$/OVPM/Analyzer

QXCR1000304837 Service openma (SLM Open Metric Adapter) aborted

 The openma process cannot start, according to the default configuration installed. The corresponding service is reported as aborted: ovc -status openma

openma   OV SLM Open Metric Adapter   SLM   Aborted

Workaround:

Replace the value 0 for DataPoolTimeLimit by the value 60, in the file <OV data dir>/conf/slm/OpenMA.props:

OpenMA.OvSLMSink.DataPoolTimeLimit = 60

QXCR1000244984: The incidents generated by the alarm engine are not correctly filled.

When an incident is generated by the SLM Alarm Engine, its 'Service Level' attribute is not the one which is related to the generation of this incident.

Instead the 'Service Level determination' works as follows:

When the related 'Configuration Item' has a Service Level, that one is taken

Else the 'Default Service Level' is used

Check the Incident 'Information' field to have details about the context in which this incident was generated.

QXCR1000245541: Merge on SLM Administration fails after an update

If you change the Life Cycle Status Mapping of SLM, and your modification takes more than 60s (default value for the server heartbeat), you cannot save your modifications. The merge action fails, in the merge windows the result is "merge operation impossible".

As a workaround, you can stop the SLM Server using 'ovc -stop ovsdslm', then proceed to the modification, and finally restart the SLM Server using 'ovc -start ovsdslm'.

QXCR1000297334: Old schedule considered when updated during run of SLM Core

You must restart SLM core in order to take into account any changes regarding schedules and schedule elements used by SLM. This applies to Service Hours, Planned Downtime, TimeZone used for these schedules. Until SLM is restarted, the considered information is the one that was available at SLM start.

QXCR1000299666: SLM Licensing: no messages sent to Client Console

When an SLM-licensing problem occurs, no message is sent to the Client Console but all Licence events are logged into slm log file.

For example, if the number of services authorized by licenses is reached, the user can create a new service but the 'SLA activity status' remains "not managed".

Indeed, SLM manages only the number of services licensed. In case a greater number of services is ready in the CMDB for SLM management, only a licensed number of services will be managed. The other ones will not be. The non managed one are listed only in the log file and the SLM management status might be inaccurate.

QXCR1000303710: No reset of some violation when update of several SLA at same time

When many SLA are updated concurrently in order to reset their service metrics total violation time (ie reset of SLAs status), It appears sometime that the reset doesn't work for some of the SLAs. ==> At the end of the operation, all statuses should be "not yet computed". If this is not the case, restart the operation.

QXCR1000297334 SLM changes

You must restart SLM core in order to take into account any change regarding schedules and schedule elements used by SLM. This applies to Service Hours, Planed Downtime, TimeZone used for these schedules. Until SLM is restarted, the considered information is the one that was available at SLM start.

QXCR1000303710 SLA updates

When many SLA are updated concurrently in order to reset their service metric total violation time (ie reset of SLAs status), It appear sometime that the reset doesn't work for some of the SLAs. ==> After having done the operation, check that the status are "not yet computed" If not, redo it.

OVO Integrations

We've found some defects in the OVO/W integration package of SD 5.0.

QXCR1000305179 OVO/W integration consumes named user licenses.

Work-around: Change the account type of the "OVO for Windows" account to "integration account".

QXCR1000305173 OVO/W integration sending events from OVO to SD fails.

Work-around: Create the missing directory "C:\Program Files\HP OpenView\Data\Datafiles\obs\queues\ovow" on the OVO/W management server manually.

QXCR1000305543 OVO/U integration outage functionality does not generate or does not update the OVO outage file.

Work-around: After installation of the "OVO/U integration" package ovouintegration but before running the setup script /opt/OV/bin/ovsdovosetup.sh you need to replace the file ovsdintegrationsdconfig.xml located in the directory /opt/OV/newconfig/conf/sd on the OVO management server with the hotfix file ovsdintegrationsdconfig.xml located on the SD installation DVD in the /addendum directory.

QXCR1000304589 ovsdovosetup.sh cannot create /var/opt/OV/conf/sd/ovsdmkoutage.conf file

Missing directory for using the OVO UNIX Integration

How to reproduce:

1   Install the OVO/U integration

2   Run the /opt/OV/bin/ovosdovosetup.sh script

Expected results:

Script runs without errors and creates all needed configuration files.

Actual results:

ovsdovosetup.sh[296]: /var/opt/OV/conf/sd/ovsdmkoutage.conf: Cannot create the specified file. Error caused by absence directory /var/opt/OV/conf/sd.

Solution:

The directory must be created during install.

Workaround:

Create directory manually.

AFTER installation of the ovouintegration package and

BEFORE you run the /opt/OV/bin/ovosdovosetup.sh script.

QXCR1000305974 OVO/U integration import mappings "ovounix" are not imported during upload of ovsdintegrationsdconfig.xml

Work-around: Same as for defect QXCR1000305543. After installation of the "OVO/U integration" package ovouintegration but before running the setup script /opt/OV/bin/ovosdovosetup.sh you need to replace the file ovsdintegrationsdconfig.xml located in the directory /opt/OV/newconfig/conf/sd on the OVO management server with the hotfix file ovsdintegrationsdconfig.xml located on the SD installation DVD in the /addendum directory.

Usability

QXCR1000304079 OV Control

OvApacheA and ovobs processes abort after a reboot: you must restart the processes manually (ovc -start) after having rebooted your system

QXCR1000234919

Advanced Find is not automatically started when a quick find is invoked and the query restriction is exceeded.

QXCR1000302073

The 'Match case' option is not available in Advanced Find yet.

QXCR1000296194 Schedules

Schedule entities (Compound schedules) including (Compound) Schedule entities are not supported as Service Hours or Planned Downtime. Only Schedules including Schedule elements are supported. Compound Schedule entities including Compound Schedule entities are not correctly handled by SLM.

QXCR1000293347 Unique fields

Unique fields are not being exported/imported correctly by configuration exchange.

You should manually note the fields that you want to be unique and configure them using the console on the target system.

QXCR1000287210 Notification UI rules

Set up a user notification UI rule works if you open the item from the table, but if you use the Up/Down arrows to traverse the records, it is not executed.

QXCR1000303777 Service Today

The (automatic) refresh is not working in the Service Today View. In default filter pattern, a newly created user's "Service Today" view can not show any item. The user should use the Refresh button in the View menu to see the latest calls.

QXCR1000299666 SLM licenses

When a SLM-licensing problem occurs, no message is sent to the Client Console but all Licence events are logged into the SLM log file. For example, if the number of services authorized by the license is reached, the user can create a new service, but the SLA activity status related to it is blocked to "not managed". Indeed, SLM manages only the number of services licensed. In case a greater number of services is already in the CMDB for SLM management, only a licensed number of services will be managed. The other ones will not be. The non managed one are listed only in the log file and the SLM management status might be not accurate.

QXCR1000302856 Caches

If you modify a role, you have to clear the server cache to get the modified role to affect the clients. The cache can be cleared from the advanced tab of the ovconsole options.

Product co-existence

OVO Windows 7.21, 7.5

Installing Service Desk 5.0 Client on a system where OVO WINDOWS 7.21, 7.5, Client is installed will cause the following problem:

The OVOW "HP ITO Agent" process will be stopped after installing SD client.

Workaround:

Restart the HP ITO Agent manually.

OVO UNIX 7.1

Installing Service Desk 5.0 Client on a system where OVO UNIX 7.1 HP-UX Client is installed will cause the following problem:

The OVOU "llbserver" process will be stopped after installing SD client.

Workaround:

Restart it manually.

OVO UNIX 8.1

Installing or Un-installing Service Desk 5.0 Client on a system where OVO UNIX 8.1 HP-UX Client is installed will cause the following problem:

The OVOU "ovcd" process will be stopped after installing SD client.

Workaround:

Restart it manually.

Accessibility Support

HP is working to ensure that new OpenView management software releases comply with the latest international accessibility standards. HP OpenView Service Desk 5.0 accessibility includes an improved user interface interaction model that allows screen readers to support users with visual impairments, and enhanced keyboard navigation as an alternative to mouse control.

Product characteristics based on accessibility standards include:

- No animations in the user interface
- No requirement for user speech
- Operability within a limited reach and strength
- No requirements for simultaneous actions except as provided by the operating system
- Consistent meanings of images
- No flashing at a frequency where photosensitive epilepsy is a risk
- Redundant coding of all audio signals as provided by the operating system
- No requirements for timed responses
- Consistent and well-defined focus and selection indicators
- Alternative text for images
- Redundant coding for use of color
- Online help optimized for screen readers

HP OpenView Service Desk 5.0 supports accessibility on Microsoft Windows operating systems using JAWS for Windows 4.5. For a more detailed report of product compliance with Section 508 of the American Rehabilitation Act, go to the Check Product Accessibility web page at **http://vgwh3pro.cce.hp.com/508/**. From the Select Product Category drop-down menu, select Software and Operating Systems, then click Go. On the next screen, select product family HP OpenView Service Desk, then click Go.

Accessible electronic manuals for this product can be requested from the HP OpenView Product Manuals web site at **http://ovweb.external.hp.com/lpe/doc_serv/** by clicking the **Send Feedback** link near the bottom of the page, and specifying the product name, product version, operating system, and document names that you would like to obtain in fully accessible form.

Configuring HP OpenView Service Desk 5.0 Accessibility

To activate accessibility support, perform the following:

1   Ensure these Java 2 platform edition 1.4.x files are located in directory
    `%INSTALLDIR%\nonOV\jre\1.4\lib\ext`
    (default Windows `INSTALLDIR` is `C:\Program Files\HP OpenView`):

    — `jaccess-1_4.jar`

    — `access-bridge.jar`

    These files can be copied after product installation from directory
    `%INSTALLDIR%\nonOV\jre\1.4\AccessBridge\installer\installerFiles`.

2   Add the `AccessBridge` directory to your path so the DLLs that are part of the Java Access Bridge can
    be found and instantiated:

    `PATH=%INSTALLDIR%\nonOV\jre\1.4\AccessBridge;%PATH%`

3   The Java Virtual Machine consults a number of property files as it starts up. Ensure that the
    `accessibility.properties` file is located in the `%INSTALLDIR%\nonOV\jre\1.4\lib` directory.
    This file can be copied after product installation from directory
    `%INSTALLDIR%\nonOV\jre\1.4\AccessBridge\installer\installerFiles`.

4   Each line included in the accessibility properties file can enable different accessibility features. For
    example, to enable assistive technologies to use the Java Access Bridge, use a file editor to include the
    following line in the file:
    `assistive_technologies=com.sun.java.accessibility.AccessBridge` The Java Accessibility
    Utilities documentation at **http://java.sun.com/products/jfc/jaccess-1.2/doc/examples.html** provides
    additional properties examples and explanations (for example, how to set up screen magnifiers).

For more information on how to configure accessibility with Sun JAVA applications, refer to
http://java.sun.com/products/accessbridge/docs/setup.html.

Integration with Other OpenView Solutions

For more information on the integration with Network Node Manager (NNM), see the *HP OpenView Service
Desk Data Exchange Administrator's Guide*.

For more information on the integration with OVO, see the *HP OpenView Service Desk 5.0 OpenView
Operations Integration Administrator's Guide*.

Trouble Shooting

Installation failed

If the installation failed you can look at the following location for information about why it failed.

The object server logfile

You might want to have a look at the object server logfile, located in `%OVDATADIR%/log` and is called
`system0.0_enUS`. This file holds the information from the object server and its tools. Just look at the
bottom of the file for any exception or other error message that might explain the failure.

XPL Logging.

To adjust the information logged you can do the following:

XPL logging uses the default Java logging.properties file which by default is located in `C:\Program Files\HP OpenView\nonOV\jre\1.4\lib\logging.properties`. In order for this to work, you must have executed the following once:

```
ovconfchg -ns xpl.log -set logparent true
```

For example, if you want all the logs to be written to console, add the following lines to your `logging.properties` file:

handlers=java.util.logging.ConsoleHandler

java.util.logging.ConsoleHandler.level=INFO

java.util.logging.ConsoleHandler.formatter=java.util.logging.SimpleFormatter

The logging level can be specified in the `logging.properties` file

The available logging levels are:

> SEVERE
>
> WARNING
>
> INFO
>
> CONFIG
>
> FINE
>
> FINER
>
> FINEST

Example:

To specify finer logging for the Object Server, add this to your logging.properties:

java.util.logging.ConsoleHandler.level=FINER

com.hp.ov.obs.level=FINER

Object Server Cache

It has been noted that the Object Server Cache can cause problems. So if you encounter a problem when you start the Object Server using `ovc -start`, try to delete the object server cache files by deleting all files in this folder: `C:\Program Files\HP OpenView\data\datafiles\obs`

Control Service Pid files

If you are unable to start the control service, execute the following command:

```
del C:\Program Files\HP OpenView\data\tmp\*.*
```

Console does not show any workspaces

If you experience that your console screen looks empty, please clear your user settings. You can do that by executing the following command:

```
del C:\Documents and Settings\%USERNAME%\Application Data\HP OpenView\*.* /s /q
```

Support

Please visit the HP OpenView support web site at:

http://www.hp.com/managementsoftware/support

This web site provides contact information and details about the products, services, and support that HP OpenView offers.

HP OpenView online software support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valuable support customer, you can benefit by being able to:

- Search for knowledge documents of interest
- Submit and track progress on support cases
- Submit enhancement requests online
- Download software patches
- Manage a support contract
- Look up HP support contacts
- Review information about available services
- Enter discussions with other software customers
- Research and register for software training

NOTE: Most of the support areas require that you register as an HP Passport user and sign in. Many also require an active support contract.

To find more information about support access levels, go to the following URL:

http://www.hp.com/managementsoftware/access_level

To register for an HP Passport ID, go to the following URL:

http://www.managementsoftware.hp.com/passport-registration.html

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