HP OpenView Performance Agent

for the Linux operating system

Release Notes

Software version: 4.60/February 2007

This document provides an overview of the changes made to HP OpenView Performance Agent (OVPA for the 4.60. It contains important information not included in the manuals or in online help.

In This Version

This release of OVPA has the following features:

This release of OVPA is supported on RedHat, SuSE, Debian, Asianux and Turbo distributions of Linux. See the [Installation Notes](#) section for details.

VMWare support

OVPA 4.6 can be installed on a Virtual Machines (VM) hosted on VMWare ESX Server of versions 2.5.x or 3.x and it is also supported on ESX Server Console. When installed on a VM (running Linux) hosted on a VMWare ESX server 3.x and above, OVPA 4.6 displays metrics that can be used to identify a VM and understand a VM's contribution to the utilization of physical resources available in the system. The value of the new metrics varies depending on whether OVPA is on a standalone Linux or Linux VM hosted on ESX server 2.5.X or 3.x.

The following metrics are added in this release:

- Global class:
    - GBL_LS_TYPE
    - GBL_LS_ROLE
    - GBL_LS_ID
    - GBL_LS_MODE
    - GBL_LS_SHARED
    - GBL_CPU_ENTL_MIN
    - GBL_CPU_CYCLE_ENTL_MIN
    - GBL_CPU_ENTL_MAX
    - GBL_CPU_CYCLE_ENTL_MAX
    - GBL_CPU_SHARES_PRIO
    - GBL_CPU_ENTL_UTIL
    - GBL_CPU_PHYS_TOTAL_UTIL
    - GBL_CPU_PHYSC
    - GBL_MEM_ENTL_MIN
    - GBL_MEM_ENTL_MAX
    - GBL_MEM_SHARES_PRIO
    - GBL_MEM_PHYS_SWAPPED
    - GBL_MACHINE_MEM_USED
    - GBL_MEM_OVERHEAD
- BYLS class:
    - BYLS_ID
    - BYLS_NAME
    - BYLS_NUM_CPU
    - BYLS_NUM_DISK
    - BYLS_NUM_NETIF
    - BYLS_STATE

- BYLS_CPU_ENTL_MIN

- BYLS_CPU_ENTL_MAX

- BYLS_UPTIME_SECONDS

- BYLS_CPU_PHYS_TOTAL_TIME

- BYLS_CPU_PHYS_TOTAL_UTIL

- BYLS_LS_SHARED

- BYLS_LS_MODE

- BYLS_DISPLAY_NAME

- BYLS_CPU_ENTL_EMIN

- BYLS_MEM_ENTL

- BYLS_CPU_SHARES_PRIO

> The OVPM and OVReporter templates for virtualized environment can be downloaded from: **ftp://ftp.hp.com/pub/ovreporter/VirtualizationTemplates**.

Configurable Logging Intervals

- Ability to configure the process interval between ranges of 5-60 seconds.

- Ability to configure interval for other intervalized classes to 15, 30, 60, or 300 seconds.

- The intervals are configurable in the `parm` file. The global interval value must be a multiple of the process interval value.

  Example: To set the process collection interval to 15 seconds, global and all other intervalized data classes to 30 seconds, make the following entry in the `parm` file:

  collectioninterval process=15, global=30

  The default values for process=60 seconds, global=300 seconds.

- If there is no value specified for the collectioninterval line in the `parm` file or if scopeux detects illegal values while starting, the defaults will be used.

- It is recommended that "`scopeux -c`" be run after modifying the `parm` file, so that any warnings which might occur due to incorrect values will be displayed.

Additional logging thresholds

- Logging thresholds for process data. The default `parm` file contains the following:

  procthreshold cpu = 5.0, memory = 900, nonew, nokilled

- To request that all process data be logged each interval,

  procthreshold all

  The procthreshold is equivalent to threshold, which was available with earlier releases.

  Logging thresholds for additional data classes (such as, application and device data).

- Logging thresholds for application data, appthreshold.

  Example, the following entry in the parm file will log only those application instances for which cpu utilization exceeds 10.0% during the interval,

```
appthreshold cpu = 10.0
```

To request that all application data be logged each interval,

```
appthreshold all
```

- Thresholds for disk data, diskthreshold.

Example, the following entry in the `parm` file will log only those disk instances for which disk utilization time exceeds 10.0% during the interval,

```
diskthreshold util = 10.0
```

To request that all disk data be logged each interval,

```
diskthreshold all
```

- Logging threshold for netif data, bynetifthreshold.

Example, the following entry in the `parm` file will log only those netif instances for which the IO rate exceeds 60.0 packets per second during the interval,

```
bynetifthreshold iorate = 60.0
```

To request that all netif data be logged each interval,

```
bynetifthreshold all
```

- Logging threshold for file system data, fsthreshold.

Example, the following entry in the `parm` file will log only those file system instances for which the space used exceeds 70.0% during the interval,

```
fsthreshold util = 70.0
```

To request that all file system data be logged each interval,

```
fsthreshold all
```

- Logging thresholds for cpu data, bycputhreshold.

Example, the following entry in the `parm` file will log only those cpu instance for which the percentage utilization of the cpu exceeds 90.0%during the interval,

```
bycputhreshold cpu = 90.0
```

To request that all cpu data be logged each interval,

```
bycputhreshold all
```

Flush Interval

- Ability to request a data flush interval for application and device data classes.

- Ability to record/log ALL instances of application and device data periodically, including instances which are considered "uninteresting" based on the threshold criteria specified.

Example, the following entry in the `parm` file will cause all instances of application and device data to be written to the logs once per hour (3600 seconds).

```
flush = 3600
```

The flush seconds must be in the range 300-32700 and be an even multiple of 300.

This release includes the following new metrics:

- Global class:
  - — `GBL_MEM_PAGE_FAULT_RATE`
  - — `GBL_SWAP_SPACE_DEVICE_AVAIL`
- Process class:
  - — `PROC_STARTTIME`

Note that for systems with kernel version 2.4, the metric `GBL_MEM_PAGE_FAULT_RATE` displays N/A.

This release also includes minor enhancements and defect fixes. Refer the [Enhancements and Fixes](#) section for details.

> Before using OVPA software, you must review and accept the license terms and conditions spelled out in the readme file available in */<directory>*/`README`, where `<directory>` is your CD-ROM.

Documentation Updates

The first page of this release notes document contains the following identifying information:

- Version number, which indicates the software version.
- 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, 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**.

> To view files in PDF format (*.pdf), Adobe Acrobat Reader must be installed on your system. To download Adobe Acrobat Reader, go to the following URL:
>
> **http://www.adobe.com**

Installation Notes

For installation requirements and instructions, refer to "HP OpenView Performance Agent for Linux Installation and Configuration Guide", provided as part of the product in Adobe Acrobat (.pdf) format as `ovpainst.pdf` in `/opt/perf/paperdocs/ovpa/C/`.

Before installing OVPA, make sure that your system meets the following minimum hardware and software requirements:

Hardware Requirements

- System with Intel Pentium equivalent architecture (x86)
- System with x86_64 architecture (AMD64 or EM64T)

Software Requirements

Linux Distribution Compatibility:

- On 32-bit Intel Pentium (x86):
    — RedHat Enterprise Linux (ES/AS/WS) 2.1, 3 and 4
    — SuSE Enterprise Server 8.x, 9.x and 10.x
    — Debian 3.0 r2/r3/r4, 3.1
    — TurboLinux Server 8 and 10
- On 64-bit systems (x86_64):
    — RedHat Enterprise Linux (ES/AS/WS) 3 and 4
    — SuSE Enterprise Server 9.x and 10.x
    — Asianux 2.0

NOTE FOR DEBIAN LINUX INSTALLATIONS

If RPM is not installed on the system, follow the instructions to load RPM packages given below:

If the directory /usr/bin/rpm does not exist on your system, you need to obtain a copy of RedHat Package Manager (RPM) that works on your Debian Linux system. Once you have RPM installed, the following commands can be used to install OV Performance Agent:

```
mkdir /var/lib/rpm

rpm --initdb --dbpath /var/lib/rpm

cd <Your-CD-ROM-Directory>

/ovpa.install
```

Requirements - Linux Packages

The following non-OpenView runtime libraries are required for OVPA to be installed successfully:

C++ runtime needed by multiple OV Performance Agent binaries.

For systems with kernel version 2.4: /usr/lib/libstdc++-libc6.1-1.so.2

For systems with kernel version 2.6: /usr/lib/libstdc++.so.5

To find out if these libraries are installed on your system, run the following command:

```
rpm --query --whatprovides  <library-name>

dpkg -S <library-name> ( for Debian systems)
```

These libraries can exist in one or more RPM packages available with the OS media or can be downloaded from the Internet.

Disk Space Requirements

OVPA installs in the `/opt/perf/` and `/opt/OV` directory and creates its log and status files in the `/var/opt/perf/` and `/var/opt/OV` directory.

- 50 MB in the `/opt/perf/` and `/opt/OV` directory for first-time installation of OVPA

- 70 MB in the `/var/opt/perf/` and `/var/opt/OV` directory for log and status files

> If you are installing or upgrading OVPA on a system on which HP OpenView GlancePlus is already installed, you must upgrade GlancePlus to the same release version. The GlancePlus and OVPA versions must always be the same.

> There is no web fulfillment mechanism to convert the OVPA images to a non-trial licensed product. To obtain the production (non-trial) version of OVPA, you must purchase a License-to-Use product for each system on which OVPA images are installed, and at least one copy of the OVPA media product for your overall environment. The production software for OVPA must be installed from the media. It can be installed directly over the trial software (You need not remove the trial software).

Special Installation instructions

- If you are installing OVPA 4.6 and OVO 7.x agent on a same system, you must install OVO 7.x agent first and then install OVPA 4.6.

- If you are installing OVPA 4.6 on a system on which if one or more of the following OV products are installed, it is recommended to restart them after OVPA 4.6 installation

  a OVO Agent

  b OV Internet Services

  c OV Performance Manager

- If you have OV SMART Plug-Ins installed, install the following patches for SMART Plug-Ins, to work successfully with OVPA 4.6. These patches are needed to update a tool that is used to integrate OV SMART Plug-Ins and OVPA.

```
HPUX:      OVO/U 7.1X on HPUX-PA PHSS_33921

           OVO/U 8.1X on HPUX-IA PHSS_33922

Solaris:   OVO/U on 7.1X Sun ITOSOL_00474

           OVO/U on 8.1X Sun ITOSOL_00475
```

Enhancements and Fixes

The following issues (identified by error tracking number) are fixed in this release:

QXCR1000289162

PROBLEM: Application utilizations don't add up to GLOBAL CPU utilization.

FIX: A new parameter, gapapp, is added in parm file. Based on the parameters for gapapp, a dummy application is added to application list whose metric values indicate the differences between global metrics and sum of application metrics.

QXCR1000362775

PROBLEM: perfalarm, while restarting, is unable to connect to coda if bbc port is being changed dynamically.

FIX: Now, restart of perfalarm can connect to coda after the bbc port is changed dynamically.

QXCR1000366448:

PROBLEM: coda process crashes while destroying ScopeAccess object.

FIX: This problem is fixed.

QXCR1000332045

PROBLEM: parm file on different platforms shows different value of mainttime and does not match the text statement written regarding mainttime value.

FIX: Value of mainttime is consistent on all the platforms.

QXCR1000378175

PROBLEM: As OVPA is configurable in seconds' granularity, TIME metric should also give seconds too.

FIX:	Now, TIME metric will be displayed in HH: MM: SS format.
	To see the data with seconds granularity with OVPM, version of OVPM6 should be 06.01.042 (patch) and version of OVPM5 should be X.05.00.036 (hotfix).

QXCR1000318628

PROBLEM:	log files and OVPA status files have global write permissions after upgrade to C.04.X.
FIX:	Now, the check for inconsistency in file permissions for 'others' and 'group' users, has been added.

QXCR1000241467

PROBLEM:	OVPA and glance do not report both inactive iCoD CPU's as well as active CPUs.
FIX:	This problem is fixed. The iCOD CPUs are correctly reported now.

QXCR1000240985

PROBLEM:	`GBL_MEM_USER_UTIL` shows incorrect values.
FIX:	This problem is fixed.

QXCR1000298401

PROBLEM:	`perfstat` has to be enhanced to show the active datasources.
FIX:	`perfstat` should show active datasources, if coda is running.

QXCR1000356803

PROBLEM:	`perfstat` output needs to be enhanced to show port configuration and status of EPC.
FIX:	To provide the required data, the option "`-d`" has been added, and "`-p`" has been enhanced to perfstat.

QXCR1000356310

PROBLEM:	Scope Access API's consume very high CPU, causing the coda process to show a very high value for `PROC_CPU_TOTAL_UTIL`.
FIX:	The issue of CODA consuming high CPU utilization for huge `log` files, without any client request, has been fixed.

QXCR1000336978

PROBLEM:	Need a mechanism to verify if installations of OVPA contain permanent licenses.
FIX:	OVPA software license status can now be obtained using '`-licheck`' option of extract or utility.

QXCR1000319163

PROBLEM:	Problem with certain scripts and links being created during upgrade.
FIX:	On upgrade, OVPA related startup scripts in the `/etc/init.d` and the `/etc/rc.d` are preserved.

QXCR1000380984

PROBLEM:	OVPA install changes permission & owner of `/opt` and `/var`.
FIX:	This problem is fixed.

QXCR1000215773

PROBLEM:	OVPA needs to be enhanced to use an alternate temporary directory for utility resize operation.
FIX:	OVPA will now use the alternate temporary directory set by "`TMPDIR`" environment variable, as temporary location to resize log file.

QXCR1000321854

PROBLEM:	status scope has repetitive WARNING messages if the entry in /proc/swaps is incorrect.
FIX:	Now, only once the WARNING message is logged in `status.scope`.

QXCR1000311335

PROBLEM:	`PROC_CPU_TOTAL_UTIL_CUM`, `PROC_CPU_SYS_MODE_UTIL_CUM` and `PROC_CPU_USER_MODE_UTIL_CUM` show zero values if some processes are started before Glance is started.
FIX:	The problem is fixed now.

QXCR1000137128

PROBLEM:	In multi-cpu machine, `BYCPU_INTERRUPT`* metrics are zero for CPUs other the CPU 0.

FIX: Now the BYCPU_INTERRUPT* metrics are calculated by reading /proc/interrupt.

QXCR1000330112

PROBLEM: scopeux was capping PROC_CPU_TOTAL_UTIL to 100% because the thread data provided
                        separately by kernel.

FIX: Now scopeux is not capping because the process data is cumulative of all the threads.

QXCR1000313705

PROBLEM: While scopeux is aligning with 5 minute boundary, the last record's time is returned as
                        zero as there is no record.

FIX: Now, it finds the last record logged on the previous day and returns the time of that
                        record.

QXCR1000324137:

PROBLEM: GBL_SWAP_SPACE_AVAIL_KB is moved to CONFIGURATION class of metrics in OVPA C.04.X.
                        However, other interdependent metrics, GBL_SWAP_SPACE_AVAIL and
                        GBL_SWAP_SPACE_USED, are not moved.

FIX: Now GBL_SWAP_SPACE_AVAIL_KB and GBL_SWAP_SPACE_AVAIL will be logged under
                        CONFIGURATION class and GBL_SWAP_SPACE_USED will be logged under GLOBAL class.

QXCR1000335471

PROBLEM: ovpa script starts all common components as root when installed on a system with OVOA
                        8.x is installed and configured to run as non-root.

FIX: Now OVPA script starts common components as non-root, if OVOA is configured to run
                        as non-root.

QXCR1000284243

PROBLEM: scopeux fails while collecting data file network metrics due to incorrect string
                        comparison.

FIX: Now, the string comparison is corrected.

QXCR1000327694

PROBLEM: coda dumps core while starting when it tries to access a corrupted DSI log files.

FIX: This problem is fixed and now coda ignores a datasource if corresponding DSI log file

is corrupted and an error message is logged to `coda.txt`.

QXCR1000319426

PROBLEM: `PROC_CPU_SYS_MODE_UTIL`, `PROC_CPU_USER_MODE_UTIL` and `PROC_CPU_TOTAL_UTIL` metrics will overflow for a multithreaded application in a multi CPU environment if the value exceeds 327.67%.

FIX: The upper limit for these metrics has been increased to 3270%.

QXCR1000315985

PROBLEM: On some Windows systems, "UNAUTHORIZED CONNECTION ATTEMPT" message is logged to `status.rep_server` file even though the machine name is included in `authip` file.

FIX: This problem is fixed.

QXCR1000323517

PROBLEM: alarmgen terminates abnormally when CONFIGURATION metrics are included in alarmdef file.

FIX: This problem is fixed.

QXCR1000244444

PROBLEM: `scopeux` stops running after one year limit is reached for any of `scope log` files.

FIX: Now, scopeux continues to run after performing roll over for the data in the `scope log` file for which one year limit is reached.

QXCR1000288917

PROBLEM: mwa restart fails if `LC_ALL` is set to any locale other than "C".

FIX: This problem is fixed

QXCR1000240635

PROBLEM: scopeux terminates when `/var` file system is full.

FIX: Now `scopeux` is modified to log a WARNING message in `status.scope` file and stops logging, if it finds the space in `/var` file systems is less than 1 MB. `perfalarm/alarmgen` will generate an alarm to indicate the situation. Scopeux will resume logging once free space `/var` file system is greater than 1MB.

QXCR1000334202

PROBLEM: Change in GMT offset values is not logged for `GBL_GMTOFFSET` due to day light saving
             (from ST to DST or vice versa).

FIX: Now scope logs a new configuration record whenever there is change in value of
             `GBL_GMTOFFSET`.

QXCR1000343417

PROBLEM: Alarms are not generated when alarms are defined using alias for any multi-instance
             class.

FIX: This problem is fixed.

QXCR1000217399

PROBLEM: Service name is missing in alarm message on message browser.

FIX: This problem is fixed.

QXCR1000308434

PROBLEM: perflbd, rep_server, extract and sdlutil may all abort and core when they encounter a
             corrupted `DSI log` file.

FIX: Now perflbd, rep_server, extract and sdlutil will not dump core for corrupted `DSI log`
             file.

QXCR1000309395

PROBLEM: `rep_server` (for dsidata) used to dump core when two dsi datasources get same shared
             memory

FIX: Now, the implementation uses memory mapped files and works as expected.

QXCR1000310128

PROBLEM: `perfalarm` used to fail when there are multiple datasources being referenced, and if a use
             "SCOPE" statement is not included at the beginning of the alarmdef file.

FIX: Now, `perfalarm` works fine without USE ""SCOPE"" in `alarmdef`.

QXCR100031326

PROBLEM: `BYNETIF_* _BYTE_RATE` metrics used to overflow at high network traffic.

FIX: The overflow in scope has been handled and now the maximum value for the two metrics is increased to 3276700.0.

QXCR1000313783

PROBLEM: dsilog aborts with a bus error

FIX: dsilog core dump issue with bus error is fixed.

QXCR1000237216

PROBLEM: Coda memory leak is observed.

FIX: The memory leak in coda is fixed.

QXCR1000288391

PROBLEM: Newly added filesystems are not being shown in OVPM without restarting OVPA

FIX: This issue is resolved by logging the header record when the number of instances of a resource change.

QXCR1000312752

PROBLEM: Alarmgen fails when large filesystem name exists in the system and is mentioned in the alarmdef file.

FIX: The display size of the field `FS_DIRNAME` is increased from 40 chars to 60 chars.

QXCR1000195883

PROBLEM: Linux memory metrics have been skewed, because physical memory calculation is not proper. Free memory is reported wrongly.

FIX: Free memory calculation, Physical memory calculation has been changed.

QXCR1000321539

PROBLEM: Co-existence of OVO 8.x Agent and OVPA 4.5 makes coda aborts.

FIX: Problem is resolved.

QXCR1000340322

PROBLEM: Dependency issues with Linux RPM packages.

FIX:	Issues are resolved by verifying for correct dependent packages.

QXCR1000282671

PROBLEM:	"**opcagt -stop**" stops coda on ovpa4.5/OVO8.x node
FIX:	OVO 8.16 agent resolves the issue.

QXCR1000368199

PROBLEM:	OVPA fail to report correct memory util if memory is > 4GB
FIX:	Modified for reporting correct memory metrics.

QXCR1000333214

PROBLEM:	`scopeux` Segmentation Fault on OVPA Linux 4.5
FIX:	Issue is resolved.

Known Problems, Limitations, and Workarounds

QXCR1000346247:

PROBLEM: OVPA alarming module (`perfalarm`) processes the logged records every 15 seconds. Even if the logging interval is configured to less than 15 seconds (in case of PROCESS class), perfalarm processes all the logged records at the next 15 seconds boundary. Alarms generated on these records will have the timestamp of the last record processed.

For example:

- If an alarm condition is met at 00:02:10, the perfalarm will process that record at 00:02:15, and reports alarm start time as 00:02:00.

- If an alarm condition is ended at 00:02:10, the perfalarm will process that record at 00:02:15, and reports alarm end time as 00:02:15.

WORKAROUND: None

QXCR1000353884

PROBLEM: After one of the VM restarts, GLOBAL metrics `GBL_MEM_SWAPIN_BYTE` and `GBL_MEM_SWAPOUT_BYTE` are zero and these metric values are huge for first interval after restart of VM. This is a problem with the VMWare command which provides us the wrong values. We are working with VMWare to correct the issue.

WORKAROUND: NONE.

PROBLEM:	On Debian systems, that has OVOA 8.x and OVPA 4.6 installed, Un-installation of OVO 8.x agent removes all the Lcore components, although OVPA4.6 is dependent on them.
WORKAROUND:	Hotfix is available through HP Support.

QXCR1000315893:

PROBLEM:	• Performance agent does not support continuity across online hardware configuration change. In some cases, software change influences OVPA. Stop OVPA and then change HW configuration,
	• OVPA does not recognize Hot-plug or on-line replacement facility supplied by hardware and/or operation system. HP recommends evaluation to meet within replacement
WORKAROUND:	NONE

PROBLEM:	On some systems, when GatherCoda is scheduled from Reporter Scheduler, though Reporter collects data successfully from the host, the following message appears on the Reporter GUI:
	"006/12/05 12:42:40 ERROR: `Gather <hostname>,GahterCODA Method ScopeDataView::SetPosition failed`"
WORKAROUND:	NONE

QXCR1000349933:

PROBLEM:	On SLES9 upto kernel version 2.6.9 it is observed that for processes started after OVPA/GlancePlus is started, process starttime is ahead of current system time during first interval. This will affect calculation of metrics `PROC_CPU_TOTAL_UTIL`, `PROC_CPU_USER_MODE_UTIL` and `PROC_CPU_SYS_MODE_UTIL`.
WORKAROUND:	Install kernel version 2.6.10 or above on SLES9.

QXCR1000046025 (Legacy ID R555019786)

PROBLEM:	Some Linux kernels (some 2.4 versions), disk util and queue metrics will be zero or large value. Some Linux kernels do not support the instrumentation needed to create good values for the following metrics:
	• `GBL_DISK_UTIL_PEAK`
	• `GBL_DISK_REQUEST_QUEUE`
	• `BYDSK_UTIL`
	• `BYDSK_REQUEST_QUEUE`

- BYDSK_CURR_QUEUE_LENGTH
- BYDSK_AVG_REQUEST_QUEUE
- BYDSK_QUEUE_*_UTIL
- BYDSK_AVG_SERVICE_TIME

These metrics may be zero or incorrect.

WORKAROUND: NONE

PROBLEM: Extract of logical data (extract -xt with -i/-I option), is not supported in this release.

WORKAROUND: NONE.

Documentation Errata

None

Software Version Information and File Placement

Version Information

For a summary of version strings for the major executable components of OV Performance Agent for Linux systems, enter the command:

/opt/perf/bin/perfstat –v

File Placement

The following is a list of directory locations for product files.

- Release Notes:

    /opt/perf/ReleaseNotes/

- Executables including UI programs, daemons and scripts:

    /opt/perf/bin/

- Examples (refer to the README file in the directory for more information):

    /opt/perf/examples/

- Shared component files:

    /opt/OV/bin/

    /opt/OV/lbin/

- Shared component libraries:

```
/opt/OV/lib/
```

- Product configuration files:
  ```
  /var/opt/perf/
  /var/opt/OV/conf/perf/
  ```

- Man pages:
  ```
  /opt/perf/man/man1/
  /opt/perf/man/man3/
  /opt/perf/man/man4/
  ```

- Printable documents:
  ```
  /opt/perf/paperdocs/ovpa/C/
  /opt/perf/paperdocs/arm/C/
  ```

- Default configuration and template files:
  ```
  /opt/perf/newconfig/
  ```

- Product configuration and status files:
  ```
  /var/opt/perf/
  /var/opt/OV/conf/perf/
  /var/opt/OV/log/
  ```

- Status and data files:

  Product binary data and internal-use files (created during and after installation):
  ```
  /var/opt/perf/datafiles/
  ```

- Development include files:
  ```
  /opt/perf/include/
  ```

- Library files:
  ```
  /opt/perf/lib/
  ```

- Online help files:
  ```
  /opt/perf/help/ovpa/C/
  ```

- Message catalogs:
  ```
  /opt/perf/lib/nls/msg/C/
  ```

Local Language Support

Localized HP OpenView Performance Agent is not available for this release.

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 valued 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

> 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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