HP OpenView Performance Agent

for the Sun 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.

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In This Version

OVPA was formerly called the MeasureWare Agent. In some places, the name MeasureWare Agent (MWA) might still appear.

This release of OVPA supports the following features:

- Configurable logging intervals.
- Additional logging thresholds.
- Flush Interval

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 collection interval 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, disk = 5.0, 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_SWAP_SPACE_USED
   — GBL_MEM_PAGEIN
   — GBL_MEM_SWAPIN_BYTE
   — GBL_MEM_SWAPOUT_BYTE
   — GBL_DISK_LOGL_READ_RATE
   — GBL_DISK_LOGL_WRITE_RATE

- — `GBL_MEM_FILE_PAGEIN_RATE`

- — `GBL_MEM_PAGE_FAULT_RATE`

- — `GBL_SYSCALL_READ_BYTE_RATE`

- — `GBL_SYSCALL_WRITE_BYTE_RATE`

- — `GBL_SWAP_SPACE_RESERVE`

- — `GBL_SWAP_SPACE_DEVICE_AVAIL`

- — `GBL_SWAP_SPACE_USED`

- — `GBL_SWAP_SPACE_MEM_AVAIL`

- — `GBL_MEM_FREE`

- Process class:

  - — `PROC_STARTTIME`

This release includes minor enhancements and defect fixes. See 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.ovpa`, where *<directory>* is your CD-ROM directory .

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, see the HP OpenView Performance Agent Installation and Configuration Guide for Sun Solaris Systems provided as part of the product in Adobe Acrobat (`.pdf`) format, and found as `ovpainst.pdf` in `/opt/perf/paperdocs/ovpa/C/`.

Hardware and Software Requirements

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

Hardware

OVPA generally runs on hardware platforms supporting the Solaris operating system, including:

- Sun4c
- Sun4d
- Sun4m
- Sun4u
- Sun4us
- Sun4v
- E 10000
- Sunfire

OS platform

This version of OVPA requires the Sun Solaris 7 operating environments or later. It is recommended to have at least the "End User System Support" level of operating system installed on your Sun system. If the "Core System Support" level of operating system is installed on your system, you have to additionally install the following two operating system packages:

- SUNWlibC
- SUNWlibms

You can determine which packages are installed by using the pkginfo command:

pkginfo SUNWlibC SUNWlibms

If the command returns:

ERROR: information for "`SUNWlibC`" was not found system `SUNWlibms` Sun Workshop Bundled shared libm

You have to install the appropriate package (`SUNWlibC`).

Prerequisites

The following Solaris patches are recommended for OVPA to function correctly.

Patch Level   Description

117000-03	On Solaris 8, this patch level fixes, aborts and corrects metrics in the perftools caused by instrumentation errors on earlier patch levels. Patch 108528-29 is known to have this instrumentation issue. It is fixed by 117000-03.
106327-15	Solaris 7: 32-Bit Shared library patch for C++
106950-18	Solaris 7: Linker Patch
106980-23	Solaris 7: libthread patch
107834-04, 107544-03, 106541-34	These three patches are prerequisites 107544-03, for the above three Solaris 7 patches.

NCS and DCE Communication Protocols

OVPA C.04.60.000 for Sun systems supports emulated NCS and DCE communication protocols. For DCE-based operations, a lightweight DCE client(HPlwdce 1.1.4.23.2) is bundled with OVPA. The lightweight DCE package provides DCE server functionality in the environments where the commercial DCE software is not available. In order to integrate with the environments that already provide commercial DCE software, this OVPA release is compatible with the following DCE products:

- DASCOM DCE 1.1.4.15.3 for SUN Solaris 7 and later. (DCE and SECDES packages are required)

- IBM DCE 3.1 for SUN Solaris 7 and 8

- IBM DCE 3.2 for Sun Solaris 9

> If you have a commercial DCE product (IBM DCE 3.1 for Sun Solaris 7 or 8) installed and running on your system, you must have the HPlwdce package installed as well.

When you perform installation with HPlwdce package, the installation script detects that a DCE client already exists, and the DCE daemon will not be started. The commercial DCE will be deployed for communication with other OpenView products.

- If you are using the lightweight DCE package bundled with OVPA on systems where no commercial DCE software is available, and you decide to install one of the above mentioned fully functional, commercial DCE software at a later date, you must:

  a   Remove your currently-installed OVPA.

  b   Install the fully functional, commercial DCE software.

  c   Reinstall your OVPA.

- If you were using a fully functional DCE client for OVPA purposes only, you may safely remove it and use the lightweight DCE package bundled within OVPA. To do so, you must:

  a   Remove your currently installed OVPA.

  b   Remove your fully functional commercial DCE software (see the DCE documentation for information on how to remove it).

  c   Reinstall your OVPA.

- If you were using a fully functional DCE client for applications other than just the OVPA, you must ensure that the version of the DCE client software is supported by this release of OVPA. For more information, see the HP OpenView Performance Agent for Sun Solaris Systems Installation & Configuration Guide, Chapter 1, "*Installing OV Performance Agent*" and Chapter 2, "*Starting Up & Running OV Performance Agent*".

Disk Space Requirements

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

- recommended 100 MB space in the `/opt/perf/` and `/opt/OV` directories for first-time installation of OVPA

- recommended 125 MB space in the `/var/opt/perf/` and `/var/opt/OV` directories for log and status files

> 1. If you are installing or upgrading OVPA on a system, on which HP OpenView GlancePlus (GlancePlus) is already installed, you must upgrade GlancePlus to the same release version as OVPA. The GlancePlus and OVPA release versions must always be the same.
>
> 2. On a Solaris 10 system with Zones, OVPA can be installed only in the global zone.
>
> 3. 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 the same system, you must install OVO 7.x agent first and then OVPA 4.6.

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

  a OVO Agent

  b OVO Unix Management Server

  c OV Performance Manager

  d OV Internet Service

- 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`

Windows: `OVOW on 7.2X OVOW_00201`
            `OVOW on 7.5X OVOW_00202`

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, has been added in parm file. Based on the parameters for gapapp, a dummy application, whose metric values indicate the differences between global metrics and sum of app metrics, is added to application list.

QXCR1000370552

PROBLEM: "mwa restart alarm" exposes file descriptor leak in rep_server.

FIX: The problem is fixed now.

QXCR1000368751

PROBLEM: OVPA alarms received by OVO show the alarm start time to be later than the end time.

FIX: Now, the alarm start time will not be greater than the end time.

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: The problem is fixed now.

QXCR1000332045

PROBLEM: `parm` file shows different values of mainttime on different platforms and does not match

the text statement written regarding mainttime value.

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

QXCR1000318628

PROBLEM: Scope 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: The iCOD CPUs are correctly reported now.

QXCR1000219848

PROBLEM: Need to update documentation for metric `GBL_SWAP_SPACE_DEVICE_AVAI`L in Glance.

FIX: Metric Documentation for `GBL_SWAP_SPACE_DEVICE_AVAIL` is updated.

QXCR1000204660

PROBLEM: Sometimes, when mounting filesystems while scopeux is active, an incorrect instance is logged by scope.

FIX: Now, the newly mounted disk data is dynamically available to OVPA and does not requires a restart.

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: New options "`-d`" and "`-p`" have been added to perfstat to provide the required data..

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 '`-liccheck`' option of extract or utility.

QXCR1000380984

PROBLEM: OVPA install changes permission & owner of `/opt` and `/var`.

FIX: OVPA will not change the credentials of `/opt` and `/var`.

QXCR1000357119

PROBLEM: Installing OVPA on a sun4v machine, gives a warning message.

FIX: Now, OVPA is supported on sun4v architecture.

QXCR1000322273

PROBLEM: Installing OVPA on a sun4us machine, gives a warning message. On sun4us architecture systems OVPA may not work as expected.

FIX: Now, OVPA is supported on sun4us architecture.

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).

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 the temporary location to resize the log file.

QXCR1000192146

PROBLEM:	Installation of OVPA on SUN Solaris changes the ownership and rights of the directory /usr/include.
FIX:	OVPA will not change the credentials of /usr/include directory.

QXCR1000327694

PROBLEM:	While starting, coda dumps core when it tries to access a corrupted DSI log file..
FIX:	This problem is fixed and now, coda ignores a data source if the corresponding DSI log file is corrupted, and an error message is logged to coda.txt.n.

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 into the status.rep_server file even though the machine name is included in the authip file.
FIX:	This problem is fixed.

QXCR1000323517

PROBLEM:	alarmgen terminates abnormally when CONFIGURATION metrics are included in the alarmdef file.
FIX:	This problem is fixed.

QXCR1000244444

PROBLEM:	scopeux stops running after one year limit is reached for any 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 location other than "C".
FIX:	This problem is now fixed.

QXCR1000240635

PROBLEM:	scopeux terminates when /var file system is full.
FIX:	Now, scopeux is modified to log a WARNING message in the `status.scope` file and stops logging if it finds that the space in the /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 in the `/var` file system is greater than 1MB.

QXCR1000343417

PROBLEM:	Alarms are not generated when alarms are defined using alias for any multi-instance class.
FIX:	This problem is now fixed.

QXCR1000217399

PROBLEM:	Service name is missing in alarm message on message browser.
FIX:	This problem is now fixed.

QXCR1000330374

PROBLEM:	`perfalarm` prints may return "-1" for some metrics at the startup.
FIX:	This problem is now fixed.

QXCR1000335471

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

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`.

QXCR1000305120

PROBLEM: `GBL_DISK_PHYS_WRITE_BYTE_CUM` metric may overflow on a system with high disk activity.

FIX: The overflow has been handled and now the maximum value for the `GBL_DISK_PHYS_WRITE_BYTE_CUM` metric has been increased.

QXCR1000349063

PROBLEM: Performance of ARMed applications may degrade if large number of calls are made to arm_init(), arm_getid() and arm_end() from ARMed applications.

FIX: This problem is now fixed.

QXCR1000316706

PROBLEM: coda performance degrades and memory growth is observed if a data source is configured for a large scope log file.

FIX: Coda's performance has been improved.

QXCR1000309776

PROBLEM: On a Solaris machine with a huge number of disks, coda does not respondto both local and remote clients requests.

FIX: This problem is now fixed.

QXCR1000308434

PROBLEM: `perflbd, rep_server, extract` and `sdlutil` dump core due to mishandling of errors returned in case of `DSI log` file corruption.

FIX: Now `perflbd, rep_server, extract` and `sdlutil` are modified to handle the errors properly for the corrupted `DSI log` file.

QXCR1000309395

PROBLEM:	The keys to access the shared memory of two DSI data sources being same results in data corruption. The corrupted data causes the `rep_server` to dump core.
FIX:	Now, the implementation uses memory mapped files and works as expected.

QXCR1000310128

PROBLEM:	perfalarm fails to treat "SCOPE" as default data source.
FIX:	Now, perfalarm, by default, recognizes the "SCOPE" data source and doesn't expect the "use SCOPE" statement in the alarmdef file.

QXCR1000313261

PROBLEM:	`BYNETIF_*_BYTE_RATE` metrics overflow when the network traffic is high.
FIX:	The overflow has been handled, and now the maximum value for the `BYNETIF_*_BYTE_RATE` metrics is enhanced to 3276700.0.

QXCR1000313783

PROBLEM:	A miscalculation of address causes dsilog to dump.
FIX:	dsilog has been fixed to correctly calculate the memory address.

QXCR1000237216

PROBLEM:	Memory leak in coda because of not freeing the allocated memory.
FIX:	The memory leak in coda is fixed.

QXCR1000288391

PROBLEM:	OVPA does not log the header information for the newly added file system into log files. This causes the summarization not to show FS metrics.
FIX:	Now OVPA logs header information if there is a change in number of instances of file systems.

QXCR1000312752

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

Known Problems, Limitations, and Workarounds

QXCR1000346247

PROBLEM: OVPA alarming module (alarmgen/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), alarmgen/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 alarmgen/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 alarmgen/perfalarm will process that record at 00:02:15, and reports alarm end time as 00:02:15.

WORKAROUND: None.

QXCR1000377061

PROBLEM: On systems that has OVPA 4.6 installed, by default, the DCE based alarm generator, alarmgen, is not running.

WORKAROUND: To enable the DCE based alarm generator, alarmgen, stop OV PerformanceAgent, rename the perfalarm executable to perfalarm.old, and restart OV Performance Agent using the mwa script.

QXCR1000046070

PROBLEM: OVPA on Solaris does not log LV_ metrics for VxVM 3.5.

WORKAROUND: While VxVM 3.5 logical volumes are not in the LV_ class of data, the file systems mounted on those volumes show up in the FS_ (by-file system) class of data. The FS_ metrics must be used to monitor the Veritas volumes.

QXCR1000240349

PROBLEM: BBC5 daemon fails to start on a system with PV (PerfView) installed. The default port for pvalarm, the "PV alarm management" daemon is 383. This conflicts with the default port for BBC communication broker daemon 'ovbbccb'.

WORKAROUND: Choose a different port for pvalarm.

PROBLEM: Some of OVPA or OVO 8.x daemons may fail to start on a Solaris system with both OVO 8.x agent and OVPA 4.6 installed, with the error message "No space left on device".

WORKAROUND: Increase the kernel's limit for semaphore.

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 Plan

Version Information

For a summary of version strings for the major executable components of OV Performance Agent for Sun Solaris Systems, use the following command:

/opt/perf/bin/perfstat   -v

File Placement

- Release Notes:

  /opt/perf/ReleaseNotes/

- Executables including UI programs, daemons, and scripts:

  /opt/perf/bin/

- Shared component executables

  /opt/OV/bin/

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

  /opt/perf/examples/

- 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
```

- Product binary data and internal-use files (created during and after installation):

```
/var/opt/perf/datafiles/
```

```
/var/opt/OV
```

- Development include files:

```
/opt/perf/include/
```

- Library files:

```
/opt/perf/lib/
```

```
/opt/perf/lib/lv/
```

```
/opt/perf/lib/sparc_64/
```

- Online help files:

```
/opt/perf/help/ovpa/
```

- Startup and shutdown scripts:

```
/etc
```

```
/etc/default
```

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

Legal Notices