HP OpenView Performance Agent

For the IBM AIX Operating System

Release Notes

Software version: C.04.50 / October 2005

This document provides an overview of the changes made to HP OpenView Performance Agent (OVPA) for the version C.04.50. It contains important information not included in the manuals or in online help.

In This Version

OVPA was formerly called MeasureWare Agent. In some places, the names MeasureWare Agent and MWA might still appear.

This release of OVPA supports the following features:

- Support on IBM AIX 5.1 and later
- Support for HTTP and HTTPS-based data communication
- Support for single port communication

HTTPS enables secure communication. OVPA continues to support existing DCE or NCS-based communication. You can configure OVPA to use either DCE or NCS, or HTTP(S)-based data communication. Refer to Chapter 2 of the *HP OpenView Performance Agent for IBM AIX Systems Installation and Configuration Guide* for more details.

Important points to note are:

- HTTPS-based secure communication is supported only in the OVO 8.x environment.
- HTTP(S) data communication is supported using `CODA`.
- Applications that use performance data from OVPA can communicate with OVPA using HTTPS data communication. OV Performance Manager (OVPM) 5.0 can communicate with OVPA using HTTPS, while OV Reporter 3.6 and OV Performance Insight 5.1 can communicate only using HTTP data communication.

  What is `CODA`?

  `CODA` is a daemon that handles data communication (both HTTP and HTTPS) when delivered as part of OVPA. It also handles communication with `perfalarm`, the alarm management daemon. `CODA`, when delivered as part of OV Operations Agent enables lightweight system performance collection and Smart Plug-In support.

  OVPA shares the Black Box Communication functionality with OV Operations. It includes the `ovbbccb` daemon that is started with and used by `CODA`. Switching to the new data communication facility makes communication across firewalls easier (see the *HP OpenView Performance Agent Installation and Configuration Guide for IBM AIX Systems* for details).

- The DCE or NCS-based alarm management daemon, `alarmgen`, has been replaced by the HTTP-based `perfalarm`. The `Perfalarm` daemon is the preferred daemon to send alarms to OVO servers. The `alarmgen` daemon is still supported for sending alarms to OVPM 3.x (PerfView). For information on how to set up `alarmgen` as the default alarm management deamon, refer to Chapter 2 of the *HP OpenView Performance Agent Installation and Configuration Guide for IBM AIX Systems*.
- This release includes the following new metrics:
  - `GBL_SWAP_SPACE_AVAIL`
  - `GBL_STATTIME`
  - `GBL_MEM_PAGEIN_RATE`
- The scaling for the following metrics has been changed from KB to MB.
  - `GBL_MEM_AVAIL`
  - `GBL_MEM_PHYS`

- Dependency of `ttd` on having `rpcbind` or `portmap` running has been eliminated. `ttd` has been modified to work independent of `rpcbind` or `portmap`.
- User messages in extract and utility tools will now display time in 24-hour format.
- This release includes minor enhancements and defect fixes. Refer to the Enhancements and Fixes section for details.

➤ Before using OV Performance Agent 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.

Installation Notes

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

Software and Hardware Requirements

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

- Hardware: IBM RS/6000 and pSeries systems
- Operating system version and compatibility: AIX 5L V5.1 and later
- Software
  - The `libC.a` library is required for the OVPA to operate properly. The library is bundled within the `xlC.rte` package, available from your AIX OS CD-ROM media.
  - The `libSpmi.a` library is a prerequisite on AIX 5L V5.1 and later for the memory metrics to be calculated correctly. The library is bundled within the `perfagent.tools` fileset from your AIX OS CD-ROM disk media and is installed in the `/usr/lib/` directory.
  - NCS 1.5.1

    `llbd` is the location broker for OVPA NCS mode. If you are installing OVPA in NCS mode, it is recommended you use native `llbd` provided by the OS.
  - IBM DCE V3.2

    DCE is not a standard product on AIX, whereas NCS is available with the AIX OS CD-ROM media. Hence the DCE Base Services for AIX Package must be purchased separately. The package is necessary and has to be installed only if you want to install the OVPA binary set with the `-b dce` option and run it in DCE mode, or you want to emulate the NCS mode using DCE.

    Note that DCE must be running on your system before installing or starting OVPA in DCE mode. To set up DCE to run automatically at system startup, edit the `/etc/inittab` file. Insert the following line before the line that begins with `ovpa` in the `/etc/inittab` file:

    ```
    rcdce:2:wait:/etc/rc.dce core > /dev/console 2 > &1
    ```
- Disk space

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

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

— recommended 60 MB in the `/var/opt/perf/` and `/var/opt/OV/` directories for log and status files.

If you are installing or upgrading OVPA on a system that already has GlancePlus installed, you must upgrade GlancePlus to the same release version. GlancePlus and OVPA versions should always be the same.

Special Installation Instruction

- If you are installing OVPA 4.5 and OVO 7.x agent on the same system, then you must install OVO 7.x agent first and then OVPA 4.5.
- If you are installing OVPA 4.5 on a system where OVO Agent is also installed, then it is recommended you restart OVO Agent after OVPA 4.5 installation.
- If you have an HP OpenView Smart Plug-In (SPI) installation on your system, you must install the following software updates for the SPI to work successfully with OVPA 4.5.

  — If you are running OVO management server on Windows operating systems, then download and install the following OVO patch:

    – For OVO 7.2x download and install patch `OVOW_00201`

    – For OVO 7.5x download and install patch `OVOW_00202`

    These patches can be downloaded from:

    http://support.openview.hp.com/patches/patch_index.jsp

  — If you are running OVO management server on UNIX operating systems (HP-UX and Solaris) then download and install the software update, `DSI2DDF_A.02.02.00.sdtape`.

    `DSI2DDF_A.02.02.00.sdtape` can be downloaded from the following anonymous ftp location:

    `ftp://ftp.hp.com/pub/ovreporter/ovpa_spi`

    For more information about the software update, refer to the `Readme` file at the location

    `ftp://ftp.hp.com/pub/ovreporter/ovpa_spi/ReadMe.txt`.

Enhancements and Fixes

This release provides fixes for the following major problems and change requests:

QXCR1000220067

PROBLEM: `APP_IO_BYTE[RATE]` metrics may overflow under very high I/O for an application.

FIX: In this version, `APP_IO_BYTE` and `APP_IO_BYTE_RATE` do not overflow for high I/O intensive applications.

QXCR1000235322

PROBLEM: In OVO 8.x environments, `alarmgen` is not able to send alarm messages to OVO server.

FIX: `alarmgen` and `perfalarm` can send OVO messages to OVO management server in OVO 8.x environments.

QXCR1000233643

PROBLEM: Memory leak in `rep_server`.

FIX: In this version of OVPA, the memory leak issue with `rep_server` is fixed.

QXCR1000233663

PROBLEM: `status.rep_server` is filled up with spurious 6-digit hex numbers during log files roll-over.

FIX: This problem is fixed.

QXCR1000245528

PROBLEM: `BYNETIF_ERROR` metric is not in compliance with `netstat -i` output for smaller values of `BYNETIF_ERROR`.

FIX: The problem with logging `BYNETIF_ERROR` metric for lower values has been fixed. Scope will log correct values for `BYNETIF_ERROR` metric.

QXCR1000241862

PROBLEM: Certain `BYDSK_* RATE` metrics may overflow on a system with large number of disk I/O intensive processes running.

FIX: In this version, OVPA and Glance reports correct `BYDSK_* RATE` metrics on a system with large number of disk I/O intensive processes running.

QXCR1000241862

PROBLEM: The `BYDSK_ID` metric reports an incorrect value. It is always exported as the `MISSING` value configured in the report template file.

FIX: This problem has been fixed and the `extract` command exports the correct value of `BYDSK_ID` metric.

QXCR1000195801

PROBLEM: `GMT_OFFSET` metric is exported incorrectly for negative offset values.

FIX: In this version of OVPA, the `GMT_OFFSET` metric exports correctly for negative offset values.

QXCR1000192942

PROBLEM: The `BYNETIF_NET_SPEED` metric is logged as 31702 instead of 1000000000 for a 1GB LAN interface.

FIX: `BYNETIF_NET_SPEED` metric has been changed to display in Mega bits per second (Mbps). Both Glance and OVPA show this metric in Mbps.

Known Problems, Limitations, and Workarounds

The known problems and workarounds for this release of OVPA are listed below:

QXCR1000188488

PROBLEM: The metrics `GBL_NFS_CALL` and `GBL_NFS_CALL_RATE` may not reflect the activity of NFS version 4 (NFSv4) operations because AIX instrumentation in that area for AIX 5L 5.3 is lacking.

WORKAROUND: None.

QXCR1000193405

PROBLEM: Some CPU utilization and disk I/O metrics may report incorrect values on Power5 systems because of problems with the AIX 5.3 instrumentation in that area. Specifically, the per-process system CPU metrics may be over-reported and may not match the per-CPU or global CPU utilization.

WORKAROUND: None.

QXCR1000195155

PROBLEM: On systems that support dynamic CPU addition/deletion, such as AIX 5L 5.3 on Power5 architecture, average (cumulative) global CPU metrics are calculated based on the maximum number of CPUs, instead of active CPUs. An example of one of these global metrics is `GBL_CPU_TOTAL_UTIL_CUM`.

WORKAROUND: None.

QXCR1000195155

PROBLEM: Logically partitioned AIX 5L 5.3 systems on Power5 architecture allow dynamic changes to their online memory allocation. This type of memory size change will not correctly reflect in performance tools until the tools are restarted.

WORKAROUND: None.

QXCR1000187723

PROBLEM: The values reported for swapping metrics (`GBL_MEM_SWAP_*`) are same as the corresponding paging metrics values (`GBL_MEM_PAGE_*`). The swapping metrics do not reflect swapping.

WORKAROUND: None.

QXCR1000053950

PROBLEM: In a cluster environment, after a cluster is switched on or off, OVPA servers cannot be restarted by issuing the `ovpa restart` command.

WORKAROUND: The DCE daemon must be started only after the cluster software is started and must be terminated before stopping the cluster software. If this is not done, the steps to be followed are:

If DCE was started prior to starting the cluster:

1. Stop the cluster software.
2. Stop the DCE daemon.
3. Start the cluster software.
4. Start the DCE daemon.
5. Stop OVPA, if it is running.
6. Start OVPA.

If DCE was started prior to stopping the cluster:

1. Start the cluster software.
2. Stop the DCE daemon.
3. Stop the cluster software.
4. Start the DCE daemon.
5. Stop OVPA, if it is running.
6. Start OVPA.

QXCR1000287213

PROBLEM: Installation of OVPA 4.5 on the system having OVO 7.x agent installed sends continuously the following alert message to OVO management server.

```
BBC Local Location Broker of subagent 0 aborted; process did an exit 77.
The process has been started for '6' times in the last '0 d 00:00:50'
already. (OpC30-1198)
```

WORKAROUND: Restart OVO 7.x agent by running the following commands:

```
# opcagt -kill
# opcagt -kill
```

QXCR1000287583

PROBLEM: Installation/ un-installation of OVPA 4.5 on a system with OVO 8.x running in non-root user mode switches the user id back to root for the `ovc`, `coda`, and `ovbbccb` processes.

WORKAROUND: Run **`ovswitchuser.sh`** to fix the above problem.

QXCR1000237437

PROBLEM: On system that has OVOA 8.x and OVPA 4.5 installed, un-installation of OVO 8.x agent is left incomplete.

WORKAROUND: Hotfix is available through HP Support.

QXCR1000237478

PROBLEM: On system that has OVOA 8.x and OVPA 4.5 installed, un-installation of OVO 8.x agent stops `ovc`, `ovbbccb`, and `coda`.

WORKAROUND: Hotfix is available through HP Support.

QXCR1000282671

PROBLEM: On system that has OVOA 8.x and OVPA 4.5 installed, If you stop OVO 8.x agent using command **`opcagt -stop`**, `coda` is also stopped.

WORKAROUND: Hotfix is available through HP Support.

QXCR1000289724

PROBLEM: On systems where OVPA 4.5 co-exists with the OVO 7.x agent, uninstallation of OVO 7.x causes removal of the `/usr/lpp/OV/` directory.

WORKAROUND: Hotfix is available through HP Support.

QXCR1000291031

PROBLEM: In a HTTPS based secure data communication environment, OVPM 5.0 encounters a timeout condition while communicating with OVPA 4.5, if OVPA 4.5 is additionally configured for single port communication.Refer section "Communicating Across a Firewall" in HP OpenView Performance Agent *Installation and Configuration Guide* (ovpainst.pdf) for details about "Single port communication" and "Secure Communication".

WORKAROUND: When you wish to enable HTTPS data communication, use a fixed second port number instead of configuring coda for single-port communication. If you do not configure single-port data communication, then by default, OVPA's `coda` process will use a dynamically chosen second port (in addition to port 383 which is used by the `ovbbccb` communication broker process). This use of a dynamic port can be difficult when connecting to OVPA remotely through a firewall, because you will not know what firewall ports to open. Instead of configuring single-port data communication along with HTTPS, choose a port other than 383 that you will open in the firewall and then configure OVPA to use it for coda by typing the following commands:

a **`ovconfchg -ns coda.comm -set SERVER_PORT`** <*portnumber*>

b **`ovconfchg -ns coda.comm -set SERVER_BIND_ADDR 0`**

c **`ovpa restart server`**

➤ AIX kernel architecture performs disk I/O through the VMM (Virtual Memory Management) subsystems using memory mapped files. This affects the `GBL_MEM_FREE` and `GBL_MEM_UTIL` metrics. And the size of the freelist is not an indication of the free memory that is available on the system. As a workaround, the `GBL_MEM_PG_SCAN_RATE` metric can be used to monitor the memory pressure. The metric value gives an indication if a system is running low on memory.

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 AIX systems, enter the command:

/usr/lpp/perf/bin/perfstat -v

File Placements:

Release Notes:

/usr/lpp/perf/ReleaseNotes/

Printable documents:

/usr/lpp/perf/paperdocs/ovpa/C/

Executables and scripts:

/usr/lpp/perf/bin/

/usr/lpp/OV/

Java ARM Wrappers:

/usr/lpp/perf/examples/arm

Examples of ARM instrumented applications:

/usr/lpp/perf/examples/arm/

Online help files:

/usr/lpp/perf/help/ovpa/C/

/usr/lpp/perf/help/arm/C/

Messages and catalog files:

/usr/lpp/perf/lib/nls/msg/C/

Installation files and holding area:

/usr/lpp/perf/newconfig/

Program libraries:

/usr/lpp/perf/lib/

Include files for program development:

`/usr/lpp/perf/include/`

Man pages:

`/usr/lpp/perf/man/`

Product configuration and status files:

`/var/opt/perf/`

`/var/opt/OV/conf/perf/`

startup and shutdown scripts:

`/etc/`

`/etc/rc.ovpa`

Log files and other data files:

`/var/opt/perf/datafiles`

`/var/opt/OV`

Local Language Support

Localized OVPA is not currently available for AIX systems.

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 using the support site 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 access levels, go to:

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

To register for an HP Passport ID, go to:

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

Online Documentation

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

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