# **HP Performance Agent**

for the AIX, HP-UX, Solaris, Linux, and Windows® operating systems

# Release Notes

Software version: 5.00/August 2009

This document provides an overview of the changes made to HP Performance Agent (Performance Agent) for the version 5.00. It contains important information not included in the manuals or in online help.

#### Note:

 It is recommended that you view the most recent edition of Release Notes available at the following URL:

#### http://h20230.www2.hp.com/selfsolve/manuals

This site requires you to register for an HP Passport and sign-in. To register for an HP Passport ID, go to:

### http://h20229.www2.hp.com/passport-registration.html

Or click the **New users - please register** link on the HP Passport login page.

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

- 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 web site: http://www.adobe.com/
- The product release notes will not available as a part of media and will be available only on the manuals site: http://h20230.www2.hp.com/selfsolve/manuals.

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### What's New In This Version

This release of Performance Agent includes the following features. For information on new features specific to individual platforms see the individual sub-sections. The new features common to all platforms are available in the section Common Features Applicable to All Platforms.

To view the platform-specific list of new metrics in 5.00, see New Metrics Added In This Release:

### Common Features Applicable to All Platforms

- The logproc log file capacity is enhanced and can now store data up to a maximum size of 4GB; previously the capacity was 2GB.
- Provides 64-bit libarm and libarmjava libraries along with 32-bit libraries.
- The unit of metrics APP\_MEM\_RES and APP\_MEM\_VIRT is modified from KiloBytes to MegaBytes.

HP Performance Agent was previously called as OpenView Performance Agent (OVPA). The new product name, HP Performance Agent is applicable from version 4.70.

#### AIX

- Performance Agent is enhanced to present performance metrics of Work Load Partitions (WPARS) when Performance Agent is installed in global environment. The BYLS class of metrics will present performance data for WPAR.
- Performance Agent is supported inside System WPAR on AIX 6.1 TL2.
- Option to configure the logical systems parameter in the parm file to enable logging of BYLS class of metrics for LPAR and WPAR.
- When SMT is ON, Performance Agent on AIX systems represent both logical and physical CPU utilizations on the system.
- Performance Agent is supported on VIOS 1.3, 1.4, 1.5, and 2.1 versions. Performance Agent can capture data for LPARs configured with VIOS 1.3, 1.4, 1.5, and 2.1 versions.
- Performance Agent 5.00 supports data logging for LAN interfaces configured with IPv6 address and tunnel interfaces.
- A new metric has been added to configuration class, GBL\_IGNORE\_MT. This metric value indicates the value of the flag ignore\_mt in the parm file.
  - If the value of GBL\_IGNORE\_MT = True, the CPU metrics of global class will report values normalized against the active number of cores in the system.
  - If GBL\_IGNORE\_MT = False, the CPU metrics of global class will report values normalized against active number of CPU threads in the system.

Note: When you enable or disable SMT, you need to restart Performance Agent.

#### HP-UX

- Performance Agent is supported on HPVM versions 4.00 and 4.10.
- The metric PROC STOP REASON is enhanced to capture kernel functions.
- Performance Agent includes the RC enhancement feature, hence when Performance Agent is installed, you can notice an improvement in the system shutdown time and boot time compared to earlier versions.

#### Linux

- Performance Agent is supported on guests hosted on SLES10 & RHEL5 Xen virtual environment.
- PA is supported on SELinux environment. For more details see the *Install Guide for HP Performance Agent on Linux Operating System*.
- Performance Agent is enhanced to run on vMA (VSphere Management Assistant) 4.0. Performance Agent captures and reports performance data (in BYLS class) for ESX hosts, resource pools and guests from ESX Servers that are registered with the vMA.
- Performance Agent 5.00 supports data logging for LAN interfaces configured with IPv6 address and tunnel interfaces. The metric BYNETIF\_NET\_TYPE is enhanced to capture and present the data for IPV6 tunnel interfaces.

### Solaris

- Supported on Logical Domains (LDoms) on SPARC with Sun Solaris 10 operating environment or later.
- Supports monitoring of Sun Solaris ZFS (Zettabyte File System).
- Supports monitoring of global and non-global zones. The BYLS class of metrics is available on Solaris Zones on Sun Solaris 10, (Update-5, March 2008 release) operating environment or later.
- Option to configure the logical systems parameter in the parm file to enable logging of BYLS class of metrics for zones.
- Performance Agent is supported on Sparse root non-global zones and Whole root non-global zones.
- Performance Agent is not supported inside Branded zones.
- Performance Agent 5.00 supports data logging for LAN interfaces configured with IPv6 address and tunnel interfaces. The metric BYNETIF\_NET\_TYPE is enhanced to capture and present the data for IPV6 tunnel interfaces.

### Windows

- Performance Agent is supported on Windows guest hosted on Xen virtual environment.
- Supports monitoring of Hyper-V role enabled Windows 2008 systems. The BYLS class of metrics is available on Hyper-V enabled environments.
- Option to configure the logical systems parameter in the parm file to enable logging of BYLS class of metrics for Hyper-V.
- Performance Agent on Windows platform is digitally code signed and hence you can verify the integrity
  and authenticity of the code received before installing Performance Agent. For more information, see
  Code Signing Verifying Signature.
- Performance Agent 5.00 supports data logging for LAN interfaces configured with IPv6 address.
- From Performance Agent 5.00, when you install Performance Agent on a Windows system, the **Add or Remove Programs** option under **Control Panel** has an entry for only Performance Agent in the list of programs. The shared components for Performance Agent are not listed. To uninstall Performance Agent and all the shared components, you need to select Performance Agent from the list. For more details on uninstallation, refer to the *HP Performance Agent Configuration and Installation Guide for Windows operating system*. However if you have HP Operations Agent installed on the same system, you need to consider the version of the agent installed:
  - If Performance Agent 5.00 is installed on a Windows system that has Operations Agent version less than 8.60 already installed, then components upgraded by Performance Agent have entries in the Add or Remove Programs list.

— If Operations Agent version less than 8.60 is installed on a Windows system where Performance Agent 5.00 is already installed, then except for components installed by Performance Agent all other components have entries in Add or Remove Programs list.

# What's Changed In This Version

In this release of Performance Agent, the following features are no longer supported:

- Performance Agent 5.00 does not support HP Self-Healing Services (SHS).
- Performance Agent 5.00 supports only http(s) data communication. The RPC, DCE and NCS modes of data communication are not supported.
- Co-existence of Performance Agent 5.00 and 7.x DCE Operations Agent, on 64-bit edition of Windows 2003 and 2008 (on X86\_64, AMD64, EM64T, and IA64 architectures), 64 bit AIX6.1, and Linux (SLES10.x and RHEL5.x) environments is not supported.
- Performance Agent 5.00 is not supported on the following versions of operating systems:
  - Debian, Asianux and Linux 2.4 kernel
  - Solaris 7 and 8 operating environments
  - AIX 5.1 and 5.2
- Performance Agent is not supported on ESX server console.
- Performance Agent, version 5.00 is the last version to be supported on Windows 2000. Henceforth Performance Agent will not be supported on Windows 2000.

## **Product Documentation Map**

This section provides an overview of the documentation available with Performance Agent and also the file names and locations where you can find the files after installing the Performance Agent:

Note:

To view the most recent edition of any document, visit the following URL:

### http://h20230.www2.hp.com/selfsolve/manuals

This site requires that you register for an HP Passport and sign-in. To register for an HP Passport ID, go to:

#### http://h20229.www2.hp.com/passport-registration.html

Or click the **New users - please register** link on the HP Passport login page.



Conventions used: <paperdocs\_dir>

On HP-UX, Linux and Solaris = /opt/perf/ paperdocs/ovpa/C/ On AIX = /usr/lpp/perf/paperdocs/ovpa/C/ On Windows = <drive>:\Program Files\HP\HP BTO Software\paperdocs\ovpa\C\

#### Welcome to Performance Agent

#### Release Notes



To view the most recent edition of Release Notes, visit the following URL: http://h20230.www2.hp.com/selfsolve/manuals

Read the Release Notes to understand the new features in this version, enhancements, defect fixes, licensing in this version:

Are you ready to install or upgrade to version 5.00?



#### **Installation and Configuration Guide**

Provides the pre-requisites, requirements, instructions to install, uninstall, configure and start/stop PA.

Where to find it: <paperdocs\_dir>/ovpainst.pdf

Start using the product; explore the power of the product, various customization options



#### User Guide

Includes information on working with Performance Agent, configuration parameters, usage of extract, utility and alarms

Where to find it:<paperdocs\_dir>\ovpausers.pdf

Explore the rich set of metrics which Performance Agent offers



#### See Also

Context sensitive online help from Windows GUI

Manpages on UNIX for various commands and options

# Metrics Dictionary

Platform specific list of all metrics with descriptions.

Where to find it:<paperdocs\_dir>\met<os>.txt

For metric obsolescence information, see <paperdocs\_dir>/mettable.txt

#### Additional options



#### **Data Source Integration Guide**



For information on data source integration, usage, class specification reference and program reference, examples of DSI.

Where to find it: <paperdocs\_dir>\ovpadsi.pdf



#### **Track Your Transactions Guide**

For instructions on using transaction tracking, messages, errors and examples

Where to find it:<paperdocs\_dir>\tyt.pdf



#### **Application Response Measurement API Guide**

Refer to this guide for information on basics tasks for instrumenting an application, installing and testing, usage of the various ARM 2.0 API options.

Where to find it:<paperdocs\_dir>\arm2api.pdf

## Licensing

Performance Agent licensing is controlled by 'mwakey' (on Windows, Solaris, AIX and HP-UX systems) and 'ovpakey' (on Linux systems) and is available in the following directory

- HP-UX, Solaris, AIX and Linux /var/opt/perf
- Windows <data\_dir>. The default data dir is <disk drive>:\Documents and Settings\All Users\Application Data\HP\HP BTO Software\Data\.

## Types of Licenses

There are three types of licenses available for Performance Agent.

- **Trial** The trial license is valid for 60 days. The trial period for the Performance Agent license starts the first time you start Performance Agent.
- **Extended** You have the option of extending your trial license for an additional duration. For instructions to extend trial license, see <u>Steps to get trial license/extended trial license.</u>
- **Permanent** There is no expiration date for Performance Agent with permanent license.

### Steps to obtain media

Go to the following web site for trial copy of the software:

### https://h10078.www1.hp.com/cda/hpdc/display/main/index.jsp

- Go to the following web site to download permanent software:
  - SUM (Software Update Manager)

#### http://support.openview.hp.com/software updates.jsp

SUM is also accessible through the ITRC (IT Resource Center)

#### http://www.itrc.hp.com

Visit the tutorial for SUM registration, login, etc.:

#### http://support.openview.hp.com/pdf/sso/index.html

BTO Software Download Center

### https://h10078.www1.hp.com/cda/hpdc/display/main/index.jsp

• To get Physical Media

Contact HP Software sales representative (contract administrators).

## Steps to get trial license/extended trial license

Temporary license keys are granted for evaluation purposes only. As a general rule, temporary evaluation license keys cannot be granted for non-evaluation purposes.

- 1 Obtain an approved product evaluation request from your Sales Representative.
- 2 Email your approval along with the details below to the email ID based on your region:

Customer name:

Customer contact name:

Product Name:

Product version:

Number of days of trial/extension required:

- For APJ Region: asia\_password@cnd.hp.com
- For Americas Region: EvalkeyRequest\_AMER@hp.com

For EMEA Region: europe\_password@cnd.hp.com

#### Command to check the license installed on the system

To check the validity of the product license, run the following command. If the license is valid, it can be a trial version or a permanent version:

Syntax: licheck

Example: utility -licheck

If the license is valid and permanent, the following message appears:

The permanent OVPA software has been installed

### Migrating from Trial or Extended license to Permanent license

To migrate to a permanent license of Performance Agent, version 5.00, follow these steps:

- 1 Stop Performance Agent.
- 2 Uninstall the existing version of Performance Agent and re-install the new version. For instructions, see *HP Performance Agent Installation and Configuration Guide*. However when you uninstall Performance Agent, you lose the data that was collected. It is recommended that you manually backup this data before uninstalling Performance Agent.
- 3 Start Performance Agent.

**Note**: There is no web fulfillment mechanism to convert the Performance Agent images to a non-trial licensed product. To obtain the production (non-trial) version of Performance Agent, you must purchase a License-to-Use product for each system on which Performance Agent images are installed, and at least one copy of the Performance Agent media product for your overall environment.

You must install the production software for Performance Agent from the optical media. If you already have the trial software installed, you must uninstall the trial software and install the production software.

## Manufacturing Part Numbers

Listed below are the part numbers for the product:

#### **Permanent:**

- B7490-15317 DVD, PA 5.0 (All Platforms) Perm
- B7490-15318 DVD, PA 5.0 Deployables for HP-UX (8.x and 9.x) management servers and Solaris (Sun OS 5.7 and later) management server
- B7490-15319 DVD, PA 5.0 Deployables for Windows (8.x) management server
- B7490-15321 ESD, PA 5.0 HP-UX 11.11 Perm
- B7490-15322 ESD, PA 5.0 HP-UX 11.23 Perm
- B7490-15323 ESD, PA 5.0 HP-UX 11.31 Perm

- B7490-15325 ESD, PA 5.0 AIX Perm
- B7490-15324 ESD, PA 5.0 Linux Perm
- B7490-15326 ESD, PA 5.0 Solaris Perm
- B7490-15327 ESD, PA 5.0 Windows Perm
- B7490-15328 ESD, PA 5.0 Deployables for HP-UX HP-UX (8.x and 9.x) management servers
- B7490-15329 ESD, PA 5.0 Deployables for Solaris (Sun OS 5.7 and later) management server
- B7490-15330 ESD, PA 5.0 Deployables for Windows (8.x) management server

#### **Trial:**

- B7490-13317 DVD, PA 5.0 (All Platforms) Trial
- B7490-13318 ESD, PA 5.0 HP-UX 11.11 Trial
- B7490-13319 ESD, PA 5.0 HP-UX 11.23 Trial
- B7490-13320 ESD, PA 5.0 HP-UX 11.31 Trial
- B7490-13322 ESD, PA 5.0 AIX Trial
- B7490-13321 ESD, PA 5.0 Linux Trial
- B7490-13323 ESD, PA 5.0 Solaris Trial
- B7490-13324 ESD, PA 5.0 Windows Trial

### Installation Notes

Installation requirements, as well as instructions for installing Performance Agent, are documented in the *Installation Guide for HP Performance Agent* provided in Adobe Acrobat (.pdf) format. The document file is included on the product's CD or DVD media as:

```
<installationmedia>\<os>\paperdocs\C
```

For information on the documentation available with Performance Agent and for location of documents after installation, refer to the section Related Documentation.



Before using Performance Agent, you must review and accept the license terms and conditions detailed in the readme file available in /<directory>/<os>/<filename>, where <directory> is your optical media directory.

Readme filenames on different platforms are as follows:

- AIX, Solaris readme.ovpa
- Linux README

There is no readme file on HP-UX and Windows.

# Supported Platforms

For latest support matrix, visit the following web site:

#### http://support.openview.hp.com/selfsolve/document/KM323488

This site requires that you register for an HP Passport and sign-in. To register for an HP Passport ID, go to:

#### http://h20229.www2.hp.com/passport-registration.html

Or click the **New users - please register** link on the HP Passport login page.

## Software and Hardware Requirements

Before installing Performance Agent, make sure that your system meets the requirements stated in the *HP Performance Agent Installation and Configuration Guide*.

Instructions for installing Performance Agent are also available in the *HP Performance Agent Installation* and Configuration Guide.

### Special Instructions



HP Strongly recommends that you stop all product services before uninstalling the product or upgrading to a newer version.

- If you are installing or upgrading Performance Agent on a system where GlancePlus is already installed, you must upgrade GlancePlus to the same release version. The Performance Agent and GlancePlus versions should always be the same.
- If you install the Performance Agent on a system where the HP Operations Agent is already installed, you must restart the HP Operations Agent after installation of Performance Agent is complete.
- On RHEL4 IA64 system where Performance Agent is supported in emulation mode, make sure that fix for "Redhat Bugzilla Id:493341" installed. This fix is required for supporting "4GB logproc" feature.
- To capture guest-specific virtualization metrics for HP-UX guest systems hosted on HPVM, make sure that same version of VMGuestLib is installed on the host and guests. For information on installing guest libraries, see the HP Integrity Virtual Machines Installation, Configuration, and Administration Guide, Section 4.2 Installing HP-UX Guest Management Software.
- On HP-UX system, for nfs mounted installations while removing the product use always use the following command:

#### swremove -x write\_remote\_files=true <BUNDLENAME>

- To run Performance Agent in SELinux environment, perform the following:
  - configure the firewall of the SELinux box as it disables all communications inward except ssh. Open Port 383 and enable the http and https protocols to enable communication.
- If you are installing Performance Agent 5.00 and HP Operations Agent 7.xx on the same system, you must install HP Operations Agent 7.xx first and then Performance Agent 5.00.
- If you are installing Performance Agent 5.00 on a system on which one or more of the following HP Software products are installed, it is recommended to restart the following after Performance Agent 5.00 installation:
  - HP Operations Agent
  - HP Operations Manager
  - HP Performance Manager
  - HP Reporter
  - HP Performance Insight
  - OV Internet Services

### Code Signing - Verifying Signature

Performance Agent on Windows platform is code signed. It enables you to verify the integrity and authenticity of the code received before deployment. Digitally signed code also enables you to manage security vulnerability risk.

You may verify the signature for a binary on a need basis. To verify signature for a binary, perform the following steps:

- 1 Select the binary. Right-click the selected binary and open the **Properties** window.
- 2 In the **Properties** window, select the **Digital Signatures** tab. This tab displays the certificate, indicating that the binary is signed. To view details of the certificate, select it and click the **Details** button.
- 3 To view the certificate, click the **View Certificate** Button.

# Shared Components and Versions with Performance Agent 5.00

List of components available with the installation package of Performance Agent:

Shared component	Componen	t Name	Version Numbers	HPUX - PA	HPUX - IA	Solaris ( Sparc & x86)	Windows ( x86, x64 and IA64 )
L-core	HP Software Cross Platform Component	HPOvXpl	06.20.051	06.20.052	06.20.052	06.20.052	6.20.054
	HP Software Security Core	HPOvSecCo	06.20.050				
	HP Software HTTP	HPOvBbc	06.20.050		06.20.051		
	Communication HP Software Process Control	HPOvCtrl	06.20.052				
CODA	HP Software Performance	HPOvPacc	10.50.180				10.50.190
	Access HP Software Performance Core	HPOvPCO	10.50.180				10.50.190

#### Note:

• When you are upgrading to version 5.00 of Performance Agent or installing Performance Agent 5.00 on a system which has other HP BTO products installed, the versions of common components will always increment to the higher version. If Performance Agent 5.00 includes a lesser version of the components than the one already available on the system, the version of common components will not change.

## Steps to verify the component version available on your system

Before installing Performance Agent on your system, you can verify the versions of common components available in the system either from a previous installation of Performance Agent or any other HP product. To see the version of Performance Agent installed, run the following command:

On AIX systems:

```
lslpp -1 | grep -i hpov
```

- On HP-UX systems:
  - \$ /usr/sbin/swlist -l fileset | grep -i hpov
- On Solaris systems:

pkginfo | grep -i hpov

• On Linux systems:

rpm -qa | grep -i hpov

A list of all the HP BTO shared components appear. Sample output of this command:

HPOvLcore.HPOvBbc	6.20.1.0	COMMITTED	HP Software HTTP Communication
HPOvLcore.HPOvCtrl	6.20.11.0	COMMITTED	HP Software Process Control
HPOvLcore.HPOvSecCo	6.20.10.0	COMMITTED	HP Software Security Core
HPOvLcore.HPOvXpl	6.20.21.0	COMMITTED	HP Software Cross Platform
HPOvPerf.HPOvARM	5.0.0.0	COMMITTED	HP Application Response
HPOvPerf.HPOvDSI	5.0.0.0	COMMITTED	HP Data Source Integration
HPOvPerf.HPOvMI	5.0.0.0	COMMITTED	HP Measurement Interface
HPOvPerf.HPOvPALic	5.0.0.0	COMMITTED	HP Performance Agent License
HPOvPerf.HPOvPCO	10.50.160.0	COMMITTED	HP Software Performance Core
HPOvPerf.HPOvPacc	10.50.160.0	COMMITTED	HP Software Performance Access
HPOvPerf.HPOvPetc	5.0.0.0	COMMITTED	HP Software Performance
HPOvLcore.HPOvBbc	6.20.1.0	COMMITTED	HP Software HTTP Communication
HPOvLcore.HPOvCtrl	6.20.11.0	COMMITTED	HP Software Process Control
HPOvPerf.HPOvPCO	10.50.160.0	COMMITTED	HP Software Performance Core

- On Windows systems:
  - HPOvXpl:

ovconfget -version

Sample output: HP Software Cross Platform Component Config Lookup Tool 06.20.040

— HPOvBbc:

bbcutil.exe -version

Sample output: HP Software HTTP Communication Utility Program 06.20.010

— HPOvCtrl:

ovc -version

Sample output: HP Software Control 06.20.016

— HPOvSecCo:

ovcoreid -version

Sample output: HP Software Security Core 06.20.031

— HPOvPacc:

Perfstat -v

— HPOvPCO:

Perfstat -v

Sample output:

Perf Agent coda executables in the directories:

OvCoda.dll	10.50.172.00
ovcodautil.exe	10.50.172.00
coda.exe	10.50.172.00

# **Enhancements and Fixes**

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

# **Common Fixes Available In All Platforms**

QXCR1000440817	
PROBLEM:	The GBL_NUM_CPU_CORE needs to be supported on more platforms.
FIX:	The GBL_NUM_CPU_CORE is now supported on AIX, HP-UX, Linux, Solaris, and Windows.
QXCR1000768866	
PROBLEM:	A new metric to be added to HP Performance Agent to log the status of Hyperthreading.
FIX:	A new metric GBL_CPU_MT_ENABLED is added to HP Performance Agent to report if hyperthreading is on or off.
QXCR1000347704	
PROBLEM:	Support logging of PROC_PROC_CMD in HP Performance Agent logs.
FIX:	A new log file by name logpcmd<0,1> is introduced to log PROC_PROC_CMD.
QXCR1000383942	
PROBLEM:	Provide an option to disable flush option.
FIX:	The flush interval can be disabled by setting flush at zero (i.e. flush = 0). If the flush is set to zero, the scopeux never logs the application and device data which are not meeting threshold values.
QXCR1000216935	
PROBLEM:	A RECORD PER HOUR is limited to one record per second for logging DSI data.
FIX:	RECORDS PER HOUR limit is increased to allow logging of more unsummarized data records per hour. To support this, a new option "-u" is introduced with sdlcomp and need to use this option if more than one unsummarized data record per second need to be logged.
QCCR1A88420	
PROBLEM:	Undocumented changes to INTERVAL metric caused SAS data feed to fail on 4.6.
FIX:	Note that the data format for INTERVAL metric is changed to tenths-of-a-second to represent the data up to precision of 1 decimal.

QXCR1000347643	
PROBLEM:	Provide an option to Manage log file by days in addition to size.
FIX:	Two new parameters days and maintweekday are introduced in parm file. The days parameter controls the size of the scopeux log files in terms of number of days of data logged. The maintweekday parameter specifies the day of the week log file maintenance is done once the limit for days parameter is met. The log file continues to grow even though the limit for days parameter is met until maintweekday when log file roll back is done removing the exceeded number of days of data from start of log file at mainttime.
QXCR1000026539	
PROBLEM:	The metric GBL_MEM_PAGE_REQUEST_RATE is capped at 3276.7.
FIX:	This issue associated with capping of metric GBL_MEM_PAGE_REQUEST_RATE has been resolved.
QXCR1000041926	
PROBLEM:	Customer would like permissions of the status files to be changed.
FIX:	Now the status files and the SCOPE log files have "644" permission.
QXCR1000420544	
PROBLEM:	When lvm class is enabled in parm file, CODA fails to run after some time.
FIX:	The problem has been resolved now and the CODA no longer aborts with too many open files error.
QXCR1000423212	
PROBLEM:	OVPA communication daemon is not started automatically in the following scenarios:  • After a reboot.  • If "ovc -kill" is issued before "ovpa start".
FIX:	Now OVPA communication daemon starts fine in all scenarios.
QXCR1000423390	
PROBLEM:	Alarming based on process loop syntax in alarmdef file does not work consistently.
FIX:	Now alarming based on process loop syntax in alarmdef file works consistently.
QXCR1000372676	
PROBLEM:	GBL_STATDATE, GBL_STATTIME, GBL_INTERVAL have to be included in all extracts.
FIX:	New metrics STATDATE and STATTIME have been added to provide the ending time stamp for each interval in Performance Agent. The above metrics have been added to all the classes except for 'Configuration'.

QCCR1A88885	
PROBLEM:	PA does not log LS_Name beyond 78 characters - need more field length.
FIX:	Performance Agent is enhanced to show BYLS_LS_NAME up to 128 characters length when extracted from the system where BYLS data is collected.
QCCR1A88826	
PROBLEM:	coda takes high cpu when huge extracted file is used as datasource
FIX:	This problem is fixed
QXCR1000816710	
PROBLEM:	64 bit libarmjava need to be generated on all platforms.
FIX:	64 bit libarmjava is now shipped with Performance Agent on all the platforms.
QCCR1A88932	
PROBLEM:	APP_MEM_RES and APP_MEM_VIRT are overflowing
FIX:	The unit for metrics APP_MEM_RES and APP_MEM_VIRT is changed from KB to MB. Hence APP_MEM_RES and APP_MEM_VIRT can display values upto 2 PetaBytes.
	For more information, see the knowledge base available at the website: http://support.openview.hp.com/selfsolve/document/KM745740
QCCR1A87695	
PROBLEM:	Utility -xa -D stops analyzing after DST fallback
FIX:	In http mode, utility -xa analyzes the entire logfile.
QCCR1A88174	
PROBLEM:	Perfalarm's attempt to send alert msg to OVO failed with result 512
FIX:	The problem with the Perfalarm has been fixed now and alert messages are delivered to HPOM with out any problem.
QCCR1A88222	
PROBLEM:	Data goes to wrong columns in DSI files
FIX:	This problem is now fixed and DSI log works fine for floating point numbers with comma.
QCCR1A80670	
PROBLEM:	GBL_RUN_QUEUE metric are inconsistent across platforms
FIX:	Now GBL_RUN_QUEUE is consistent on HP-UX, Solaris and AIX. It shows average number of threads (or processes) waiting in the runqueue over the interval. On Linux and Windows, it is the instantaneous value that is, the number of threads in the

PROBLEM: GBL_ACTIVE_PROC > GBL_ALIVE_PROC due to overflow for GBL_ALIVE_PROC FIX: Overflow issue for metrics GBL_ALIVE_PROC is resolved.  QCCR1A88209 PROBLEM: extracted binary files are getting corrupted FIX: This problem is fixed.  QCCR1A88313 PROBLEM: GBL_CPU_TOTAL_UTIL incorrectly shows 100% FIX: This problem is fixed.  QCCR1A88321 PROBLEM: OVPA perfalarm alarms are severely delayed for non process metric data. FIX: This problem is fixed.  QCCR1A88346
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PROBLEM: OVPA perfalarm alarms are severely delayed for non process metric data.  FIX: This problem is fixed.
FIX: This problem is fixed.
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QCCR1A88346
PROBLEM: Perfalarm goes down with FATAL ERROR.
FIX: This problem is fixed.
QCCR1A78696
PROBLEM: HP-Internet timebomb override has not been updated: Glance will expire 5APR08.
FIX: Now trial bits will work properly and expire after 60 days without any license.
QCCR1A87434
PROBLEM: Extract does not show correct time with the -ut option.
FIX: This problem is fixed, Now Extract shows the correct time when it is used with the -ut option.
QCCR1A87892
PROBLEM: CODA is dying abruptly.
FIX: This problem is fixed.
QCCR1A88797
PROBLEM: Extract of data doesn't work consistently on old data. Running an extract on disk data for the current day's date returns a report with only a header, no current data.
FIX: The extraction of device data works fine when the device data is enabled and disabled in "parm" file.

Importing data with dsilog when using a comma "," as field separator dsilog with version C.04.70.000 fails to parse input data when comma "," is used as field separator i.e when comma "," is passed with -c option to dsilog.
This problem is now fixed and using comma "," as field separator with dsilog for importing data works fine.
Summary of APP_MEM_RES has negative values. On large systems, summary export of APP_MEM_RES metric shows negative value due to metric overflow.
Summary export of APP_MEM_RES shows correct value without overflow.
On some UNIX servers, extract / export output has wrong date format.
Now extract / export output shows date in correct format. The default format is now mm/dd/yyyy.
Addition of all application's APP_MEM_RES overflows. APP_MEM_UTIL metric value is not correct due to the addition of all application's APP_MEM_RES overflows.
Addition of all application's APP_MEM_RES was overflowing due to 32bit counter. It is modified to 64bit counter.
OVPA/alarmdef severity mismatched in NNM events.
This problem is fixed.
Coda dies when trying to proxy 3.72 extracted logfiles on OVPA 4.6.
This problem is fixed.
Customer logfiles make rep_server and coda abort.
This problem is fixed.
Corruption in logproc and logdev on PA after filesystem was full.
Scopeux will continue to collect but will not log anything when it recognizes the available disk space is low for /var filesystem. It will continue to log when the

	available space reaches the threshold set - default 5 MB.
QCCR1A88327	
PROBLEM:	ITOSOL_00571 fails to install if HPOVPADep not installed.
FIX:	The Patch installation will fail with proper error message, if base version of OVPA deployable is not installed.
QCCR1A88428	
PROBLEM:	Configuration metrics are collected for every 5 minutes.
FIX:	This problem is fixed.
QCCR1A88467	
PROBLEM:	OVPA records BYDISK_XX every interval. but, setting diskthreshold util.
FIX:	The data will be logged only when they exceed the threshold values.
QCCR1A88482	
PROBLEM:	Utility does not analyze full logfile if there is gap in log time.
FIX:	The problem is fixed.
QCCR1A88511	
PROBLEM:	Scopeux is dumping core.
FIX:	The problem is fixed and scopeux will not core dump.
QCCR1A88514	
PROBLEM:	On ovpa 4.7 coda uses 100% cpu.
FIX:	This problem is fixed and coda will not take high CPU utilization after upgrade to version 04.70.
QCCR1A88535	
PROBLEM:	OVPA doesn't show FS metrics if FS is huge.
FIX:	OVPA is modified to support huge FS.
QCCR1A88581	
PROBLEM:	The CPU utilization of coda is high when ovpa status/perfstat is executed.
FIX:	The problem is fixed. coda CPU utilization will NOT peak when 'ovpa status' or 'perfstat' is executed.

QCCR1A88598	
PROBLEM:	Export function is not limited to metric class mentioned in report file but CLI.
FIX:	Extract will now export only the metrics of class mentioned in report template file.
QCCR1A88680	
PROBLEM:	Core files being generated by extract under certain conditions.
FIX:	The problem is fixed. Extract does not core dump while using scripts or executed in guided mode after checking the condition while fetching the metrics.
QCCR1A88299	
PROBLEM:	Customer logfiles make rep_server and coda abort.
FIX:	This problem is fixed.

# AIX

QXCR1000394402	
PROBLEM:	Double counting of IO in GBL_DISK_* metrics on a virtualized environment.
FIX:	The GBL_DISK_* metrics and BYDSK_* metrics are linked such that, the BYDSK class metrics collect both virtual and physical disk data, and the GBL_DISK_* metrics account for only the physical disk data.
QCCR1A88510	
PROBLEM:	Few configuration metrics are not getting exported when subproc interval is set for less then 5 seconds. Example:  GBL_CPU_ENTL, GBL_CPU_ENTL_MIN, GBL_CPU_ENTL_MAX, GBL_LS_TYPE, GBL_LS_ROLE, GBL_LS_MODE, GBL_LS_SHARED, GBL_POOL_NUM_CPU, GBL_CPU_SHARES_PRIO, GBL_LS_ID, GBL_POOL_ID, GBL_POOL_CPU_ENTL.
FIX:	Modified to support configuration class when sub process interval is less then 5 seconds.
QXCR1000790050/ QCCR1A88495	
PROBLEM:	Request for additional AIX lpar metrics.
FIX:	The following new metrics are added:  BYLS_CPU_WAIT_MODE_UTIL, BYLS_CPU_IDLE_MODE_UTIL, BYLS_PHANTOM_INTR,  GBL_POOL_TOTAL_UTIL, GBL_POOL_IDLE_TIME, and GBL_TOTAL_DISPATCH_TIME.
QXCR1000806284	
PROBLEM:	Extend the capability of AIX PA agent to include all available LPAR metrics.

FIX:	Following new metrics have been added:  GBL_LS_NUM_SHARED, GBL_LS_NUM_DEDICATED, GBL_LS_NUM_CAPPED,  GBL_LS_NUM_UNCAPPED, GBL_LS_CPU_NUM_SHARED, GBL_LS_CPU_NUM_DEDICATED,  GBL_LS_PHYS_MEM_TOTAL, and GBL_LS_PHYS_MEM_CONSUMED.
QXCR1000472644	
PROBLEM:	Corruption in Performance Agent log files logproc and logdev after file system was full.
FIX:	scopeux will continue to collect data but will not log the collected data if the available disk space is low for the /var file system. It will continue to log the data when the available space reaches the default threshold of 5 MB.
	<b>NOTE:</b> Scope checks for the disk space when it comes up with the fixed size configurable through environment variable DISK_RESERVE.
QXCR1000467028	
PROBLEM:	scopeux/glance aborts with libSpmi errors.
FIX:	LibSpmi dependency has been removed for lan metric (deferred metric only) and the metric is made -1(na). Successive failure of libSpmi call will not abort scopeux and glance process.
QXCR1000797116	
PROBLEM:	The CODA processes uses 100% CPU utilization after updating to Performance Agent 4.72.
FIX:	This problem is resolved and CODA does not consume high CPU units.
QXCR1000286135	
PROBLEM:	Please add new metrics for Global Runnable processes (RUN QUEUE).
FIX:	GBL_RUN_QUEUE metric was already present but it was wrongly showing load average This has been fixed and RUN QUEUE will be available through the metric GBL_RUN_QUEUE.
QXCR1000383025	
PROBLEM:	Glance fails with "kmem64: -1 instead of 304 bytes read" error on AIX 5.3 system.
FIX:	All kmem errors for disk metrics are fixed.
QXCR1000418915	
PROBLEM:	ovpa start command fails with the following error: 'kmem64: -1 instead of 376 bytes read @ 200000000 for symbol "ifnet64-2" on AIX 5.3 MLP5.
FIX:	The issue is fixed by reading metrics from libperfstat.
QXCR1000419708	
PROBLEM:	CODA aborts intermittently while serving DSI data sources containing a large number of classes.

FIX:	CODA does not abort while serving DSI data sources containing a large number of classes.
QXCR1000401800	
PROBLEM:	lsdaemon dies soon after OVPA is started with a shared memory error.
FIX:	This problem is fixed.
QXCR1000424031	
PROBLEM:	lsdaemon taking over 90% of CPU in some environment.
FIX:	lsdaemon will not consume high CPU.
QXCR1000467028	
PROBLEM:	Successive failure of libSpmi call aborts binary (scopeux, glance).
FIX:	Now successive failure of libSpmi call will not abort scopeux and glance process.
QCCR1A88559	
PROBLEM:	ER: Extend capability of AIX OVPA agent to include all available LPAR metrics
FIX:	The following metrics are added to nums layer.
	GBL_LS_PHYS_MEM_TOTAL
	GBL_LS_PHYS_MEM_CONSUMED
	GBL_LS_NUM_DEDICATED
	GBL_LS_NUM_UNCAPPED
	GBL_LS_NUM_CAPPED
	GBL_LS_CPU_NUM_SHARED
	GBL_LS_CPU_NUM_DEDICATED  GBL_LS_NUM_SHARED
QCCR1A88262/ QXCR1000463587	
PROBLEM:	Installation files should be supplied as installp bundles only.
FIX:	Performance Agent version 5.00 is available in native packages for AIX platform.
QCCR1A88882	
PROBLEM:	Scopeux dies when logical systems is enabled and lpar count > 64.
FIX:	Scopeux runs successfully on AIX LPAR environments having more than 64 LPARs with when logging of performance data for logical systems (BYLS) is enabled.

QCCR1A88371	
PROBLEM:	Workaround for AIX degrading performance of multi-CPU virtualized system
FIX:	This fix allows users to disable OVPA/Glance collecting hyperviser metrics on the system through an environment variable.
QCCR1A88288	
PROBLEM:	Incorrect BY_CPU metrics on AIX 5.2 standalone system
FIX:	This problem is fixed.
QCCR1A88290	
PROBLEM:	OVPA handling of defunct processes.
FIX:	This problem is fixed.
QCCR1A88312	
PROBLEM:	GBL_CPU_PHYS_TOTAL_UTIL not matching native tools when SMT=on on a Power5 system.
FIX:	GBL_CPU_PHYS_TOTAL_UTIL (and other CPU metrics) are now comparable with native tools on a dedicated or shared LPAR, and standalone system when SMT is enabled.
QCCR1A88002	
PROBLEM:	The value of PROC_IO_BYTE_CUM is restricted to 2,097,152.
FIX:	This problem is fixed.
QCCR1A94392	
PROBLEM:	Export Binary format - Unable to import binary format exported files into SAS on 64 bit platforms where ovpa runs in native mode.
FIX:	This problem is fixed.
QCCR1A80670	
PROBLEM:	GBL_RUN_QUEUE metric are inconsistent across platforms.
FIX:	Now GBL_RUN_QUEUE is consistent on HP-UX, Solaris and AIX. It shows average number of threads (or processes) waiting in the runqueue over the interval. On Linux and Windows, it is the instantaneous value.

QCCR1A80655	
PROBLEM:	BYNETIF_UTIL is incorrect - too low.
FIX:	This problem is fixed and BYNETIF_UTIL, GBL_NET_UTIL_PEAK metrics values are showing correctly.
QCCR1A86746	
PROBLEM:	/var/opt/perf/reptfile not being used as described in the User's Guide.
FIX:	Extract can use now the modified /var/opt/perf/reptfile as the default template file, if -r option is not specified.
QCCR1A88363	
PROBLEM:	The installation script for OVPAAIX_00003 doesn't detect the installed versions.
FIX:	The patch installation is compatible with I18n standard.
QCCR1A88371	
PROBLEM:	Workaround for AIX degrading performance of multi-CPU virtualized system
FIX:	Added an environment variable which disable OVPA collecting hyperviser metrics on the system
QCCR1A88453	
PROBLEM:	OVPA/Glance installation overwrites libarm.a on AIX.
FIX:	The problem is fixed.
QCCR1A88024	
PROBLEM:	app cpu util % just after the ovpa restart seems to be too high.
FIX:	Showing app cpu util % just after the ovpa restart issue is resolved.
QCCR1A88178	
PROBLEM:	OVPA (scopeux) will not start after upgrade to 4.6.
FIX:	This problem is fixed in OVPA 4.6 patch OVPAAIX_00004.
QCCR1A88287	
PROBLEM:	Scopeux/Glance aborts with spmi errors

FIX:	This problem is fixed.
QCCR1A88292	
PROBLEM:	AIX/LPAR: Glance patch C.04.60.300 installation fails
FIX:	This problem is fixed.
QCCR1A87681	
PROBLEM:	Global Disk I/O metrics are "double counted" in EMC powerpath environment.
FIX:	In an EMC Powerpath environment Global Disk I/O metrics will not be double counted.
QCCR1A80635	
PROBLEM:	Several mistakes in metric descriptions for virtualization metrics.
FIX:	Virtualization metrics definitions are corrected and explained wherever necessary.
QCCR1A88633	
PROBLEM:	Threads get stuck on ARM – libraries.
FIX:	ARM library "libarm" has been made thread safe.

# **HP-UX**

QXCR100078141	5
PROBLEM:	Need a metric to report the number of physical sockets in the system.
FIX:	Metric GBL_NUM_SOCKET added to represent the physical CPU sockets count on the system. This metric is not available on 11i V1 systems.
Pre-requisite:	Following patches are required on the system to source metric value for GBL_NUM_SOCKET,
	— PHKL_37802 ( For 11.31)
	— PHKL_37803 ( For 11.23)
	— PHKL_37804 ( For 11.23)
	— PHKL_37805 ( For 11.23)
	<pre>— PHKL_37806 ( For 11.23)</pre>

QXCR1000763437/	
QCCR1A88407	
PROBLEM:	PA needs to log GBL_MEM_PAGE_FILE_CACHE and GBL_MEM_FILE_PAGE_CACHE_UTIL (UFC) metrics.
FIX:	These metrics are now being logged by Performance Agent.
QCCR1A88148	
PROBLEM:	OVPA4.6-Patch-HPUX:OVO Agent uninstallation removes all binaries in /opt/OV/bin.
FIX:	If you install have Performance Agent with OVO 8.x on the same system, while uninstalling OVO 8.X Agent the common components will not removed.
QCCR1A89027	
PROBLEM:	Support to increase the midaemon's virtual address space.
FIX:	midaemon need to be started with tuned parameters. Please contact HP Support on how to tune the parameters.
QCCR1A78660	
PROBLEM:	memory usage should show file page cache.
FIX:	Xglance displays "File Cache" in "Memory Usage Graph".
QCCR1A80544	
PROBLEM:	ER: Add metric for sar -d's avwait
FIX:	A metric BYDSK_AVG_QUEUE_TIME is added in both nums and scope.
QCCR1A91642	
PROBLEM:	midaemon core dumps on HPUX.
FIX:	midaemon is enhanced to handle bad or zero length traces from Kernel instrumentation.
QCCR1A91567	
PROBLEM:	scopeux/glance aborts with mi_shared1 - MI synchronization failed error.
FIX:	This problem is fixed.
QCCR1A80666	
PROBLEM:	Several BYHBA_ metrics are incorrect.
FIX:	The BYHBA metrics are enhanced to display accurate value.

QCCR1A88954	
PROBLEM:	scopeux / glance fail to start - MI synchronization failed error.
FIX:	This problem is fixed.
QCCR1A88746	
PROBLEM:	Fix the values for TBL_BUFFER_CACHE_MIN as it doesn't track kctune filecache_min.
FIX:	TBL_BUFFER_CACHE_MIN/MAX shows the values of respective kctune filecache_min/max in HP-UX 11.31 systems.
QCCR1A88818	
PROBLEM:	OVPA metric PROC_OTHER_WAIT_PCT always 0.
FIX:	Now PA calculates PROC_OTHER_WAIT_PCT properly. Exported file will now show correct values for this metric.
QCCR1A93912	
PROBLEM:	Total Application or Process CPU utilization exceeds permissible limits on HP-UX under certain scenarios.
FIX:	This problem is fixed.
QCCR1A88269	
PROBLEM:	scopeux is generating core file for SIGFPE.
FIX:	This problem is fixed.
QCCR1A80639	
PROBLEM:	MI sleep states not being kept current impacts DB perf analysis
FIX:	This problem is fixed.
QCCR1A88289	
PROBLEM:	OVPA C.04.60.300 perfengine core dumps on HPUX 11.31 IA platform.
FIX:	This problem is fixed.
QCCR1A88400	
PROBLEM:	C.04.70 OVPA subagent deploy fails on HP-UX 11.31 Itanium systems
FIX:	This problem is fixed.
QCCR1A88344	
PROBLEM:	perfalarm not alarming for LVOLUME LOOP & perfengine consumes high cpu
FIX:	This problem is fixed.

BYNETIF_IN_BYTE_RATE and BYNETIF_OUT_BYTE_RATE to be 64 bit compatible
This problem is fixed.
BYNETIF values are overflowing on heavy network transaction
This problem is fixed.
GBL_RUN_QUEUE metric are inconsistent across platforms.
Now GBL_RUN_QUEUE is consistent on HP-UX, Solaris and AIX. It shows average number of threads (or processes) waiting in the runqueue over the interval. On Linux and Windows, it is the instantaneous value.
swapinfo and glance swap metrics not matching with tunable BASE_PAGESIZE of 64k
This problem is now fixed and OVPA/Glance swap metrics values matches with swapinfo values when BASE_PAGESIZE is set with values 8k/16k/64k other than 4k.
BYNETIF_UTIL is incorrect - too low.
This problem is fixed and BYNETIF_UTIL, GBL_NET_UTIL_PEAK metrics values are showing correctly.
Memory metrics are incorrect in Glance and PA 4.70 on HP-UX.
This problem is fixed and memory metrics are showing correct values consistently.
GBL_CPU_WAIT_UTIL with value zero differs from sar -u.
GBL_CPU_WAIT_UTIL is now matching with value from sar -u.
/var/opt/perf/reptfile not being used as described in the User's Guide.
Extract can use now the modified /var/opt/perf/reptfile as the default template file, if -r option is not specified.

QCCR1A87870	
PROBLEM:	PA 4.6: LS metrics incorrectly reported for HPVM/glance.
FIX:	The issue with the logical cpu utilization metric for guest VM has been fixed.
QCCR1A88838	
PROBLEM:	status.mi is filled with warning if midaemon is 'X' bits. The status.mi is filled with warning messages for midaemon whose version string starts with 'X'.
FIX:	Now the warning message does not appear in status.mi file for whose version string starts with 'X'.
QCCR1A88842	
PROBLEM:	Configuration data is getting logged and also utility scan is showing 'collector off' messages even when there is no change in the number of locally mounted file systems
FIX:	Configuration data will NOT be logged and also utility scan will not show "collector off" messages if there is NO change in the number of locally mounted file systems.
QCCR1A88895	
PROBLEM:	Scopeux dumps core on the systems having 64 bit LAN cards (10 giga bit LAN cards).
FIX:	Scopeux does not dump core on the systems having 64 bit LAN cards.
QCCR1A88347	
PROBLEM:	Incorrect parm app warnings posted to status.perfalarm.
FIX:	Warning messages will be not displayed when the values with wild characters specified for "argv1" and "cmd" in parm file.
QCCR1A88485	
PROBLEM:	GBL_NUM_NETWORK is one more than the actual if both IPv4 & IPv6 are configured.
FIX:	If both IPv4 and IPv6 are configured on the server, then loopback is counted only once. The total number of interfaces configured will match actual number.
QCCR1A88541	
PROBLEM:	Global I/O statistics are five times higher than disk I/O statistics.
FIX:	The problem is fixed.
QCCR1A88681	
PROBLEM:	Coda fails to dynamically load libOvScopeAccess as libscope is having TLS.
FIX:	Dynamic loading issue of library libOvScopeAccess is resolved.

QCCR1A88709	
PROBLEM:	Coda 10.50.040/HPUX 11.x: Coda crashes, when gathercoda run from remote machine.
FIX:	This problem is fixed and CODA will provide correct data when it is queried by clients such as Reporter, OVPM and ovcodautil.
QCCR1A88754	
PROBLEM:	Coda aborts during the logfile maintenance of scope.
FIX:	This problem is fixed and coda will not abort during maintenance of a scope logfile.
QCCR1A88323	
PROBLEM:	Document the function, purpose, and ramification of /var/opt/perf/OVPAInt_save
FIX:	The/var/opt/perf/OVPAInt_save/readme is updated with elaborate explanations.
QCCR1A88135	
PROBLEM:	Scopeux does not start automatically and "perfstat -d" shows wrong output.
FIX:	Scopeux not starting automatically is an expected behavior. "perfstat –d" shows wrong output issue is fixed.
QCCR1A88633	
PROBLEM:	Threads get stuck on ARM – libraries.
FIX:	ARM library "libarm" has been made thread safe.

# Linux

QXCR1000863271	
PROBLEM:	Linux GBL_MEM_PAGEOUT* metrics do not represent "forced" page outs as they do on other Unix systems. This makes it impossible to define accurate memory bottleneck alarms.
FIX:	These metrics now match other Unix systems. Two new metrics were added at the same time: GBL_MEM_FILE_PAGEIN_RATE and GBL_MEM_FILE_PAGEOUT_RATE.
QXCR1000781415	
PROBLEM:	Need a metric to report the number of physical sockets in the system.
FIX:	A new metric GBL_NUM_SOCKET is added to Performance Agent on Linux to log number of physical sockets in the system.

	A new metric GBL_NUM_CPU_CORE has been added with this release. This
	metric is available only with Linux 2.6 Kernel.
QXCR1000216935	
PROBLEM:	GBL_STATDATE, GBL_STATTIME, GBL_INTERVAL have to be included in all extract
FIX:	New metrics STATDATE and STATTIME have been added to provide the ending time stamp for each interval in Performance Agent. The above metrics have been added to all the classes except for 'Configuration'.
QXCR1000408578	
PROBLEM:	Request for a new metric that would allow for the differentiation between logical and physical CPUs in an environment where hyper threading may be enabled.
FIX:	A new metric GBL_NUM_CPU_CORE has been added. This metric is available only on Windows XP Professional( 64-bit edition), Windows Server 2003, Windows Vista.
QXCR1000417955	
PROBLEM:	PA installation generates error messages when -n -v option is used.
FIX:	PA installation succeeds without any error message when -n -v option is used.
QXCR1000829529	
PROBLEM:	BYDSK_PHYS_READ_BYTE_RATE gets overflow at 16MB/sec.
FIX:	Fixed to provide correct values for BYDSK_PHYS_READ_BYTE_RATE.
QCCR1A88785	
PROBLEM:	Balloon driver (vmmemctl) utilization required as a metric
FIX:	The following metrics are available for Virtual Machine instances:
	BYLS_MEM_BALLOON_UTIL     DYLS_MEM_BALLOON_USED
	<ul> <li>BYLS_MEM_BALLOON_USED</li> <li>The above two metrics present the memory utilization by the balloon driver in a Virtual machine.</li> </ul>
QCCR1A88466	
PROBLEM:	Availability of 64bit libarm libraries with 32bit OVPA on Linux 2.6 platforms.
FIX:	64-bit libarm will also be available when a 32-bit Performance Agent on RHEL 4 update 2 and later is installed.
QCCR1A78782	
PROBLEM:	unable to start GlancePlus with LINES=24 on Linux node
FIX:	The problem has been fixed and now the Glance on Linux platform can run with 24 lines. The minimum terminal window size must be 80x24.

QCCR1A87660	
PROBLEM:	4.60 scope fails to start up after VMware server rebooted
FIX:	This problem is fixed
QCCR1A88215	
PROBLEM:	OVPA 4.60 / Linux: GBL_DISK_UTIL_PEAK pegged at 100%.
FIX:	This problem is fixed.
QCCR1A91537	
PROBLEM:	HPPA doesn't start automatically start when machine boots up on SUSE Linux 9 and 10
FIX:	ovpa boot script is updated to incorporate SLES method of startup and now Performance Agent starts automatically on bootup.
QCCR1A88115	
PROBLEM:	Error on OVPA on ESX server after vmotion
FIX:	This problem is fixed
QCCR1A88340	
PROBLEM:	PA 4.7 fails to install on RedHat versions greater than 5.0
FIX:	This problem is fixed.
QCCR1A94392	
PROBLEM:	Export Binary format - Unable to import binary format exported files into SAS on 64 bit platforms where ovpa runs in native mode.
FIX:	This problem is fixed.
QCCR1A80670	
PROBLEM:	GBL_RUN_QUEUE metric are inconsistent across platforms.
FIX:	Now GBL_RUN_QUEUE is consistent on HP-UX, Solaris and AIX. It shows average number of threads (or processes) waiting in the runqueue over the interval. On Linux and Windows, it is the instantaneous value.
QCCR1A80700	
PROBLEM:	OVPA/Glance C.04.73.100:GBL_CPUUTIL metrics broken on RH Linux ES release 4.
FIX:	This problem is now fixed. GBL_CPU_*_UTIL metrics matches with top/sar on RH Enterprise Linux ES release 4 IA64 platform where Glance/OVPA runs in Emulation mode.

QCCR1A80694	
PROBLEM:	Linux GBL_MEM_PAGEOUT metrics should not include file activity.
TROBLEM.	Linux GBL_MEM_PAGEOUT metrics should not include me activity.
FIX:	Pageout metrics fixed on linux to behave like any other Unix systems. File paging (in/out) metrics were also added.
QCCR1A86746	
PROBLEM:	/var/opt/perf/reptfile not being used as described in the User's Guide.
FIX:	Extract can use now the modified /var/opt/perf/reptfile as the default template file, if -r option is not specified.
QCCR1A88841	
PROBLEM:	OVPA support for VMware ESX 3.5 platform, VMControl error -10: VMware command error messages are getting logged into status.scope file.
FIX:	Now, vmware command error messages will not be logged into status.scope.
QCCR1A88890	
PROBLEM:	perfstat -v is showing warning for files under /opt/OV/lib64.
FIX:	Now perfstat $-v$ looks in the correct directory and binaries on an OMU 8.53 and PA C.04.7x environment.
QCCR1A88483	
PROBLEM:	Highly threaded processes causes excessive scopeux CPU utilization.
FIX:	The problem is fixed.
QCCR1A88478	
PROBLEM:	GBL_NUM_CPU and GBL_NUM_CORE values are showing wrong values with HT ON.
FIX:	The problem is fixed. GBL_NUM_CPU_CORE will display the number of cores per physical processor.
QCCR1A88291	
PROBLEM:	OVPA Patch Install Script in Linux has a bug.
FIX:	This problem is fixed.

QCCR1A88319	
PROBLEM:	Can the 'nice' value of scopeux be changed by the user? Nice value of scopeux is resetting back to -20 after changing the nice value by administrator.
FIX:	The nice value of scopeux can be changed by the administrator and "scopeux is resetting back to -20" problem is fixed.
QCCR1A88899	
PROBLEM:	GBL_CPU_PHYS_TOTAL_UTIL metric shows inaccurate values with OVPA on ESX 3.5 (Windows/Linux) guest VM.
FIX:	GBL_CPU_PHYS_TOTAL_UTIL metric now shows accurate value with OVPA on ESX 3.5 guest VM (WINDOWS/LINUX).
QCCR1A88633	
PROBLEM:	Threads get stuck on ARM – libraries.
FIX:	ARM library "libarm" has been made thread safe.
QCCR1A88503	
PROBLEM:	PA 4.7 binaries pointing to incorrect library location.
FIX:	PA binaries point to the libscope library located under /opt/perf/lib or /opt/perf/lib64 directory.

# Solaris

PROBLEM: Performance Agent should be supported on Solaris Zones on Sun Solaris 10 operating
environment or later.
FIX: Performance Agent is now supported on Solaris Zones on Sun Solaris 10 operating environment or later.
QXCR1000436154
PROBLEM: Issue while upgrading HP Performance Agent on Solaris System due to perf64.
FIX: Issue of perf64 failing to upgrade on a Solaris systems is fixed and now perf64 is upgraded correctly.
QXCR1000231855
PROBLEM: Zones to be supported with OVPA on Solaris 10 operating environment.
FIX: Now Solaris zones are supported with OVPA on Sun Solaris 10 operating environment

PROBLEM: ER-OVPA Support for Solaris 10 zones  FIX: Performance Agent 5.00 can now be installed inside non-global zones.  GCCR1A88491  PROBLEM: scopeux is corrupting logfiles if its size become greater than 2 GB  FIX: "logproc" can now hold upto 4 GB of data  GCCR1A88784  PROBLEM: Require raw metrics for cpu cycles, memory used by ESX guests  FIX: The following two metrics have been implemented:  • BYLS_MEM_USED  • BYLS_CPU_CYCLE_TOTAL_USED  These metrics give the absolute values for memory and cpu cycles used by a Virtual Machine.  GCCR1A88225  PROBLEM: OVPA Shared Memory Metrics Bad.  FIX: This problem is fixed.  GCCR1A87981  PROBLEM: PROC_CPU_TOTAL_TIME not being calculated based on alive interval  FIX: This problem is fixed.  GCCR1A87982  PROBLEM: Incorrect PROC_CPU_TOTAL_TIME and PROC_CPU_TOTAL_TIME_CUM metrics  FIX: PROC_CPU_*_TIME metrics are now being calculated based on alive interval  (PROC_INTERVAL_ALIVE) instead of interval (PROC_INTERVAL).  GCCR1A86854  PROBLEM: PROC_MEM_VIRT and PROC_MEM_RES are getting overflow.  FIX: Now PROC_MEM_VIRT and PROC_MEM_RES do not overflow after 32 GB limit and they can show up to 2TB.  GCCR1A86917  PROBLEM: GBL_COMPLETED_PROC shows low values compared to GBL_STARTED_PROC in 3.82 & 4.5.  FIX: GBL_COMPLETED_PROC shows low values compared to completed processes.		or later through BYLS class metrics.
PROBLEM: ER-OVPA Support for Solaris 10 zones  FIX: Performance Agent 5.00 can now be installed inside non-global zones.  QCCR1A88491  PROBLEM: scopeux is corrupting logfiles if its size become greater than 2 GB  FIX: "logproc" can now hold upto 4 GB of data  QCCR1A88784  PROBLEM: Require raw metrics for cpu cycles, memory used by ESX guests  FIX: The following two metrics have been implemented:  BYLS_MEM_USED  BYLS_CPU_CYCLE_TOTAL_USED  These metrics give the absolute values for memory and cpu cycles used by a Virtual Machine.  QCCR1A88225  PROBLEM: OVPA Shared Memory Metrics Bad.  FIX: This problem is fixed.  QCCR1A87981  PROBLEM: PROC_CPU_TOTAL_TIME not being calculated based on alive interval  FIX: This problem is fixed.  QCCR1A87982  PROBLEM: Incorrect PROC_CPU_TOTAL_TIME and PROC_CPU_TOTAL_TIME_CUM metrics  FIX: PROC_CPU_*_TIME metrics are now being calculated based on alive interval (PROC_INTERVAL_ALIVE) instead of interval (PROC_INTERVAL).  QCCR1A86854  PROBLEM: PROC_MEM_VIRT and PROC_MEM_RES are getting overflow.  FIX: Now PROC_MEM_VIRT and PROC_MEM_RES are getting overflow.  FIX: Now PROC_MEM_VIRT and PROC_MEM_RES do not overflow after 32 GB limit and they can show up to 2TB.  QCCR1A86917  PROBLEM: GBL_COMPLETED_PROC shows low values compared to GBL_STARTED_PROC in 3.82 & 4.5.		of favor unrough B122 class metrics.
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PROBLEM: scopeux is corrupting logfiles if its size become greater than 2 GB  FIX: "logproc" can now hold upto 4 GB of data  QCCR1A88784  PROBLEM: Require raw metrics for cpu cycles, memory used by ESX guests  FIX: The following two metrics have been implemented:	PROBLEM:	ER-OVPA Support for Solaris 10 zones
PROBLEM: scopeux is corrupting logfiles if its size become greater than 2 GB  FIX: "logproc" can now hold upto 4 GB of data  GCCR1A88784  PROBLEM: Require raw metrics for cpu cycles, memory used by ESX guests  FIX: The following two metrics have been implemented:	FIX:	Performance Agent 5.00 can now be installed inside non-global zones.
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4.5.	QCCR1A87981 PROBLEM: FIX: QCCR1A87982 PROBLEM: FIX: QCCR1A86854 PROBLEM:	PROC_CPU_TOTAL_TIME not being calculated based on alive interval  This problem is fixed.  Incorrect PROC_CPU_TOTAL_TIME and PROC_CPU_TOTAL_TIME_CUM metrics  PROC_CPU_*_TIME metrics are now being calculated based on alive interval (PROC_INTERVAL_ALIVE) instead of interval (PROC_INTERVAL).  PROC_MEM_VIRT and PROC_MEM_RES are getting overflow.  Now PROC_MEM_VIRT and PROC_MEM_RES do not overflow after 32 GB limit and they
FIX: GBL_COMPLETED_PROC now shows the true count of completed processes.	QCCR1A87981 PROBLEM: FIX: QCCR1A87982 PROBLEM: FIX: QCCR1A86854 PROBLEM: FIX:	PROC_CPU_TOTAL_TIME not being calculated based on alive interval  This problem is fixed.  Incorrect PROC_CPU_TOTAL_TIME and PROC_CPU_TOTAL_TIME_CUM metrics  PROC_CPU_*_TIME metrics are now being calculated based on alive interval (PROC_INTERVAL_ALIVE) instead of interval (PROC_INTERVAL).  PROC_MEM_VIRT and PROC_MEM_RES are getting overflow.  Now PROC_MEM_VIRT and PROC_MEM_RES do not overflow after 32 GB limit and they
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QCCR1A86746	
PROBLEM:	/var/opt/perf/reptfile not being used as described in the User's Guide.
FIX:	Extract can use now the modified /var/opt/perf/reptfile as the default template file, if -r option is not specified.
QCCR1A88450	
PROBLEM:	Issue message after perfalarm obtains lock on file.
FIX:	Added extra message indicating that lock was successfully released when scopeux released the lock.
QCCR1A88739	
PROBLEM:	Scopeux fails to start if duplicate entries found in /etc/mnttab on Solaris.
FIX:	Scopeux works fine even though /etc/mnttab file has duplicate entries.
QCCR1A88542	
PROBLEM:	LP: Documentation of OVPA behavior and configuring on Solaris cluster.
FIX:	PA is not cluster Aware. It runs on a cluster node like a standalone system. Solaris Install guide is updated with this information.
QCCR1A88162	
PROBLEM:	Sun cluster is having problem with midaemon which is running in RT Priority.
FIX:	This problem is fixed and midaemon can be started with Normal Priority.
QCCR1A88311	
PROBLEM:	Scope doesn't log newly mounted FS entries after a certain limit.
FIX:	This problem is fixed.
QCCR1A80635	
PROBLEM:	Several mistakes in metric descriptions for virtualization metrics.
FIX:	Virtualization metrics definitions are corrected and explained wherever necessary.
QCCR1A88633	
PROBLEM:	Threads get stuck on ARM – libraries.
FIX:	ARM library "libarm" has been made thread safe.

### **Windows**

QXCR1000372039	
PROBLEM:	ER: OVPA 3.65 / Win2K: value of GBL_RUN_QUEUE should agree with perfmon output.
FIX:	${\tt GBL\_RUN\_QUEUE} \ is \ changed \ and \ now \ its \ values \ are \ in \ accordance \ with \ the \ perfmon.$
QXCR1000339144	
PROBLEM:	Install should prompt before exceeding PATH variable limit.
FIX:	We display a warning message when the number of characters in PATH variable exceeds 2047. The warning message is displayed and Installation proceeds further.
QXCR1000389796	
PROBLEM:	GBL_DISK_UTIL_PEAK shows more than 100% on Windows.
FIX:	Issue is fixed and $\mbox{GBL\_DISK\_UTIL\_PEAK}$ does not show values above $100\%$ .
QXCR1000397020	
PROBLEM:	ovpacmd refresh alarm fails to process the updated entries made to alarmdef.mwc .
FIX:	ovpacmd refresh alarm command is now able to process updated alarmdef.mwc.
QXCR1000418817	
PROBLEM:	HP Performance Agent installation does not append a final ";" to the PATH variable.
FIX:	PATH environment variable is now appended with ";".
QXCR1000433660	
PROBLEM:	ScopeNT hangs after a fresh installation of HP Performance Agent on Windows 2003 64-bit. This happens only on multi processor systems having more than 10 CPUs.
FIX:	ScopeNT works fine on multi processor Windows 2003 64-bit systems.
QCCR1A88074/ QCCR1A88356	
PROBLEM:	perfstat -p shows unable to connect to the system.
FIX:	perfstat -p works fine now.
QXCR1000443211	
PROBLEM:	Extract fails to work on a system with the regional settings set to 'English (United Kingdom)' and short date format set to dd/mm/yyyy.

FIX:	Resolved the issue and now extract works fine on a system with the regional settings set to 'English (United Kingdom)' and short date format set to dd/mm/yyyy.
QXCR1000447363 /QCCR1A88147	
PROBLEM:	Unattended installation deletes self user in dcom permission.
FIX:	Installation of HP Performance Agent (either in interactive or silent mode), on the supported flavors of Windows OS, will not remove SELF account from "Default Access Permission".
QXCR1000423427	
PROBLEM:	Alarms severity set in alarmdef mismatched with NNM events.
FIX:	Alarms severity set in alarmdef matched with NNM events.
QXCR1000804920	
PROBLEM:	Installation of HP Performance Agent 4.70 on Windows 2000 system causes an automatic reboot if older version of Microsoft Visual C++ 2005 Redistributable (version lesser than 8.0.50727.762) is present and used by some other application
FIX:	Automatic reboot is suppressed in this version. But for the application to work properly, the system must be rebooted. To identify if reboot is necessary, please look for the following message at the end of the file "%temp%\OvXplInstallLog.log""The Windows Installer initiated a system restart to complete or continue the configuration of 'HP Software Cross Platform Component'."  NOTE: To avoid reboot, Microsoft Visual C++ 2005 Redistributable consuming
	application must be stopped during the Installation of HP Performance Agent 5.00.
QCCR1A88888	
PROBLEM:	Migrate away from the 3.0.0.15 version of DynaZip library
FIX:	Now "perfstat -z" uses ZLIB libraries for archiving on Windows.
QCCR1A88305	
PROBLEM:	Change GBL_MACHINE to reflect the differences between AMD64 and EMT64
FIX:	GBL_MACHINE is enhanced to reflect the differences between AMD64 and EMT64
QCCR1A88166	
PROBLEM:	OVPA 4.60 / Win 2k3 : GUI seems to ignore timezone settings
FIX:	This problem is fixed and Performance Agent GUI is now able to recognize the time zone settings.
-	

QCCR1A89172	
PROBLEM:	OVPA4.70/Win2k3:perfalarm fails to send messages to OVO
FIX:	Perfalarm sends message to OVO without any problem even when mixed path notation is used.
QCCR1A88348	
PROBLEM:	Windows Itanium PA 4.7 will not work without MS C++ redistributable pkg
FIX:	For PA 4.7 modules to work fine on a Itanium 64 hardware running Windows Operating System, please install "Microsoft VC++ Redistributable for x86". Contact HP Support in case help is needed on obtaining the same.
QCCR1A80655	
PROBLEM:	BYNETIF_UTIL is incorrect - too low.
FIX:	This problem is fixed and BYNETIF_UTIL, GBL_NET_UTIL_PEAK metrics values are showing correctly.
QCCR1A81077	
PROBLEM:	Persistent DSI documentation in MWA/WIN DSI users guide incomplete/wrong.
FIX:	The information in DSI User Guide for Microsoft Windows is updated with the modified syntax.
QCCR1A88863	
PROBLEM:	Metric issues with Windows OVPA as ESX 3.5 guest.
	The following memory metrics in P.A 4.7 show incorrect values on ESX 3.5 guest (Windows/Linux) VM when memory limits are set. GBL_MEM_ENTL_MAX indicates that the VM is entitled to up to 2 gig mem when memory limit is set to UNLIMITED. GBL_MEM_SHARES_PRIO shows incorrect values for preset share values (HIGH, LOW, and NORMAL).
FIX:	The following memory metrics now show correct values on ESX 3.5 guest (Windows/Linux) VM when memory limits are set:
	GBL_MEM_ENTL_MAX and GBL_MEM_SHARES_PRIO.
QCCR1A88915	
PROBLEM:	Doc CR / PA 4.70 : User guide mentions wrong default proc cpu threshold.
FIX:	The information in the HP Performance Agent Windows User Guide is modified to indicate correct values for default proc threshold, as indicated in the latest parm file.
QCCR1A88930	
PROBLEM:	PA installation aborts when NtfsDisable8dot3NameCreation key is set one PA installation aborts on the machine in which the TEMP folder is created with HKLM\SYSTEM\CurrentControlSet\Control\FileSystem\NtfsDisable8dot3Na meCreation key is enabled and The TEMP path contains directory names with

	spaces.
FIX:	PA installs on windows machine with HKLM\SYSTEM\CurrentControlSet\Control\FileSystem\NtfsDisable8dot3Na meCreation registry key enabled.
QCCR1A88478	
PROBLEM:	GBL_NUM_CPU and GBL_NUM_CORE values are showing wrong values with HT ON.
FIX:	The problem is fixed. GBL_NUM_CPU_CORE will display the number of cores per physical processor.
QCCR1A88472	
PROBLEM:	OVPA 4.7 Release notes/installation guide not clear on support for windows 2k
FIX:	The PA Install Guide and Release Notes have support statement for Windows 2000.
QCCR1A88451	
PROBLEM:	OVPANT_00005 fails on system with NtfsDisable8dot3NameCreation Key is enabled.
FIX:	The problem is fixed.
QCCR1A88515	
PROBLEM:	Removal of pdh.dll from the "%OVInstallDir% bin" directory
FIX:	pdh.dll is not packaged.
QCCR1A88557	
PROBLEM:	GBL_MEM_UTIL shows 100% in Windows XP after disabling the pagefile option.
FIX:	GBL_MEM_UTIL shows "NA" when pagefile option is disabled on the system.
QCCR1A88767	
PROBLEM:	DSI: sdlcomp fails to compile if the LABEL crosses 25 characters on Windows.
FIX:	The CLASS LABEL size can be up to 48 characters long. sdlcomp will throw an error message during compilation if the size exceeds 48.
QCCR1A88131	
PROBLEM:	Unable to export process details from the OVPA 4.5 logfile.
FIX:	This problem is fixed on ovpa 04.50.59 patch. It is possible to extract the process data once this patch applied it on OVPA 4.5.

QCCR1A88228	
PROBLEM:	OVPA 4.6 scopent.exe generates exception after installation.
FIX:	This problem is fixed.
QCCR1A88241	
PROBLEM:	Terminal Server settings to reflect Install mode while Installing OVPA
FIX:	The Terminal services server should always be in install mode while installing the applications. You can install applications using Terminal Services through Add/Remove programs from Control Panel or command prompt. A detailed explanation is provided in the Windows Install Guide in the 'Installing Performance Agent using Terminal Services' section.
QCCR1A88310	
PROBLEM:	Patch text for OVPANT_00005 on Window 64 bit system is misleading.
FIX:	Added information in patch text for clear understanding.
QCCR1A88314	
PROBLEM:	Patch_WIN_50.exe / Patch_WIN.exe failed to execute completely.
FIX:	Patch documentation has been updated, which mandates customer to have minimum windows installer version to be 3.01 for installing the component patch.
QCCR1A88899	
PROBLEM:	GBL_CPU_PHYS_TOTAL_UTIL metric shows inaccurate values with OVPA on ESX 3.5 (Windows/Linux) guest VM.
FIX:	GBL_CPU_PHYS_TOTAL_UTIL metric now shows accurate value with OVPA on ESX 3.5 guest VM (WINDOWS/LINUX).

# Known Problems, Limitations, and Workarounds

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

## **Common For All Platforms**

QXCR1000346247	
PROBLEM:	HP Performance Agent 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.
QXCR1000831711	
PROBLEM:	DSI logfiles created by 32-bit PA agent are not compatible with 64-bit PA agent and vice-versa. Commands like extract, utility and sdlutil will not work with these DSI logfiles and CODA fails to recognize these DSI logfiles.
WORKAROUND:	Migrate DSI log file to destination agent type format.
	Steps for moving the DSI logfiles from 32-bit agent system to 64-bit agent system or vice-versa,
	1 Export all the metrics on the source system to ASCII format (say mydsi.asc) and make sure that data time is in UNIX format (using extract -xp -ut).
	2 Move the ASCII file to destination system.
	3 Create new DSI log file set (using sdlcomp) on destination system.
	4 Import the data into new DSI logfiles using command dsilog with -timestamp option (cat mydsi.asc  dsilog -timestamp).
PROBLEM:	Extract of logical data in combination with other classes of metrics are not supported. Example, extract -xt -ip / -id /-it / -idy (not supported).
WORKAROUND:	Logical class of metrics can be extracted independently.
	Example, extract -xt -i is supported.
PROBLEM:	Extract with WK1/SPREADSHEET format has cell width limit of 255 characters. This limit truncates PROC_PROC_CMD metric length to 255 when extracted with WK1/SPREADSHEET format.
PROBLEM: WORKAROUND:	e e e e e e e e e e e e e e e e e e e
	truncates PROC_PROC_CMD metric length to 255 when extracted with ${\tt WK1/SPREADSHEET}$ format.
WORKAROUND:	truncates PROC_PROC_CMD metric length to 255 when extracted with ${\tt WK1/SPREADSHEET}$ format.

#### **AIX**

 $\begin{tabular}{ll} \textbf{NOTE:} AIX kernel architecture performs disk I/O through the Virtual Memory Management (VMM) subsystems using memory mapped files. This affects the GBL_MEM_FREE and GBL_MEM_UTIL metrics. \\ \end{tabular}$ 

The size of the free list is not an indication of the free memory that is available on the system. As a workaround, the <code>GBL\_MEM\_PG\_SCAN\_RATE</code> metric can be used to monitor the memory pressure. The metric value indicates if a system is running low on memory.

Inside a system WPAR, the  $\mbox{GBL\_CPU\_ENTL*}$ ,  $\mbox{GBL\_CPU\_PHYSC}$  and  $\mbox{GBL\_MEM\_ENTL*}$  metrics values appear as na if the Resource Control Flag of the WPAR is set to "no".

QXCR1000820321	
PROBLEM:	GBL_NUM_NETWORK value is zero when exported as a configuration class metric.
WORKAROUND:	Export GBL_NUM_NETWORK as a global class metric.
QXCR1000394423	
PROBLEM:	On multi-path environments, the virtual disk counters are counted twice as the underlying Operating System considers them as individual disks.
WORKAROUND:	None.
QXCR1000344795	
PROBLEM:	It is possible that there can be a .5% difference in APP_CPU_TOTAL_UTIL and GBL_CPU_PHYS_TOTAL_UTIL on AIX shared partitions. This is because the AIX kernel instrumentation provides those values.
WORKAROUND:	None.
QXCR1000366771	
PROBLEM:	BYLS_HYP_UTIL logged as "0" for each LPAR for each interval. For collecting logical systems (BYLS_) data, we use RSi library from IBM. The equivalent Spmi metric for BYLS_HYP_UTIL is %hyppet and is not being calculated. Since RSi also depends on Spmi, our GBL_HYP_UTIL will also be zero always. We are working with IBM to correct the issue. The defect number against IBM is:IY88986.
WORKAROUND:	Install APAR IY88986 on your system.
QXCR1000366443	
PROBLEM:	User mode and kernel mode utilizations for BYLS class of metrics are zeros even when the total utilization is non-zero for some intervals. This is because the underlying libraries we use are providing us wrong values. We are working with IBM to correct the issue. The defect number against IBM is:IY88986.
WORKAROUND:	Install APAR IY88986 on your system.
QXCR1000366404	
PROBLEM:	The values reported by metric GBL_NUM_DISK and BYLS_NUM_DISK for the same LPAR on a physical system (when collected) will not match because we collect vscsiN also as disk in our product. In BYLS class this virtual SCSI device is not considered.
WORKAROUND:	None.

PROBLEM: HP Performance Agent may not log accurate values for the interval when mode of SMT

is changed for a LPAR. This is because the underlying libraries we use are providing us wrong values when this configuration change occurs. However, next interval will have

correct values.

WORKAROUND: None.

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.

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.

QXCR1000366417

PROBLEM: HP Performance Agent logs N/A for some of BYLS metrics intermittently. This will

affect summarization as HP Performance Agent substitutes N/A with 0 while

summarizing the numeric data.

WORKAROUND: None.

QXCR1000426422

PROBLEM: PROC\_CPU\_TOTAL\_UTIL/APP\_CPU\_TOTAL\_UTIL Don't Reflect AIX Logical CPU.

WORKAROUND: Metric help text is now modified to indicate that, on AIX SPLPAR

PROC\_CPU\_TOTAL\_UTIL/APP\_CPU\_TOTAL\_UTIL are physical CPU consumptions and

hence should be compared with GBL\_CPU\_PHYS\_TOTAL\_UTIL.

PROBLEM: I/O metrics are always zero for WPAR

WORKAROUND: None.

QCCR1A59595

PROBLEM: If the WPAR is not active then the following configuration metrics will be shown as

"na":

BYLS\_CPU\_ENTL\_MIN
BYLS\_CPU\_ENTL
BYLS\_IP\_ADDRESS
BYLS\_NUM\_NETIF

BYLS\_CPU\_SHARES\_PRIO

-	BYLS_MEM_ENTL
WORKAROUND:	None.
QCCR1A91768	
PROBLEM:	WPAR: Issue with AIX sources for GBL_MEM metrics
WORKAROUND:	None. Case filed with IBM, PMR# 53150,756,000
PROBLEM:	In a system with Operations Agent already installed, after manually installing Performance Agent, all Operations Agent processes may not start up automatically.
WORKAROUND:	To start all the processes, execute the following commands after installing Performance Agent 5.00:
	ovc -kill
	2 ovc -start

### **HP-UX**

QCCR1A88809	
QCCK1A00007	
PROBLEM:	On a HPVM host machine, the value for the metric "BYLS_LS_HOSTNAME" is blank. The HPVM API from which the metric is sourced provides a NULL value. A defect (ID QXCR1000917629) is raised with HPVM to track this issue.
WORKAROUND:	None.
QCCR1A94282	
PROBLEM:	Missing Metrics on HPUX
WORKAROUND:	The following metrics are not available if 'fileio' trace option is not enabled in mideamon:
	• GBL_DISK_LOGL_*
	• GBL_DISK_REM_LOGL_*
	• GBL_NFS_LOGL_*
	• APP_DISK_LOGL_*
	• PROC_DISK_REM_LOGL_*
	• PROC_DISK_LOGL_*
	• PROC_NONDISK_LOGL_*
	BYDSK_LOGL_*
	• FS_LOGL_*
	The 'fileio' trace option is not enabled by default for midaemon. You need to enable this option to source file I/O related metrics. To enable this option: Start midaemon with option -fileio_traces.

QXCR1000910997	
PROBLEM:	Pstat() call gives incorrect value for User memory on the system where asyncdsk configuration is enabled. Performance Agent depends on pstat() call to report most of the memory metrics and it uses the user memory to derive the system memory. Since the pstat() call gives wrong value for User memory, the system memory is also affected and Performance Agent shows wrong value for system memory as well.
WORKAROUND:	Install the patch PHKL_39401 available with the 11.31 0909 release. The patch provides the fix for the problem.
QXCR1000952701	
PROBLEM:	If you do not have the patch PHCO_40211 installed, midaemon might dump core when glance or $scopeux$ is stopped.
WORKAROUND	The problem is with the pthread library and not with Performance Agent. Install the patch PHCO_40211 available in 11.31 1003 release. This patch provides a fix for the problem.
QCCR1A96072	
PROBLEM:	On HP-UX 11.11 machines, midaemon process may not come up due to a defect in execve() system call. exeve() returns undocumented error ENOSPC for EXEC_MAGIC binaries with 'large' page size for text segment. glance/scopeux/midaemon fails to start with error: mi_shared - MI initialization failed (status 28)
WORKAROUND:	Reduce the page size to 4K with the following 'chatr' command for midaemon binary: chatr +pi 4K /opt/perf/bin/midaemon

### Linux

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.
QXCR1000315893	
PROBLEM:	Performance agent does not support continuity across online hardware configuration change. In some cases, software change influences HP Performance Agent. Stop HP Performance Agent and then change.
	HP Performance Agent 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>, GatherCODA Method ScopeDataView::SetPosition failed".</hostname>	
WORKAROUND:	None.	
QXCR1000349933		
PROBLEM:	PROBLEM: On SLES9 upto kernel version 2.6.9 it is observed that for processes started after HP Performance Agent/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.	
QXCR1000447472		
PROBLEM:	Control Agent does not get started with Performance Agent installed on top of 7.33 agent on IA64 platforms only.	
WORKAROUND:	Hotfix is available through HP Support.	
PROBLEM:	On IA64 system, you see "unaligned access" messages.	
WORKAROUND:	Execute the following command,	
	sysctl -w kernel.ignore-unaligned-usertrap=1	
PROBLEM:	Upgrade from Performance Agent 4.60 to 5.00 fails on SLES10 x64.	
WORKAROUND:	Use ovpa.install -f during upgrade.	
QCCR1A58874		
PROBLEM:	GBL_MEM_OVERHEAD on ESX guests shows the wrong value when VMware SDK is disabled.	
WORKAROUND:	Follow the steps mentioned below to disable VMware SDK on ESX guest.  Edit *.vmx file (vm-cfg-path) of guest ,set "isolation.tools.guestlibGetInfo.disable" to TRUE.  "Power Off" the guest and then "Power On". Do not Restart.	
	After the guest is up, check the vmware.logfile for that guest Value of "isolation.tools.guestlibGetInfo.disable" should match *.vmx file.	
	. and of hotalioning account devinional bases of the material and material and materials.	

PROBLEM:	When a vMA4.0 is deployed/hosted on a ESX3i server and when it is switched on, the following error is displayed continuously in the console session:  "end_request: I/O error, dev fd0, sector 0"
WORKAROUND:	Disable floppy diskette by accessing the bios setting of the vMA virtual machine. A case (SR 1374457341) has been raised with VMware.
QCCR1A90930	
PROBLEM:	When Performance Agent is installed in vMA4.0, a few metrics that report the physical resource utilization of a VM will not report correct values. The issue is because of the non-availability of VMware guest library in right path.
WORKAROUND:	NONE. A case (SR 1378887541) has been raised with VMware.
QCCR1A94055	
PROBLEM:	The loopback ext3, loopback ext2 and tmpfs file system metrics are not visible in Performance Agent
WORKAROUND:	Create file systems on /dev. Performance Agent recognizes all the file systems available in /dev.
QCCR1A94432	
PROBLEM:	Performance Manager and other clients are unable to display BYLS data for vMA systems when there are 'zero' ESX Servers configured.
WORKAROUND:	CODA must be restarted, when the first ESX server is added to the vifp library. The changes are dynamically reflected when the ESX Servers are added.

## Solaris

PROBLEM:	Incorrect metric values are shown for BYLS_CPU_TOTAL_UTIL, BYLS_NUM_CPU in Solaris.	
WORKAROUND:	Enable cpu resource pools using 'pooladm -e' command.	
PROBLEM:	Performance Agent 5.00 does not support BYDSK_ class metrics on Solaris 10, Logical Domains (LDOMs) update 0 to update 5.	
WORKAROUND:	The latest version of Sun Solaris 10 update 6 and higher has the fix.	
QXCR1000046070		
PROBLEM:	HP Performance Agent 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 HP Performance Agent or OVO 8.x daemons may fail to start on a Solaris system with both OVO 8.x agent and HP Performance Agent installed, with the error message "No space left on device".			
WORKAROUND:	Increase the kernel's limit for semaphore.			
QCCR1A39988				
PROBLEM:	Ovpa startup fails inside non-global zones when hostname entry not present in /etc/hosts/			
WORKAROUND:	Update hostname entry in /etc/hosts.			
QCCR1A58815				
PROBLEM:	On Solaris x86 zones, Performance Agent does not start automatically after reboot.			
WORKAROUND:	Configure non-global zones on x86 using 'zlogin -C zonename' option.			
QCCR1A95771				
PROBLEM:	scopeux doesn't generate any transaction on sparc 9.			
WORKAROUND:	Recreate a soft link for libarm.so on Solaris-9. Perform the following steps:			
	1 Stop scope			
	ovpa stop scope			
	2 Stop the ttd deamon			
	/opt/perf/bin/ttd -k			
	3 Remove existing libarm.so link			
	rm /usr/lib/libarm.so			
	4 Create new soft link for libarm.so			
	<pre>ln -s -f /opt/perf/lib/libarm.so /usr/lib/libarm.so</pre>			
	5 Start scope			
	ovpa scope start			

### Windows

PROBLEM:	ahm halp file is not displayed on Windows 2008 Sawar Core installation		
	chm help file is not displayed on Windows 2008 Server Core installation.		
WORKAROUND :	Refer the specific help files from other versions of Windows where Performance Age is installed.		
PROBLEM:	While executing "perfstat -p", following error message is displayed if performance objects are disabled in the system: (288) Error retrieving counters		
WORKAROUND :	To enable performance counters, please download the		
	Extensible Performance Counter List (exctrlst.exe) tool from the		
	following link:		
	http://www.microsoft.com/downloads/details.aspx?familyid=7ff99683-b7ec-4da6-92ab-793193604ba4&displaylang=en		
	For more information on enabling performance counters, see Enabling Performance Counters for Server Core.		
PROBLEM:	On a system with Performance Agent and OVO 7.x agent already installed, on uninstallation of Performance Agent, BBC Local Location Broker (llbserver) is not started.		
WORKAROUND :	Restart OVO 7.x agent by running the following commands:		
	# opcagt -kill		
	# opcagt -start		
PROBLEM:	Installation of HP Performance Agent fails with the following error message:		
	"[ProductName] has detected that Internet Explorer version is <i><current on="" system="" version="" your=""></current></i> . Please install Internet Explorer 5.0 or greater and run the setup again.		
WORKAROUND :	The issue is due to missing registry key that could have been removed to mitigate VML vulnerability. Please apply the following registry key values for the installation to complete successfully.		
	[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Internet Explorer\Version Vector]		
	"VML"="1.0"		
	"IE"="6.0000"		
	Refer to http://www.microsoft.com/technet/security/bulletin/ms06-055.mspx for more information on VML vulnerability.		
QXCR1000339918			
PROBLEM:	On a system that has Reporter and HP Performance Agent installed, un-installation of HP Performance Agent disables Reporter functionality due to a missing library.		
	<u> </u>		

WORKAROUND:	Copy libarm32.dll from the newconfig directory to the system32 directory to make the Reporter function as required.	
PROBLEM:	On a Windows system where OVO7.xx and HP Performance Agent are installed, uninstallation of OVO 7.xx agent terminates scopent process.	
WORKAROUND:	Run the following command to start the scopent service. # ovpacmd start	
QXCR1000245676		
PROBLEM:	Unattended installation truncates the installation directory if the directory name has "-" in it.	
WORKAROUND:	The directory name passed as a parameter during unattended installation, either for install path or for data path, must not have the '-'sign in it.	
QXCR1000238862		
PROBLEM:	HP Performance Agent does not log data of NTFS mounted volumes on Windows 2000 and Windows XP platforms.	
WORKAROUND:	None	
QXCR1000244352		
PROBLEM:	Installation of HP Performance Agent on Windows, particularly versions Win2K3 SP1 and WinXP SP2, may stop responding or terminate with an error message.	
WORKAROUND:	On the system where the problem was encountered, click Start -> Control Panel -> Administrative Tools and check the "Local Security Policy." Make sure that the "Impersonate a client after authentication" privilege in the "Local Security Policy" is configured to include the following groups:  Administrators  Service	
	If users without administrative privileges are installing HP Performance Agent, the respective users or their security groups must be configured for the Impersonate a clientafter authentication privilege.	
	For more details on the problem, visit the following link:	
	http://support.installshield.com/kb/view.asp?articleid=Q111303	
QXCR1000465748		
PROBLEM:	INTERVAL metric of PROCESS and GLOBAL class and CPU class metrics are broken when collection interval for PROCESS class is set to 5 seconds in parm.mwc file.	
WORKAROUND:	None.	
QXCR1000796562		
PROBLEM:	Upgradation of Microsoft Office 2007 SP1 fails on Performance Agent installed system.	

WORKAROUND: Performance Agent should be stopped while installing/upgrading Microsoft Office 2007 SP1. QXCR1000793635 PROBLEM: Files are not found in perfstat -1 output. WORKAROUND: None. QXCR1000459217 PROBLEM: On a Windows system where Performance Agent is installed process I/O metrics are broken on x86 64. WORKAROUND: None. QCCR1A41224 Randomly, during few collection intervals, BYLS CPU related metrics will be not PROBLEM: available on a Hyper-V role enabled Windows 2008 systems. This is due to abnormally high values being returned by PDH API's for Hyper-V based performance objects. The same behavior can be noticed while using system tools like perfmon. While querying Hyper-V based performance objects using PDH APIs, memory and handle leaks occur when a new VM is added or deleted after starting the scope collection. Hence this will result in scope consuming more memory resources. WORKAROUND: None. Both the above issues have been accepted by Microsoft as a bug in their implementation of Hyper-V based performance objects in Windows 2008. A case ( case no. SRX081212601369) has been raised with Microsoft and we are working with them to get a resolution. QCCR1A61211 On Hyper-V host, BYLS PDH related metrics becomes unavailable once VM is PROBLEM: renamed. Following is the affected list of metrics: BYLS\_CPU\_ENTL\_UTIL BYLS\_CPU\_PHYS\_TOTAL\_UTIL BYLS CPU PHYS SYS MODE UTIL BYLS CPU PHYS USER MODE UTIL BYLS\_CPU\_PHYS\_TOTAL\_TIME BYLS\_CPU\_PHYSC BYLS HYPCALL BYLS HYP UTIL WORKAROUND: On the Hyper-V host, after the Virtual Machine is renamed, follow the given steps for PA to log the metrics listed above: 1 Stop the Renamed Virtual Machine. 2 Stop HPPA using "ovpacmd stop" or from the GUI. 3 Start the Renamed Virtual Machine. Start HPPA using "ovpacmd start" or from the GUI. 4

	Now PA will correctly report the above listed metrics of that Virtual Machine	
QCCR1A89247		
PROBLEM:	On Windows Vista and Windows Server 2008, Microsoft has changed the default location of user data. To enable backward compatibility, Junction Points are used for deprecated locations. Hence, though PA, has references to the default data directory as "C:\Documents and Settings\All Users\Application Data\HP\HP BTO Software\Data\" - in documentation, registry and UI - the original location of defaut data directory is "C:\ProgramData\HP\HP BTO Software\Data". The same applie to install directory too. The locations referred by PA, in both the cases, can still be accessed using Junction Points. This will not affect the functionality of the product if any way.  Please refer the following link for more information on Junction Points:  http://msdn.microsoft.com/en-us/library/bb756982.aspx	
WORKAROUND:	None	
QCCR1A93635		
PROBLEM:	After Performance Agent is uninstalled on a system which also has HP Reporter installed on it, perfstat.exe will throw an error message that "zlibwapi.dll is not found".	
WORKAROUND:	Backup the zlibwapi.dll before you uninstall Performance Agent for perfstat to work. If Performance Agent is already uninstalled, DllVersions.exe provided by HP Reporter can be used to get the version information of the Reporter binaries. Refer command help of DllVersions.exe for additional information.	
QCCR1A94173		
PROBLEM:	On Windows, the command perfstat -z has following limitations:	
	• The zip files created using the command perfstat -z cannot be extracted using the default utility provided by Windows.	
	• The command perfstat -z does not create a valid archive file if the contents of the folder %OvDataDir% exceeds 4 GB.	
WORKAROUND:	It is recommended that you use third party tools like WinZip.	
QCCR1A95174		
PROBLEM:	When Operations Agent 8.53 or 8.60 is installed on the same machine where Performance Agent is installed, then PA GBL_DISK* and BYDSK* metrics will be NA.	
WORKAROUND:	Perform the following steps:	
	1 Stop PA collector.	
	2 Rename or delete the pdh.dll under <ovinstalldir>\bin folder installed by Operations Agent. This should not affect the functionality of Operations Agent as it will find the dll from Windows system32 directory.</ovinstalldir>	

3 Start PA collector.

PROBLEM:	When Data Protector 6.1 and Performance Agent 5.0 co-exist on the same system, some of the Performance Agent services will not come up.	
WORKAROUND:	libarm32.dll file installed in %ovinstalldir% \lib must be copied to %ovinstalldir% \bin directory. All Performance Agent services must be restarted.	
QCCR1A96382		
PROBLEM:	On Windows x64 and IA64 system after upgrade of Performance Agent from an older version to version 5.00, NNM and Reporter might face a problem with product restart or during machine reboot.	
WORKAROUND:	Perform either of the following steps:	
	Method 1:	
	Uninstall the existing version of Performance Agent retaining the Performance Agent configuration and databases.	
	2 Install Performance Agent 5.00.	
	Method 2:	
	1 Refere you start ungrading to Performance Agent version 5.00 healing registry	

- 1 Before you start upgrading to Performance Agent version 5.00, backup registry keys. To backup the registry keys, perform the following steps:
- a Click Start Menu->Run->regedit.exe to open Registry Editor.
- Browse to the following location in the registry folder:

  HKEY\_LOCAL\_MACHINE\SOFTWARE\Wow6432Node\Hewlett-Packard\HP
  OpenView
- c Right click, select "Export" and save to any location on the machine.
- 2 Upgrade to Performance Agent version 5.00. For steps to upgrade see the *HP Performance Agent Windows Installation and Configuration Guide*.
- 3 After upgrading to Performance Agent version 5.00, restore the required registry keys. To restore the registry keys, perform the following steps:
- a Click Start Menu->Run->regedit.exe to open Registry Editor.
- Click **File->Import** and browse to the location where the registry keys were backed up in Step (1) and import them.

#### **Documentation Errata**

None.

### Local Language Support

This version of Performance Agent product and supporting user documentation on HP-UX are available in Japanese (ja\_JP.SJIS).

The following documents and help are available in Japanese:

- Install and Configuration Guide for HP Performance Agent on HP-UX Operating System
- Install and Configuration Guide for HP Performance Agent on Linux Operating System
- Install and Configuration Guide for HP Performance Agent on Windows Operating System
- Man page:
  - midaemon

### Integration and Co-existence with Other HP Software Solutions

Performance Agent 5.00 supports coexistence, integration and deployment scenarios with HP Operations Agent (HTTPS) 8.53 and 8.60.

Performance Agent 5.00 supports coexistence and integration only with the latest HP DCE Operations Agent 7.3x and higher available on the respective platform. Performance Agent 5.00 does not support older versions of DCE Operations Agent.

#### Software Version Information and File Placement

#### **Version Information**

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

#### <Install\_dir>/bin/perfstat -v

<Install\_dir> is the specific directory path on a platform, and is as follows:

On AIX - /usr/lpp/perf

On HP-UX, Linux and Solaris - /opt/perf

On Windows - InstallDir

#### File Placement

Note: Conventions used in the following table for Windows platforms is as follows:

InstallDir: The default installation directory where Performance Agent is installed. The default installation directory is <disk drive>:\Program Files\HP\HP BTO Software\.

DataDir: The common data directory where data files and log files related to HP Software products are stored. The default data directory is <disk drive>:\Documents and Settings\AllUsers\Application Data\HP\HP BTO Software\Data\.

If you have already installed any HP Software Products, Performance Agent will be installed in the same directory. However on Windows systems, you can change the directory path or name, if Performance Agent is the first HP Software product to be installed in the system.

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

File	On HP-UX, Linux and Solaris	On Windows	On AIX
Executables including UI programs, daemons and scripts	/opt/perf/bin/	<installdir>\bin</installdir>	/usr/lpp/perf/bin / /usr/lpp/OV/
Shared component executables/binarie s	/opt/OV/bin/ /opt/OV/lbin/	<installdir>\bin</installdir>	/usr/lpp/perf/bin
Shared component libraries	/opt/OV/lib/	<installdir>\lib</installdir>	/usr/lpp/perf/lib
Java ARM Wrappers	/opt/perf/examples/arm	<pre><installdir>\examples\arm</installdir></pre>	/usr/lpp/perf/exa mples/arm
Java libraries	/opt/perf/examples/arm /opt/perf/examples/arm /arm64	<pre><installdir>\examples\arm <installdir\examples\arm\ pre="" win32<=""></installdir\examples\arm\></installdir></pre>	/usr/lpp/perf/exa mples/arm /usr/lpp/perf/exa mples/arm/arm64
Product configuration and status files	/var/opt/perf/ /var/opt/OV/conf/perf/	<datadir>\</datadir>	/var/opt/perf/ /var/opt/OV/conf/ perf/
Startup and shutdown scripts	/etc /etc/default		/etc/ /etc/rc.ovpa
Log files and other data files	/var/opt/perf/ /var/opt/OV/conf/perf/ /var/opt/OV/log/	<datadir>\ <datadir>\datafiles <datadir>\log</datadir></datadir></datadir>	/var/opt/perf/dat afiles /var/opt/OV
Online Help	n/a	<pre><installdir>\help\ovpa\C</installdir></pre>	n/a
Examples (see the README file in the directory for more information	/opt/perf/examples/	<installdir>\examples</installdir>	/usr/lpp/perf/exa mples/
Default configuration and template files	<pre>/opt/perf/newconfig/ /opt/perf/newconfig/et c/rc.config.d/</pre>	<pre><installdir>\newconfig</installdir></pre>	/usr/lpp/perf/new config/

### Status and data files

File	On Linux/Solaris and HP-UX	On Windows	On AIX
Product binary data and internal-use files (created during and after installation)	/var/opt/perf/datafiles / /var/opt/OV	<pre><datadir>\datafiles</datadir></pre>	/usr/lpp/perf/bin /
Development include files	/opt/perf/include/	<installdir>\include</installdir>	/usr/lpp/perf/inc lude/

Library files	Linux	• <installdir>\lib</installdir>	/usr/lpp/perf/lib
	/opt/perf/lib/ (The 32 bit libarm.so library is not provided with Linux 2.6IPF64) /opt/perf/lib64/ (for x86_64 and IPF64)	32 bit libarm libraries: <installdir>\lib\win32\ 32 bit and 64 bit armsamples: <installdir>\bin\win32\</installdir></installdir>	/ /usr/lpp/perf/lib /lib64
	HP-UX	The above two directories will be present only in Windows 64-bit platforms.	
	<pre>/opt/perf/lib/hpux32 /opt/perf/lib/hpux64 /opt/perf/lib/pa20_64  Solaris /opt/perf/lib/lv/ /opt/perf/lib/sparc_64/ /opt/perf/lib/x86_64/</pre>	<ul> <li>32-bit armjava library in Windows X64 and IA64:         <installdir>\examples\arm\arm32</installdir></li> <li>32-bit armjava library in Windows X86:         <installdir>\examples\arm (The 64 bit armjava library is not provided with Windows X86)</installdir></li> <li>64-bit armjava library in Windows X64 and IA64:         <installdir>\examples\arm</installdir></li> </ul>	
Java libraries	/opt/perf/examples/arm (The 32 bit libarmjava.so library is not provided with Linux2.6IPF64) /opt/perf/examples/arm/arm64	<installdir>/examples</installdir>	/usr/lpp/perf/exa mples/arm /usr/lpp/perf/exa mples/arm/arm64
Message catalogs:	/opt/perf/lib/nls/msg/C /	<installdir>\msg\C</installdir>	/usr/lpp/perf/lib /nls/msg/C/
Performance Agent bootup scripts	/sbin/init.d/ovpa /sbin/rc1.d/K190ovpa (linked to/sbin/init.d/ovpa) /sbin/rc2.d/S810ovpa (linked to/sbin/init.d/ovpa)	n/a	/etc/pctl
Dynamically Linked Libraries and Control Panel files	n/a	<pre><windir>\system32 Example files: <installdir>\examples</installdir></windir></pre>	n/a

## New Metrics Added in this Release

Following section includes list of new metrics added and metrics not supported in this release. The metric lists are categorized based on platforms:

 $\mbox{\sc AlX}$  Following is a list of all new metrics that are added in version 5.00.

Class	Metrics List
Global Metrics:	GBL_POOL_TOTAL_UTIL
	GBL_POOL_CPU_AVAIL
	GBL_LS_PHYS_MEM_TOTAL
	GBL_LS_NUM_DEDICATED
	GBL_LS_NUM_CAPPED
	GBL_LS_CPU_NUM_DEDICATED
	GBL_POOL_IDLE_TIME
	GBL_TOTAL_DISPATCH_TIME
	GBL_LS_PHYS_MEM_CONSUMED
	GBL_LS_NUM_UNCAPPED
	GBL_LS_CPU_NUM_SHARED
	GBL_LS_NUM_SHARED
Logical System Metrics:	BYLS_CPU_PHYS_WAIT_MODE_UTIL
	BYLS_CPU_PHYS_IDLE_MODE_UTIL
	BYLS_PHANTOM_INTR
	BYLS_LS_TYPE
	BYLS_LS_STATE
	BYLS_UPTIME_SECONDS
	BYLS_MEM_ENTL_MIN
	BYLS_MEM_ENTL_MAX
	BYLS_MEM_SHARES_PRIO
	BYLS_LS_HOSTNAME
Network Interface Metrics	BYNETIF_NET_TYPE
Configuration Class	GBL_NUM_CPU_CORE
Process Class	PROC_CPU_ALIVE_TOTAL_UTIL
	PROC_CPU_ALIVE_SYS_MODE_UTIL
	PROC_CPU_ALIVE_USER_MODE_UTIL
Logical System class for AIX standalone,	BYLS_IS_ID
LPAR and WPAR	BYLS_LS_NAME
	BYLS_NUM_CPU
	BYLS_CPU_ENTL_MAX
	BYLS_LS_SHARED

Class	Metrics List
	BYLS_DISPLAY_NAME
	BYLS_MEM_ENTL
	BYLS_CPU_PHYS_TOTAL_UTIL
	BYLS_CPU_TOTAL_UTIL
	BYLS_CPU_PHYSC
	BYLS_RUN_QUEUE
	BYLS_CPU_PHYS_USER_MODE_UTIL
	BYLS_CPU_PHYS_SYS_MODE_UTIL
	BYLS_CPU_PHYS_WAIT_MODE_UTIL
	BYLS_CPU_PHYS_IDLE_MODE_UTIL
	BYLS_LS_TYPE
	BYLS_LS_STATE

On Global Environment, the following BYLS metrics for WPARs will always be ZERO.

- BYLS\_CPU\_PHYS\_WAIT\_MODE\_UTIL
- BYLS\_CPU\_PHYS\_IDLE\_MODE\_UTIL

The following classes of metrics are not supported by Performance Agent inside a system WPAR:

- Logical System (BYLS)
- Disk Class (BYDSK)
- Logical Volume (LVM)
- Swap Class (SWAP)
- NFS class (NFS)
- CPU class (BYCPU)

Following is a list of metrics not supported inside a system WPAR:

Class	Metrics List
Global class	GBL_NUM_DISK
	GBL_DISK_TIME_PEAK
	GBL_DISK_UTIL_PEAK
	GBL_DISK_REQUEST_QUEUE
	GBL_DISK_PHYS_READ_PCT
	GBL_TOTAL_DISPATCH_TIME
	GBL_DISK_PHYS_IO_RATE

Class	Metrics List
	GBL_DISK_PHYS_IO
	GBL_DISK_PHYS_READ_RATE
	GBL_DISK_PHYS_READ
	GBL_DISK_PHYS_WRITE_RATE
	GBL_DISK_PHYS_WRITE
	GBL_DISK_PHYS_BYTE_RATE
	GBL_DISK_PHYS_READ_BYTE_RATE
	GBL_DISK_PHYS_WRITE_BYTE_RATE
	GBL_DISK_PHYS_BYTE
	GBL_DISK_VM_READ
	GBL_DISK_VM_READ_RATE
	GBL_DISK_VM_WRITE
	GBL_DISK_VM_WRITE_RATE
	GBL_DISK_VM_IO_RATE
	GBL_DISK_VM_IO
	GBL_MEM_SYS_AND_CACHE_UTIL
	GBL_MEM_CACHE_HIT_PCT
	GBL_SWAP_SPACE_AVAIL
	GBL_SWAP_SPACE_USED
	GBL_SWAP_SPACE_UTIL
	GBL_SWAP_SPACE_AVAIL_KB
	GBL_OTHER_QUEUE
	GBL_NFS_CALL
	GBL_NFS_CALL_RATE
	GBL_MEM_ACTIVE_VIRT
	GBL_LS_PHYS_MEM_TOTAL
	GBL_LS_PHYS_MEM_CONSUMED
	GBL_POOL_CPU_AVAIL
	GBL_POOL_TOTAL_UTIL
	GBL_LS_NUM_DEDICATED
	GBL_LS_NUM_SHARED
	GBL_LS_NUM_UNCAPPED
	GBL_LS_NUM_CAPPED
	GBL_LS_CPU_NUM_SHARED
	GBL_LS_CPU_NUM_DEDICATED

Class	Metrics List
	GBL_POOL_NUM_CPU
	GBL_POOL_ID
	GBL_VCSWITCH_RATE
	GBL_CPU_MT_ENABLED
	GBL_HYP_UTIL
	GBL_CPU_NUM_THREADS
Logical system class	BYLS_NUM_DISK
	BYLS_CPU_MT_ENABLED
	BYLS_PHANTOM_INTR
	BYLS_HYPCALL
	BYLS_VCSWITCH_RATE
	BYLS_HYP_UTIL
Metrics not supported on 64-bit platforms	
Global class	GBL_HYP_UTIL
	GBL_NET_DEFERRED
	$\operatorname{GBL}_{\operatorname{NET}}\operatorname{DEFERRED}_{\operatorname{CUM}}$
	$\operatorname{GBL}_{\operatorname{NET}}\operatorname{DEFERRED}_{\operatorname{PCT}}$
	GBL_NET_DEFERRED_PCT_CUM
	GBL_NET_DEFERRED_RATE
	GBL_NET_DEFERRED_RATE_CUM

### HP-UX

Following is a list of all new metrics that are added in version 5.00:

Class	Metrics List
Global Class:	GBL_CPU_MT_ENABLED
Configuration Class	GBL_NUM_CPU_CORE
	GBL_NUM_SOCKET
	GBL_LS_UUID
	GBL_NUM_VSWITCH
Logical Class:	BYLS_IP_ADDRESS
	BYLS_LS_HOSTNAME
	BYLS_CPU_PHYS_TOTAL_TIME
	BYLS_CPU_PHYS_TOTAL_TIME_CUM
	BYLS_CPU_CYCL_MIN

Class	Metrics List
	BYLS_CPU_CYCL_MAX
	BYLS_DISPLAY_NAME
	BYLS_CPU_ENTL_MAX
Network Interface Metrics	BYNETIF_NET_TYPE
Process Class	PROC_CPU_ALIVE_TOTAL_UTIL
	PROC_CPU_ALIVE_SYS_MODE_UTIL
	PROC_CPU_ALIVE_USER_MODE_UTIL

## Linux

Following is a list of new metrics that are supported by Performance Agent 5.00

Metrics List
GBL_CPU_MT_ENABLED
GBL_MEM_FILE_PAGEIN_RATE
GBL_MEM_FILE_PAGEOUT_RATE
GBL_NUM_CPU_CORE
GBL_NUM_SOCKET
BYNETIF_NET_TYPE
PROC_CPU_ALIVE_TOTAL_UTIL
PROC_CPU_ALIVE_SYS_MODE_UTIL
PROC_CPU_ALIVE_USER_MODE_UTIL
BYLS_LS_ID
BYLS_LS_NAME
BYLS_LS_STATE
BYLS_LS_OSTYPE
BYLS_NUM_CPU
BYLS_NUM_DISK
BYLS_NUM_NETIF
BYLS_CPU_ENTL_MIN
BYLS_CPU_ENTL_MAX
BYLS_UPTIME_SECONDS
BYLS_LS_MODE
BYLS_LS_SHARED
BYLS_DISPLAY_NAME

Class	Metrics List
	BYLS_MEM_ENTL
	BYLS_CPU_SHARES_PRIO
	BYLS_CPU_PHYS_TOTAL_UTIL
	BYLS_MEM_ENTL_UTIL
	BYLS_LS_UUID
	BYLS_CPU_TOTAL_UTIL
	BYLS_CPU_PHYSC
	BYLS_CPU_ENTL_UTIL
	BYLS_RUN_QUEUE
	BYLS_CPU_MT_ENABLED
	BYLS_IP_ADDRESS
	BYLS_MEM_ENTL_MIN
	BYLS_MEM_ENTL_MAX
	BYLS_MEM_SHARES_PRIO
	BYLS_MEM_OVERHEAD
	BYLS_MEM_SWAPPED
	BYLS_MEM_PHYS_UTIL
	BYLS_LS_PATH
	BYLS_LS_HOSTNAME
	BYLS_CPU_IDLE_MODE_UTIL
	BYLS_LS_HOST_HOSTNAME
	BYLS_LS_PARENT_UUID
	BYLS_LS_PARENT_TYPE
	BYLS_MEM_USED
	BYLS_CPU_CYCLE_TOTAL_USED
	BYLS_MEM_BALLOON_UTIL
	BYLS_MEM_BALLOON_USED
	BYLS_CPU_UNRESERVED
	BYLS_CPU_PHYS_WAIT_UTIL
	BYLS_CPU_PHYS_READY_UTIL
	BYLS_MEM_ACTIVE
	BYLS_MEM_UNRESERVED
	BYLS_MEM_HEALTH
	BYLS_MEM_SWAPTARGET
	BYLS_MEM_SWAPIN

Class	Metrics List
	BYLS_MEM_SWAPOUT
	BYLS_NET_BYTE_RATE
	BYLS_NET_IN_BYTE
	BYLS_NET_OUT_BYTE
	BYLS_LS_ROLE
	BYLS_LS_TYPE
	BYLS_NUM_CPU_CORE
	BYLS_NUM_SOCKET
	BYLS_UPTIME_HOURS
	BYLS_CPU_CLOCK
	BYLS_MEM_FREE
	BYLS_MEM_FREE_UTIL
	BYLS_BOOT_TIME
	BYLS_MACHINE_MODEL
	BYLS_MEM_PHYS
	BYLS_NUM_LS
	BYLS_NUM_ACTIVE_LS
	BYLS_CPU_CYCLE_ENTL_MIN
	BYLS_CPU_CYCLE_ENTL_MAX
	BYLS_DISK_PHYS_READ_RATE
	BYLS_DISK_PHYS_READ
	BYLS_DISK_PHYS_WRITE_RATE
	BYLS_DISK_PHYS_WRITE
	BYLS_DISK_PHYS_BYTE_RATE
	BYLS_DISK_PHYS_BYTE
	BYLS_DISK_PHYS_READ_BYTE_RATE
	BYLS_DISK_PHYS_WRITE_BYTE_RATE
	BYLS_DISK_UTIL
	BYLS_NET_IN_PACKET_RATE
	BYLS_NET_IN_PACKET
	BYLS_NET_OUT_PACKET_RATE
	BYLS_NET_OUT_PACKET
	BYLS_NET_PACKET_RATE
	BYLS_MEM_SYS

Solaris

Following is a list of all new metrics that are added in version 5.00:

Class	Metrics List
Global class	GBL_CPU_MT_ENABLED
Confirmation 1	GBL_MEM_ENTL_UTIL
Configuration class:	GBL_NUM_LS
	GBL_NUM_ACTIVE_LS
	GBL_LS_ROLE
	GBL_LS_TYPE
	GBL_NUM_CPU_CORE
27	GBL_NUM_SOCKET
Network Interface Metrics	BYNETIF_NET_TYPE
BYLS class	BYLS_LS_ID
	BYLS_LS_NAME
	BYLS_NUM_CPU
	BYLS_LS_STATE
	BYLS_UPTIME_SECONDS
	BYLS_SCHEDULING_CLASS
	BYLS_LS_SHARED
	BYLS_LS_MODE
	BYLS_IP_ADDRESS
	BYLS_LS_PATH
	BYLS_MEM_ENTL
	BYLS_POOL_NAME
	BYLS_CPU_SHARES_PRIO
	BYLS_CPU_ENTL_MIN
	BYLS_CPU_PHYSC
	BYLS_CPU_ENTL_UTIL
	BYLS_CPU_TOTAL_UTIL
	BYLS_MEM_SWAP
	BYLS_MEM_LOCKED
	BYLS_MEM_SWAP_USED
	BYLS_MEM_LOCKED_USED
	BYLS_MEM_SWAP_UTIL
	BYLS_MEM_LOCKED_UTIL

Class	Metrics List
	BYLS_DISPLAY_NAME
	BYLS_NUM_NETIF
	BYLS_MEM_ENTL_UTIL
	BYLS_LS_HOSTNAME
	BYLS_CPU_PHYS_TOTAL_UTIL
	BYLS_NUM_NETIF
	BYLS_UPTIME_SECONDS
	BYLS_MEM_ENTL_UTIL
	BYLS_LS_HOSTNAME
Process Class	PROC_CPU_ALIVE_TOTAL_UTIL
	PROC_CPU_ALIVE_SYS_MODE_UTIL
	PROC_CPU_ALIVE_USER_MODE_UTIL

**Note:** All metrics in the Disk class (BYDSK), Logical System class (BYLS), Swap class (BYSWP), Logical Volume class (LV) and CPU class (BYCPU) are not supported inside the non-global zones.

Following is a list of metrics that are not supported in version 5.00 inside non-global zone:

Class	Metrics List
Global Class	GBL_DISK_TIME_PEAK
	GBL_DISK_REQUEST_QUEUE
	GBL_CPU_WAIT_UTIL
	GBL_DISK_PHYS_IO_RATE
	GBL_DISK_PHYS_READ_RATE
	GBL_DISK_PHYS_WRITE_RATE
	GBL_DISK_PHYS_BYTE_RATE
	GBL_DISK_PHYS_WRITE_BYTE_RATE
	GBL_DISK_VM_IO_RATE
	GBL_MEM_SYS_AND_CACHE_UTIL
	GBL_SWAP_SPACE_AVAIL
	GBL_SWAP_SPACE_RESERVED
	GBL_SWAP_SPACE_AVAIL_KB
	GBL_SWAP_SPACE_MEM_AVAIL
	GBL_CPU_CYCLE_ENTL_MIN
	GBL_DISK_UTIL_PEAK
	GBL_DISK_PHYS_READ_PCT

Class	Metrics List
	GBL_CPU_WAIT_TIME
	GBL_DISK_PHYS_IO
	GBL_DISK_PHYS_READ
	GBL_DISK_PHYS_WRITE
	GBL_DISK_PHYS_READ_BYTE_RATE
	GBL_DISK_PHYS_BYTE
	GBL_DISK_VM_IO
	GBL_MEM_CACHE_HIT_PCT
	GBL_SWAP_SPACE_USED
	GBL_SWAP_SPACE_UTIL
	GBL_CPU_MT_ENABLED
	GBL_SWAP_SPACE_DEVICE_AVAIL
	GBL_CPU_CYCLE_ENTL_MAX
Table Class	TBL_PROC_TABLE_UTIL
	TBL_FILE_LOCK_USED
Configuration class:	GBL_ZONE_APP
Metrics that show global zone values or	on non-global zones
Global Metrics	
Global Metrics	$\operatorname{GBL\_MEM\_DNLC\_HIT\_PCT}$
Global Metrics	GBL_MEM_DNLC_HIT_PCT GBL_FS_SPACE_UTIL_PEAK
Global Metrics	
Global Metrics	GBL_FS_SPACE_UTIL_PEAK
Global Metrics	GBL_FS_SPACE_UTIL_PEAK GBL_NET_PACKET_RATE
Global Metrics	GBL_FS_SPACE_UTIL_PEAK GBL_NET_PACKET_RATE GBL_NET_IN_PACKET
Global Metrics	GBL_FS_SPACE_UTIL_PEAK GBL_NET_PACKET_RATE GBL_NET_IN_PACKET GBL_NET_IN_PACKET_RATE
Global Metrics	GBL_FS_SPACE_UTIL_PEAK GBL_NET_PACKET_RATE GBL_NET_IN_PACKET GBL_NET_IN_PACKET_RATE GBL_NET_OUT_PACKET
Global Metrics	GBL_FS_SPACE_UTIL_PEAK GBL_NET_PACKET_RATE GBL_NET_IN_PACKET GBL_NET_IN_PACKET_RATE GBL_NET_OUT_PACKET GBL_NET_OUT_PACKET
Global Metrics	GBL_FS_SPACE_UTIL_PEAK  GBL_NET_PACKET_RATE  GBL_NET_IN_PACKET  GBL_NET_IN_PACKET_RATE  GBL_NET_OUT_PACKET  GBL_NET_OUT_PACKET  GBL_NET_COLLISION_RATE
Global Metrics	GBL_FS_SPACE_UTIL_PEAK  GBL_NET_PACKET_RATE  GBL_NET_IN_PACKET  GBL_NET_IN_PACKET_RATE  GBL_NET_OUT_PACKET  GBL_NET_OUT_PACKET  GBL_NET_COLLISION_RATE  GBL_NET_COLLISION_PCT
Global Metrics	GBL_FS_SPACE_UTIL_PEAK  GBL_NET_PACKET_RATE  GBL_NET_IN_PACKET  GBL_NET_OUT_PACKET  GBL_NET_OUT_PACKET  GBL_NET_COLLISION_RATE  GBL_NET_COLLISION_PCT  GBL_NET_DEFERRED_PCT
Global Metrics	GBL_FS_SPACE_UTIL_PEAK  GBL_NET_PACKET_RATE  GBL_NET_IN_PACKET  GBL_NET_IN_PACKET_RATE  GBL_NET_OUT_PACKET  GBL_NET_OUT_PACKET_RATE  GBL_NET_COLLISION_RATE  GBL_NET_COLLISION_PCT  GBL_NET_DEFERRED_PCT  GBL_NET_ERROR_RATE
Global Metrics	GBL_FS_SPACE_UTIL_PEAK  GBL_NET_PACKET_RATE  GBL_NET_IN_PACKET  GBL_NET_OUT_PACKET  GBL_NET_OUT_PACKET  GBL_NET_COLLISION_RATE  GBL_NET_COLLISION_PCT  GBL_NET_DEFERRED_PCT  GBL_NET_ERROR_RATE
Global Metrics	GBL_FS_SPACE_UTIL_PEAK  GBL_NET_PACKET_RATE  GBL_NET_IN_PACKET  GBL_NET_OUT_PACKET  GBL_NET_OUT_PACKET  GBL_NET_COLLISION_RATE  GBL_NET_COLLISION_PCT  GBL_NET_DEFERRED_PCT  GBL_NET_ERROR_RATE  GBL_NET_IN_ERROR_PCT  GBL_NET_IN_ERROR_RATE
Global Metrics	GBL_FS_SPACE_UTIL_PEAK  GBL_NET_PACKET_RATE  GBL_NET_IN_PACKET  GBL_NET_IN_PACKET_RATE  GBL_NET_OUT_PACKET  GBL_NET_OUT_PACKET_RATE  GBL_NET_COLLISION_RATE  GBL_NET_COLLISION_PCT  GBL_NET_DEFERRED_PCT  GBL_NET_ERROR_RATE  GBL_NET_IN_ERROR_PCT  GBL_NET_IN_ERROR_PCT

Class	Metrics List		
	GBL_RUN_QUEUE		
	GBL_LOADAVG		
	GBL_LOADAVG5		
	GBL_BLOCKED_IO_QUEUE		
Metrics that show zero value on non-global zones			
Configuration metrics	GBL_NUM_DISK		
	GBL_NUM_LS		
	GBL_NUM_ACTIVE_LS		
	GBL_NUM_DISK		

## Windows

Following is the list of new metrics that are added in Performance Agent, version 5.00

Class	Metrics List		
Global class	GBL_CPU_MT_ENABLED		
	GBL_NET_IN_ERROR_RATE		
	GBL_NET_DEFERRED_PCT		
	GBL_NET_ERROR		
	GBL_NET_OUT_ERROR_RATE		
	GBL_DISK_PHYS_READ_PCT		
Network Interface Class	BYNETIF_QUEUE		
Configuration Class	GBL_NUM_CPU_CORE		
	GBL_NUM_SOCKET		
	GBL_NUM_LS		
	GBL_NUM_ACTIVE_LS		
Logical System Class (Supported on Hyper-V)	BYLS_CPU_SHARES_PRIO		
	BYLS_CPU_ENTL_MIN		
	BYLS_CPU_ENTL_MAX		
	BYLS_CPU_PHYSC		
	BYLS_CPU_ENTL_UTIL		
	BYLS_DISPLAY_NAME		
	BYLS_HYP_CALL		
	BYLS_HYP_UTIL		
	BYLS_LS_NAME		

Class	Metrics List
	BYLS_LS_MODE
	BYLS_LS_SHARED
	BYLS_LS_STATE
	BYLS_LS_UUID
	BYLS_LS_PROC_ID
	BYLS_ID
	BYLS_LS_SHARED
	BYLS_LS_PATH
	BYLS_LS_OSTYPE
	BYLS_LS_HOSTNAME
	BYLS_MEM_ENTL
	BYLS_NUM_CPU
	BYLS_NUM_DISK
	BYLS_NUM_NETIF
	BYLS_UPTIME_SECONDS
	BYLS_CPU_PHYS_TOTAL_TIME
	BYLS_CPU_PHYS_TOTAL_UTIL
	BYLS_CPU_PHYS_SYS_MODE_UTIL
	BYLS_CPU_PHYS_USER_MODE_UTIL

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- Submit and track support cases and enhancement requests
- Download software patches
- Manage support contracts
- Look up HP support contacts
- Review information about available services
- Enter into discussions with other software customers
- Research and register for software training

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