HP GlancePlus

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

Release Notes

Software version: 5.00/August 2009

This document provides an overview of the changes made to HP GlancePlus (GlancePlus) 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/

- This document will not be available with the product media.

Documentation Errata

Local Language Support

Software Version and File Placement Information

List of files and locations

New Metrics Added in this Release

AIX

HP-UX

Linux

Solaris

Support

Legal Notices

What's New In This Version

This release of GlancePlus 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

- A new daemon `perfd` has been introduced as an enhancement with GlancePlus. The capabilities of `perfd` focus on real-time system activities, remote data monitoring and options to drill-down and visualize in detail problems that have occurred in the system. This enables the user to remotely monitor systems by accessing real-time data on single or multiple nodes using CLIs (Command Line Interface).

- Provides clients such as `cpsh`, `padv` and `mpadv` to access data locally and remotely using `perfd`.

- Provides 64-bit libarm and libarmjava libraries along with 32-bit libraries on 64-bit platforms.

- The data format for INTERVAL metric is changed to tenths-of-a-second to represent the data up to precision of 1 decimal.

AIX

- For java based applications on 64 bit operating system, GlancePlus supports ARM data collection/logging only if the application is running in 64 bit java virtual machine.

- GlancePlus 5.00 supports data logging for LAN interfaces configured with IPv6 address and tunnel interfaces.

- GlancePlus is supported on VIOS 1.3, 1.4, 1.5, and 2.1 versions. GlancePlus can capture data for LPARs configured with VIOS 1.3, 1.4, 1.5, and 2.1 versions.

- When SMT is ON, GlancePlus represents both logical and physical cpu utilizations on the system.

- GlancePlus is not supported inside system WPAR (workload partitions).

HP-UX

- Supported on HPVM versions 4.00 and 4.10.

- The metric PROC_STOP_REASON is enhanced to capture kernel functions.

- The following patches are necessary to use the perfd clients: cpsh, padv and mpadv on HP-UX 11.11 systems:
  — PHCO_37369
  — PHCO_36082
  — PHNE_35865

Linux

- GlancePlus is supported on guests hosted on SLES10 & RHEL5 Xen enabled systems.

- GlancePlus 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.

- GlancePlus is enhanced to run on vMA (VSphere Management Assistant) 4.0. GlancePlus captures and reports performance data (in BYLS class) for ESX hosts, resource pools and guests from ESX Servers that are registered with the vMA.

- The glance.install script includes command line options for advanced installations. By default, on a vMA4.0 system, xglance is not installed. To modify the default option, refer to the *HP GlancePlus Installation Guide* for the Linux operating system.

- On vMA 4.0, each instance of the BYLS class now refers to either a host or a guest or a resource pool. The xglance screen now displays all these instances of BYLS class metrics on a single screen.

- Refer to the *Glance Installation and Configuration Guide for Linux* for the list of RPMs necessary for uninterrupted installation of gpm/xglance.

Solaris

- Available on Sun Solaris operating system versions 9 and later.

- Supports Logical Domains (LDoms) on SPARC with Sun Solaris 10 operating environment or later.

- Supports BYLS class of metrics on Solaris Zones on Sun Solaris 10, Update-5 (March 2008 release) operating environment or later.

- Supports monitoring of Sun Solaris ZFS (Zettabyte File System).

- GlancePlus is not supported on non-global zones.

- GlancePlus is not supported inside Branded zones.

- GlancePlus 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.

What's Changed In This Version

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

- GlancePlus does not support HP Self-Healing Services (SHS) from version 5.00 onwards.

- GlancePlus is not supported on the following versions of operating systems:

  — Debian, Asianux and Linux 2.4 kernel

  — Solaris version 7 and 8

  — AIX version 5.1 and 5.2

Product Documentation Map

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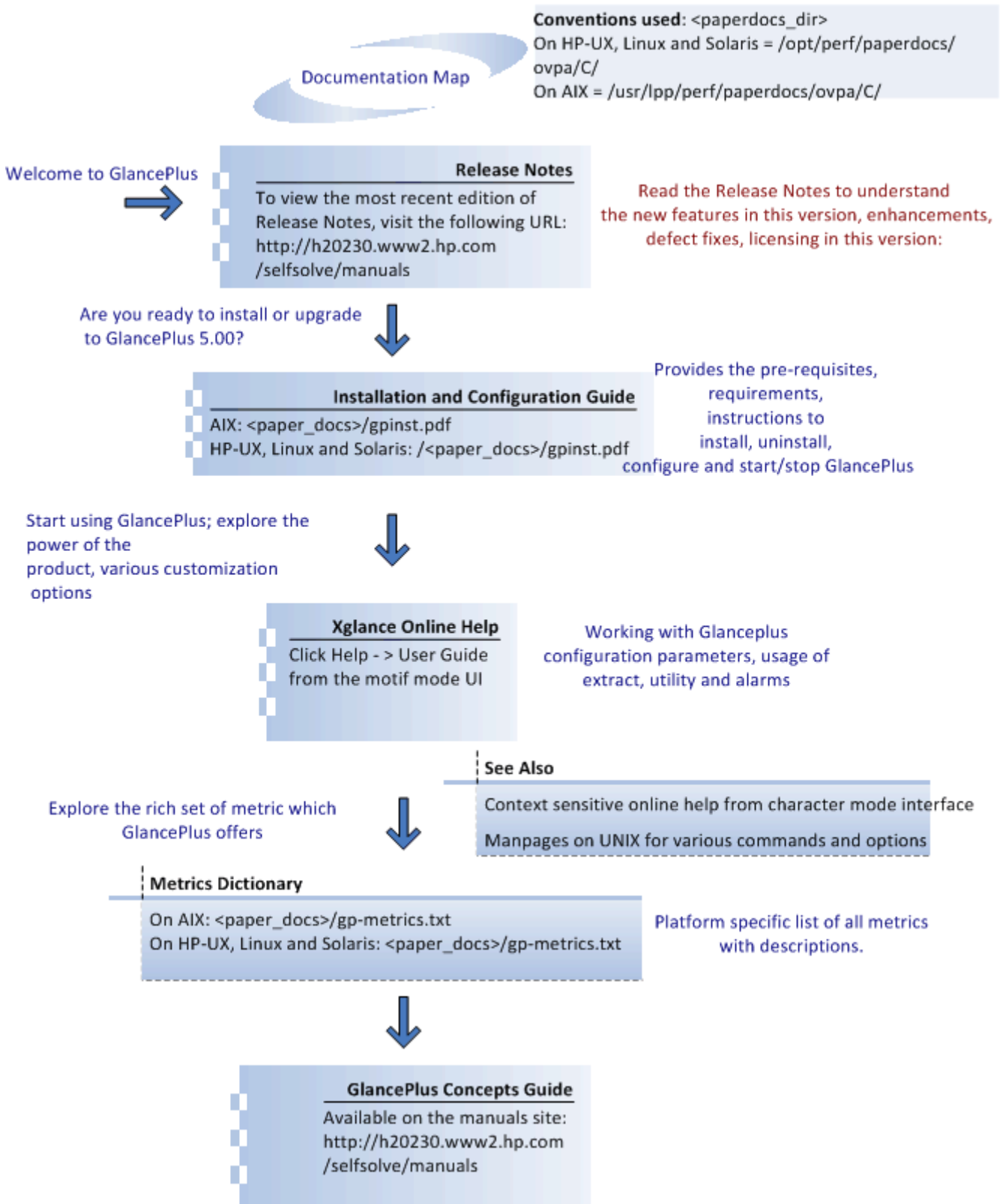
Note:

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.

Documentation Map

Conventions used: <paperdocs_dir>
On HP-UX, Linux and Solaris = /opt/perf/paperdocs/ovpa/C/
On AIX = /usr/lpp/perf/paperdocs/ovpa/C/

Welcome to GlancePlus

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 GlancePlus 5.00?

Installation and Configuration Guide

AIX: <paper_docs>/gpinst.pdf
HP-UX, Linux and Solaris: /<paper_docs>/gpinst.pdf

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

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

Xglance Online Help

Click Help - > User Guide from the motif mode UI

Working with Glanceplus configuration parameters, usage of extract, utility and alarms

See Also

Context sensitive online help from character mode interface

Manpages on UNIX for various commands and options

Explore the rich set of metric which GlancePlus offers

Metrics Dictionary

On AIX: <paper_docs>/gp-metrics.txt
On HP-UX, Linux and Solaris: <paper_docs>/gp-metrics.txt

Platform specific list of all metrics with descriptions.

GlancePlus Concepts Guide

Available on the manuals site:
http://h20230.www2.hp.com/selfsolve/manuals

Licensing

GlancePlus licensing depends on GlancePlus License Key (`gkey`) and `perfd` License Key (`pkey`). The `perfd` license is included with the GlancePlus license. The `gkey` and `pkey` are available in the following directories:

AIX, HP-UX, Solaris and Linux - `/var/opt/perf`

On trial versions of GlancePlus, the trial period for the GlancePlus license starts the first time GlancePlus is used. However, the trial period for the `perfd` license starts at the instance when the first connect request is made by a client node.

For `perfd` clients (`cpsh`, `padv`, and `mpadv`) to fetch data from local or remote nodes running `perfd`, the pre-requisite is to have a valid `perfd` license on the target node where `perfd` is running.

Types of Licenses

There are three types of licenses available for GlancePlus.

- **Trial** - The trial license is valid for 60 days. The trial period for the GlancePlus license starts the first time you start GlancePlus.

- **Extended** - You have the option of extending your trial license for an additional duration. For instructions to extend trial license, see Steps to get trial license/extended trial license.

- **Permanent** - There is no validity period for GlancePlus with permanent license.

Steps to obtain media

- Go to the following web site for trial 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.

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

Migrating from Trial or Extended license to Permanent license

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

1 Stop GlancePlus.

2 Uninstall the existing trial version of GlancePlus and re-install the new permanent version. For instructions, see *HP GlancePlus Installation and Configuration Guide*.

3 Start GlancePlus.

Manufacturing Part Numbers

Listed below are the part numbers for the product:

Permanent:
- B3693-15021 DVD, Glance 5.0 (All Platforms) Perm
- B3693-15022 ESD, Glance 5.0 HP-UX 11.11 Perm
- B3693-15023 ESD, Glance 5.0 HP-UX 11.23 Perm
- B3693-15024 ESD, Glance 5.0 HP-UX 11.31 Perm
- B3693-15025 ESD, Glance 5.0 Linux Perm
- B3693-15026 ESD, Glance 5.0 AIX Perm
- B3693-15027 ESD, Glance 5.0 Solaris Perm

Trial:
- B3693-13018 DVD, Glance 5.0 (All Platforms) Trial
- B3693-13019 ESD, Glance 5.0 HP-UX 11.11 Trial
- B3693-13020 ESD, Glance 5.0 HP-UX 11.23 Trial
- B3693-13021 ESD, Glance 5.0 HP-UX 11.31 Trial
- B3693-13022 ESD, Glance 5.0 Linux Trial
- B3693-13023 ESD, Glance 5.0 AIX Trial
- B3693-13024 ESD, Glance 5.0 Solaris Trial

Installation Notes

Installation requirements, as well as instructions for installing GlancePlus, are documented in the *Installation Guide for GlancePlus* 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 GlancePlus and for locations of documents after installation, refer to the section Product Documentation Map.

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

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

> ⚠ Before using GlancePlus, 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.
>
> Filename of readme file on all platforms:
>
> - AIX: readme.gp
> - Linux: README
> - Sun: readme.gp
>
> There is no readme file on HP-UX.

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 GlancePlus, make sure that your system meets the requirements stated in the *HP GlancePlus Installation and Configuration Guide*. Instructions for installing GlancePlus are also available in the *HP GlancePlus 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 downloading the GlancePlus installable, you receive file in the ISO format. You need to write the ISO image into a DVD and use the DVD to install the product.

- If you are installing or upgrading HP Performance Agent on a system where GlancePlus is already installed, you must upgrade GlancePlus to the same release version. The HP Performance Agent and GlancePlus versions should always be the same.

- On HP-UX system, for `nfs` mounted installations while removing the product always use the following command:

  ```
  swremove  -x  write_remote_files=true  <BUNDLENAME>
  ```

Enhancements and Fixes

To display details about each software enhancement or fix, search for the reference number from the HP Software Online Support web site. The first time you visit the HP Software Online Support web site, you must enter your HP passport information. To set up your passport profile, go to:

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

Common

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 log the status of Hyperthreading.
FIX :	A new metric GBL_CPU_MT_ENABLED is added to report if hyperthreading is on or off.
QXCR1000375911	
PROBLEM:	Logical system drilldown UI improvements.
FIX :	The Glance screens "LOGICAL SYSTEM LIST" and "LOGICAL SYSTEM DETAIL" are made consistent across the platforms.
QXCR1000410163	
PROBLEM:	Glance gives error with startup options -bootup -aos.
FIX :	All the tty related errors at the glance startup are fixed.
QXCR1000417849	
PROBLEM:	Glance in advisor mode is dumping core when there are more than 100 applications defined in parm file.
FIX :	This issue is fixed and now glance adviser works as expected for more than 100 applications.

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.

QCCR1A80698	
PROBLEM:	Memory metric BYLS_MEM_PHYS_UTIL behavior is incorrect
FIX :	BYLS_MEM_PHYS_UTIL will not depend on entitlement now. On VMware ESX server, Physical memory utilization is calculated on the actual utilization of the Guest OS.

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.

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.

QCCR1A88949	
PROBLEM:	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.
FIX :	Addition of all application's APP_MEM_RES was overflowing due to 32bit counter. It is modified to 64bit counter.

QCCR1A88535	
PROBLEM:	OVPA doesn't show FS metrics if FS is huge.
FIX :	OVPA/Glance is modified to support huge FS.

QCCR1A88511	
PROBLEM:	Scopeux is dumping core.
FIX :	The problem is fixed and scopeux will not core dump.

AIX

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.`

QXCR1000790050	
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.`

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`.

QXCR1000467028	
PROBLEM:	Successive failure of `libSpmi` call aborts binary(`scopeux,glance`).
FIX :	Now the problem is fixed.

QCCR1A88288	
PROBLEM:	Incorrect BY_CPU metrics on AIX 5.2 standalone system.
FIX :	This problem has been fixed. The user mode utilizations are shown correctly for the BYCPU systems.

QCCR1A88290	
PROBLEM:	OVPA handling of defunct processes.
FIX :	Now the problem is fixed.

QCCR1A88410	
PROBLEM:	Extract of global data dumps core for the log files with large number of disk instances.
FIX :	This problem is now fixed and the extract will work fine for the log files with large

number of disk instances.	

QCCR1A87859	
PROBLEM:	Scope/glance dying on 4.6 on this multi-LPAR AIX 5.3 ML5 Power 5 system
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.

QCCR1A88371	
PROBLEM:	Workaround for AIX degrading performance of multi-CPU virtualized system.
FIX:	Added an environment variable which disables OVPA/Glance collecting hyperviser metrics on the system.

QCCR1A88453	
PROBLEM:	OVPA/Glance installation overwrites `libarm.a` on AIX.
FIX:	The problem is fixed.

QCCR1A88633	
PROBLEM:	Threads get stuck on ARM – libraries.
FIX :	ARM library "libarm" has been made thread safe.

HP-UX

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 log number of physical sockets in the system.

QCCR1A80620/ QXCR1000412828	
PROBLEM:	Glance crashes on HPVM server every time guest status changes
FIX :	This problem is fixed.

QCCR1A78651	
PROBLEM:	Japanese help files not available.

FIX:	Help files are available in Japanese.
QCCR1A78653	
PROBLEM:	gpm C.04.60 Bad Japanese message catalogue in View.
FIX:	The catalogue files are modified.
QCCR1A91567	
PROBLEM:	scopeux/glance aborts with mi_shared1 - MI synchronization failed error.
FIX:	This problem is fixed.
QCCR1A88531	
PROBLEM:	OVPA 4.60.300 / HPUX 11.23: `BYLS_CPU_ENTL_UTIL` is calculated incorrectly.
FIX:	This problem is fixed and a number of virtual CPUs are taken into consideration while calculating `BYLS_CPU_ENTL_UTIL` on an HPVM environment.
QCCR1A88859	
PROBLEM:	OVPA 4.73.100 memory metrics issues
FIX:	Now, glance and xglance show correct values for memory metrics.
QCCR1A88907	
PROBLEM:	OVPA 4.62.500 deployment fails when HP-UX node has GlancePlus/UX Pak package
FIX:	With this fix OVPA 4.62.500 subagent deployment will be successful on nodes where GlancePlus/UX Pak is installed.
QCCR1A78692	
PROBLEM:	Glance 4.60 / HPUX 11.23 IA : no data if more than 50 PRM groups are active
FIX:	This problem is now fixed and data is displayed when more than 64 PRM groups are configured.
QCCR1A78678	
PROBLEM:	FS_BLOCK_SIZE - incorrect units on GPM file system details screen
FIX:	FS_BLOCK_SIZE will be displayed in bytes instead of kilobytes or megabytes.
QCCR1A78636	
PROBLEM:	Misleading shmmax=0 message in `status.mi`.
FIX :	This problem is fixed.
QCCR1A78655	
PROBLEM:	Glance C.04.60 HP-UX 11iv2 (IPF/PA). Unavailable BYHBA_ Metrics.

FIX :	Help text is updated for BYHBA_* metrics as these metrics are available only in HP-UX 11iv3 and above.
QCCR1A78667	
PROBLEM:	Glance 4.55 / HPUX 11.31: disk report showing process data.
FIX :	This problem is fixed.
QCCR1A78730	
PROBLEM:	Glance 4.70/HPUX 11.x: realtime CPU reported even for pri > 127.
FIX :	This issue is fixed. Now if scheduling policy is SCHED_NOAGE, CPU consumption is accounted correctly under `GBL_CPU_USER_UTIL`.
QCCR1A78743	
PROBLEM:	Glance performance is degraded after the libc patch PHCO_37476 is installed
FIX :	Now Glance starts up quickly even though the libc patch PHCO_37476 is installed.
QCCR1A80663	
PROBLEM:	Memory metrics are incorrect in Glance and PA 4.70 on HP-UX.
FIX :	This problem is fixed and memory metrics are showing correct values consistently.
QCCR1A80674	
PROBLEM:	GBL_CPU_WAIT_UTIL with value zero differs from sar –u.
FIX :	GBL_CPU_WAIT_UTIL is now matching with value from sar –u.
QCCR1A78687	
PROBLEM:	OVPA 4.6 not picking up dynamic changes
FIX :	Glance is made aware of dynamic changes done to CPUs. Toggle option 'C' is provided in glance BYCPU screen 'a'
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.
QCCR1A88322	
PROBLEM:	Glance is not showing all the processes
FIX :	The problem is 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'.

QCCR1A80699	
PROBLEM:	swapinfo and glance swap metrics not matching with tunable BASE_PAGESIZE of 64k.
FIX:	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.

Linux

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 GlancePlus on Linux to log number of physical sockets in the system.

QXCR1000863271	
PROBLEM:	Linux `GBL_MEM_PAGEOUT*` metrics do not represent "forced" pageouts 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`.

QXCR1000829529	
PROBLEM:	`BYDSK_PHYS_READ_BYTE_RATE` gets overflow at 16MB/sec.
FIX :	Fixed to provide correct values for `BYDSK_PHYS_READ_BYTE_RATE`.

QCCR1A88313	
PROBLEM:	`GBL_CPU_TOTAL_UTIL` incorrectly shows 100%.
FIX :	This problem is fixed.

QCCR1A88421	
PROBLEM:	LX: C.04.60 status.scope has sscanf errors while reading from process statistics

FIX :	Fixed by handling special program names with parenthesis in the filenames.
QCCR1A78684	
PROBLEM:	Glance running in advisor mode hangs.
FIX :	This problem is fixed.
QCCR1A80700	
PROBLEM:	OVPA/Glance C.04.73.100:`GBL_CPU__UTIL` 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.
FIX :	Pageout metrics fixed on linux to behave like any other Unix systems. File paging (in/out) metrics were also added.
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 :	VMware command error messages are not logged into `status.scope`.
QCCR1A88890	
PROBLEM:	**perfstat -v** is showing warning for files under `/opt/OV/lib64`.
FIX :	**perfstat -v** looks in the correct directory and binaries on an OMU 8.53 and PA C.04.7x environment.
QCCR1A88899	
PROBLEM:	`GBL_CPU_PHYS_TOTAL_UTIL` metric shows inaccurate values with OVPA on ESX 3.5 (Linux) guest VM.
FIX :	`GBL_CPU_PHYS_TOTAL_UTIL` metric now shows accurate value with OVPA on ESX 3.5 guest VM (LINUX).
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.
QCCR1A88483	
PROBLEM:	Highly threaded processes causes excessive scopeux CPU utilization.

FIX :	The problem is fixed.

Solaris

QCCR1A88225	
PROBLEM:	OVPA Shared Memory Metrics Bad.
FIX :	This problem is fixed.

QCCR1A78677	
PROBLEM:	Glance core dumps in adviser mode.
FIX :	libnums is fixed to provide process memory region metrics.

QCCR1A78714	
PROBLEM:	GPM/Glance 4.7 Proc Memory Regions coredumps.
FIX :	This problem is now fixed and the Glance/GPM will show process memory region metrics.

QCCR1A80635	
PROBLEM:	Several mistakes in metric descriptions for virtualization metrics.
FIX:	Virtualization metrics definitions are corrected and explained wherever necessary.

QCCR1A86917	
PROBLEM:	`GBL_COMPLETED_PROC` shows low values compared to `GBL_STARTED_PROC` in 3.82 & 4.5.
FIX:	`GBL_COMPLETED_PROC` now shows the true count of completed processes.

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.

Known Problems, Limitations, and Workarounds

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

Common

None.

AIX

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 %hyppct 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:	NONE.

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:	NONE.

PROBLEM:	`glance` and `xglance` may not report correct information when a forced refresh is made either by pressing enter key in glance (for V command and S command from there) or selecting "Update now" option in File menu of `xglance` (Logical System List window). This is because the tools get values only at the interval they are invoked with.
WORKAROUND:	NONE.

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.

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.
PROBLEM:	`glance` 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
PROBLEM:	Logical system screen initialization may take more time and you may miss data for first one or two intervals if numbers of systems responding to RSI discovery are high.
WORKAROUND:	Edit Rsi.hosts configuration file listing the LPARs configured on the same system to limit broadcast invitation to the listed LPARs.

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.

HP-UX

QXCR100093537	
PROBLEM:	When the "conceal window" option is selected in xglance, this closes the entire window instead of concealing it.
WORKAROUND:	NONE.

QXCR100093218	
PROBLEM:	"Tiny" or "Large" font size in a Japanese environment, displays garbage values.
WORKAROUND:	Use only "small" or "medium" font sizes in a Japanese environments

QCCR1A88809	
PROBLEM:	On HPVM Host machine, the value for the metric "BYLS_LS_HOSTNAME" is blank. The HPVM API from which this 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 HP-UX

WORKAROUND:	The following metrics are not available if 'fileio' trace option is not enabled in midaemon:
	
	`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. GlancePlus 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_40130` 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

PROBLEM:	On IA64 system, you see "unaligned access" messages.
WORKAROUND:	Execute the following command, **sysctl -w kernel.ignore-unaligned-usertrap=1**

QXCR1000367668	
PROBLEM:	Issue with `THREAD_PAGEFAULT` metric in xglance tool.
WORKAROUND:	In the thread metric selection window, do not select `THREAD_PAGEFAULT` and `THREAD_PAGEFAULT_RATE` as interesting metrics.

QXCR1000353884	
PROBLEM:	After one of the VMs restarts, the GLOBAL metrics `GBL_MEM_SWAPIN_BYTE` and `GBL_MEM_SWAPOUT_BYTE` are zero and these metric values are huge for first interval after restarting VM. This is a problem with the VMWare command that provides the wrong values. We are working with VMWare to correct the issue.
WORKAROUND:	NONE.

QXCR1000349 933	
PROBLEM:	On SLES9 upto kernel version 2.6.9 it is observed that for processes started after HP PA/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.
PROBLEM:	On some systems with libXm.so.3 available, hyperhelp may not be able to resolve location of libXm.so.3 if library path is not available in ldconfig cache. ldd command shall be used on hyperhelp binary so as to know whether hyperhelp resolved path for all the libraries that's required.
WORKAROUND:	Install the required openmotif rpm(mentioned above), or update the ldconfig cache(refer man pages of ldconfig).
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. 1 Edit *.vmx file (vm-cfg-path) of guest ,set "isolation.tools.guestlibGetInfo.disable" to TRUE. 2 "Power Off" the guest and then "Power On". Do not Restart. 3 After the guest is up, check the vmware.logfile for that guest 4 Value of "isolation.tools.guestlibGetInfo.disable" should match *.vmx file.
QCCR1A93992	
PROBLEM:	Name field of swap devices having lengthier names are truncated and are reported differently
WORKAROUND:	You need to enable the tool-tip option in xglance to view the full paths and full strings.

Solaris

PROBLEM:	GlancePlus 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.

Documentation Errata

None.

Local Language Support

This version of GlancePlus 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 Guide for HP GlancePlus on HP-UX Operating System
- Install Guide for HP GlancePlus Pak on HP-UX Operating System
- xglance Online Help for HP-UX
- Man pages:
    - midaemon
    - cpsh
    - mpadv
    - padv
    - perfd
    - xglance

Software Version and File Placement Information

The following is a list of directory locations for product files. Enter the command to get a list of all files in the product:

HP-UX	`/usr/sbin/swlist -l file Glance MeasurementInt`
AIX	`lslpp -f HPOvPerf.*`
Linux	Command to get list of rpm packages is: `rpm -qa	grep HPOv`
	Command to get list of files in any package: `rpm -ql <package_name>`
Solaris	`pkgchk -l <package-name>	grep Pathname`

List of files and locations

File	Location
Executables including UI programs, daemons, and scripts	On AIX `/usr/lpp/perf/bin/` On HP-UX, Linux and Solaris, `/opt/perf/bin/`
Examples (refer to the README file in the directory for more information)	On AIX, `/usr/lpp/perf/examples/arm` On HP-UX and Linux, `/opt/perf/examples/`
Default configuration and template files	On AIX, `/usr/lpp/perf/newconfig/` On HP-UX, `/opt/perf/newconfig/` `/opt/perf/newconfig/etc/rc.config.d/` On Linux and Solaris, `/opt/perf/newconfig/`
Product configuration and status files	On AIX, HP-UX and Solaris, `/var/opt/perf/`
Product binary data and internal-use files (created during and after installation)	On HP-UX and Solaris, `/var/opt/perf/datafiles/`
Development include files	On AIX, `/usr/lpp/perf/include/` On HP-UX, Linux and Solaris, `/opt/perf/include/`
Library files	On AIX, `/usr/lpp/perf/lib/` `/usr/lpp/perf/lib/lib64` On HP-UX, `/opt/perf/lib/` `/opt/perf/lib/hpux32` `/opt/perf/lib/hpux64` `/usr/perf/lib/pa20_64` On Linux, `/opt/perf/lib/` (The 32 bit libarm.so library

	`is not provided with Linux 2.6IPF64)`
	`/opt/perf/lib64/ (for x86_64 and IPF64)`
	
	On Solaris,
	`/opt/perf/lib`
	`/opt/perf/lib64/`

Java Libraries	On AIX,
	`/usr/lpp/perf/examples/arm`
	`/usr/lpp/perf/examples/arm/arm64`
	
	On Linux,
	`/opt/perf/examples/arm (The 32 bit`
	`libarmjava.so library is not provided with`
	`Linux2.4IPF64)`
	`/opt/perf/examples/arm/arm64`
	
	On Solaris,
	`/opt/perf/examples/arm`
	`/opt/perf/examples/arm/arm64`

Motif-mode application default	On AIX,
	`/usr/lpp/perf/hyperhelp/app-defaults`
	
	On HP-UX,
	English:
	`/opt/perf/newconfig/app-defaults/C/`
	Japanese:
	`/opt/perf/newconfig/app-defaults/ja_JP.SJIS/`
	
	On Linux and Solaris,
	`/opt/perf/hyperhelp/app-defaults`

Production copy of application default file for xglance	On AIX, Linux and Solaris, `/var/opt/perf/app-defaults/C`

Temporary copy of application defaults file for xglance	On AIX,
	`/usr/lpp/perf/newconfig/app-defaults/C`
	
	On Linux and Solaris,
	`/opt/perf/newconfig/app-defaults/C`

Startup and shutdown scripts	On Solaris,
	`/etc`
	`/etc/default`

Motif-mode (HyperHelp) online help executables and files:	On HP-UX,
	`/opt/perf/hyperhelp/app-defaults/`
	`/opt/perf/hyperhelp/bin/`
	`/opt/perf/hyperhelp/xprinter/`
	`/opt/perf/hyperhelp/xprinter/fontmetrics/afm/`

	`/opt/perf/hyperhelp/xprinter/fontmetrics/tfm/`
	`/opt/perf/hyperhelp/xprinter/ppds/`
Message catalogs:	On HP-UX,
	English:
	`/opt/perf/lib/nls/msg/C/`
	Japanese:
	`/opt/perf/lib/nls/msg/ja_JP.SJIS/`
	On Solaris,
	`/opt/perf/lib/nls/msg/C`
GlancePlus bootup scripts:	On AIX,
	`/etc/pctl`
	On HP-UX,
	`/sbin/rc2.d/S810pctl`
	`/sbin/rc1.d/K190pctl`
	`/sbin/init.d/pctl`
	On Solaris,
	`/etc/init.d/pctl`
	`/etc/rc0.d/K21pctl`
	`/etc/rc1.d/K21pctl`
	`/etc/rc2.d/K21pctl`
	`/etc/rc3.d/S73pctl`
`perfd` bootup scripts	On AIX,
	`/etc/pctl`
	`/etc/inittab`
	(Entry is made during Installation of the product and removed during uninstallation.)
	On HP-UX,
	`/sbin/init.d/pctl`
	`/sbin/rc2.d/S810pctl`
	(linked to /sbin/init.d/pctl)
	`/sbin/rc1.d/K190pctl`
	(linked to /sbin/init.d/pctl)
	On Linux – RedHat,
	`/etc/rc.d/init.d/pctl`
	`/etc/rc.d/rc2.d/S96pctl`
	(linked to /etc/rc.d/init.d/pctl)
	`/etc/rc.d/rc3.d/S96pctl`
	(linked to /etc/rc.d/init.d/pctl)
	`/etc/rc.d/rc5.d/S96pctl`

	(linked to /etc/rc.d/init.d/pctl)
	`/etc/rc.d/rc0.d/K08pctl`
	(linked to /etc/rc.d/init.d/pctl)
	`/etc/rc.d/rc6.d/K08pctl`
	(linked to /etc/rc.d/init.d/pctl)
	On Linux – SUSE,
	`/etc/init.d/pctl`
	`/etc/rc.d/rc2.d/S96pctl`
	(linked to /etc/init.d/pctl)
	`/etc/rc.d/rc3.d/S96pctl`
	(linked to /etc/init.d/pctl)
	`/etc/rc.d/rc5.d/S96pctl`
	(linked to /etc/init.d/pctl)
	`/etc/rc.d/rc0.d/K08pctl`
	(linked to /etc/init.d/pctl)
	`/etc/rc.d/rc6.d/K08pctl`
	(linked to /etc/init.d/pctl)
	On Solaris,
	`/etc/init.d/pctl`
	`/etc/rc0.d/K21pctl`
	(linked to /etc/init.d/pctl)
	`/etc/rc1.d/K21pctl`
	(linked to /etc/init.d/pctl)
	`/etc/rc2.d/K21pctl`
	(linked to /etc/init.d/pctl)
	`/etc/rc3.d/S73pctl`
	(linked to /etc/init.d/pctl)
Configuration startup files	On AIX, Linux and Solaris, `$HOME`
HP Software registration file	`On HP-UX,` `/etc/opt/OV/share/registration/C/perf/`

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:

AIX

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_IDLE_TIME
	GBL_POOL_CPU_AVAIL
	GBL_TOTAL_DISPATCH_TIME
	GBL_CPU_MT_ENABLED
	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
Logical System Metrics:	BYLS_CPU_ENTL_MIN
	BYLS_CPU_SHARES_PRIO
	BYLS_CPU_ENTL
	BYLS_CPU_ENTL_UTIL
	BYLS_LS_TYPE
	BYLS_LS_STATE
	BYLS_LS_MODE
	BYLS_IP_ADDRESS
	BYLS_MEM_ENTL_UTIL
	BYLS_UPTIME_SECONDS
	BYLS_MEM_ENTL_MIN
	BYLS_MEM_ENTL_MAX
	BYLS_MEM_SHARES_PRIO
	BYLS_LS_HOSTNAME
BYLS metrics for WPAR on AIX6.1 TL2	BYLS_LS_ID
	BYLS_LS_NAME
	BYLS_NUM_CPU
	BYLS_CPU_ENTL_MAX
	BYLS_LS_SHARED
	BYLS_MEM_ENTL
	BYLS_CPU_PHYS_TOTAL_UTIL
	BYLS_CPU_TOTAL_UTIL

Class	Metrics List
	BYLS_CPU_PHYSC
	BYLS_RUN_QUEUE
	BYLS_CPU_PHYS_USER_MODE_UTIL
	BYLS_CPU_PHYS_SYS_MODE_UTIL
	BYLS_LS_TYPE
	BYLS_LS_STATE

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 GBL_ACTIVE_CPU_CORE
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_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 all new metrics that are added in version 5.00:

Class	Metrics List
Global Class	GBL_CPU_MT_ENABLED
	GBL_MEM_FILE_PAGEIN_RATE
	GBL_MEM_FILE_PAGEOUT_RATE
Configuration Class	GBL_NUM_CPU_CORE
	GBL_NUM_SOCKET
Network Interface Metrics	BYNETIF_NET_TYPE
Logical System Metrics (vMA specific metrics)	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
	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

Class	Metrics List
	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
	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

Class	Metrics List
	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
Configuration Class	GBL_NUM_LS
	GBL_NUM_ACTIVE_LS
	GBL_LS_ROLE
	GBL_LS_TYPE
	GBL_NUM_CPU_CORE
	GBL_NUM_SOCKET
Global class	GBL_CPU_MT_ENABLED
	GBL_MEM_ENTL_UTIL
Network Interface Metrics	BYNETIF_NET_TYPE
Logical System 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

Class	Metrics List
	BYLS_MEM_SWAP_USED
	BYLS_MEM_LOCKED_USED
	BYLS_MEM_SWAP_UTIL
	BYLS_MEM_LOCKED_UTIL
	BYLS_NUM_NETIF
	BYLS_MEM_ENTL_UTIL
	BYLS_LS_HOSTNAME
	BYLS_CPU_PHYS_TOTAL_UTIL

Support

You can visit the HP Software support web site at:

www.hp.com/go/hpsoftwaresupport

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

HP Software online software support provides customer self-solve capabilities. It provides a fast and efficient way to access interactive technical support tools needed to manage your business. As a valued support customer, you can benefit by using the support site to:

- Search for knowledge documents of interest
- 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

Most of the support areas require that you register as an HP Passport user and sign in. Many also require an active support contract. To find more information about support access levels, go to the following URL:

http://h20230.www2.hp.com/new_access_levels.jsp

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

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

Obsolescence of this product and the Operating Systems it supports will follow the published HP obsolescence Policy

The published policy can be found at the following URL:

http://support.openview.hp.com/pdf/prod_version_policy_obsolete.pdf

Legal Notices

We appreciate your feedback!

If an email client is configured on this system, by default an email window opens when you click on the bookmark "Comments".

In case you do not have the email client configured, copy the information below to a web mail client, and send this email to **docfeedback@hp.com**

Product name:

Document title:

Version number:

Feedback: