Performance Toolbox for AIX Version 3.1

IBM

Release Notes

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> **Note**
>
> Before using this information and the product it supports, read the information in "Notices," on page 5.

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Performance Aide and Performance Toolbox for AIX Version 3.1

The following information applies to Performance Aide Version 3.1 for AIX® or later.

Note: This software may contain errors that could result in critical business impact. It is highly recommended that you install the latest available fixes prior to using this software. Fixes can be obtained from IBM® @server pSeries® Support at the following Web site:

http://www.ibm.com/servers/eserver/support/pseries/

Performance Aide agent version compatibility

The following table describes the version of Performance Aide agent perfagent and perfmgr you will need to use if you are running the following versions of AIX:

AIX Version	Performance Aide agent perfagent and perfmgr
AIX 5L™ for POWER™ Version 5.1	• perfagent.tools 5.1.0.50 (base media) • bos.perf.tools 5.1.0.50 (base media) • bos.perf.perfstat 5.1.0.50 (base media) • perfagent.server 3.1.0.0 + APAR IY64538
AIX 5L Version 5.2	• perfagent.tools 5.2.0.50 (base media) • bos.perf.tools 5.2.0.50 (base media) • bos.perf.perfstat 5.2.0.50 (base media) • perfagent.server 3.1.0.0 + APAR IY64538
AIX 5L Version 5.3	• perfagent.tools 5.3.0.10 (base media) • bos.perf.tools 5.3.0.10 (base media) • bos.perf.perfstat 5.3.0.10 (base media) • perfagent.server 3.1.0.0 + APAR IY64538

Notes:

1. Version 3.1 of the Performance Aide agent supports AIX 5.1, AIX 5.2, and AIX 5.3.
2. The Performance Toolbox clients (**xmperf** and **3dmon**) can monitor legacy Performance Aide agents installed at the Version 3.0 level.
3. In AIX 5L for POWER Version 5.1, the **iostat** performance flag is disabled in a standard installation. This can affect the reporting of performance metrics by the Performance Aide agent. To reset this flag, enter the following command:

   chdev -lsys0 -a iostat=true
4. To check the setting of **iostat**, enter the following command:

   lsattr -Elsys0 -a iostat

The **perfmgr.*** levels specified in the compatibility chart above are currently included with the latest versions of the Performance Manager media.

AIX Release-Specific Metric Information

New performance metrics are available for Performance Toolbox v3.1 in AIX 5.3. These metrics are designed to correspond closely to new information reported by the **iostat** and **lparstat** commands. For more detailed descriptions of these metrics, refer to the *AIX 5L Version 5.3 Commands Reference*.

The metric set listing for any AIX release can be retrieved by the following PTX **xmpeek** command:

`xmpeek -l [hostname]`

Additional Disk Service Time Metrics

Disk/hdisk*/	Statistics for disk hdisk
Disk/hdisk*/rserv	Average read service time in msec per read block
Disk/hdisk*/wserv	Average write service time in msec per write block
Disk/hdisk*/avgserv	Average service time per transfer
Disk/hdisk*/avgque	Average queue depth
Disk/hdisk*/avgwait	Average wait queue time for read and write transfers
Disk/hdisk*/qfull	Queue full count

Note: Some service time values may be converted from values by block to values by read and write transfers.

New Virtualization LPAR Context and Associated Metrics

LPAR/	Logical Partition statistics
LPAR/user	System-wide time executing in user mode (percent)
LPAR/kern	System-wide time executing in kernel mode (percent)
LPAR/wait	System-wide time waiting for I/O (percent)
LPAR/idle	System-wide idle time (percent)
LPAR/lbusy	Logical busy time (percent)
LPAR/pbusy	Physical busy time (percent)
LPAR/physc	Physical processor consumed
LPAR/entc	Entitlement consumed (percent)
LPAR/ent	Entitlement
LPAR/app	Available pool processor
LPAR/vcsw	Virtual CPU context switches
LPAR/maxmem	MB of max memory lpar can support
LPAR/minmem	MB of min memory lpar can support
LPAR/memreg	Size in MB of one LMB
LPAR/lparnum	Assigned LPAR number
LPAR/shared	SPLPAR flag (0/1 - dedicated/shared)
LPAR/capped	Capped partition (0/1 - uncapped/capped)
LPAR/smt	SMT flag (0/1 - off/on)
LPAR/maxpcpu	Max # physical CPUs in system
LPAR/minvcpu	Min # of virtual CPUs in this LPAR

LPAR/	Logical Partition statistics
LPAR/maxvcpu	Max # of virtual CPUs in this LPAR
LPAR/mincap	Min processor capacity
LPAR/maxcap	Max processor capacity
LPAR/capinc	Processor capacity change granule
LPAR/onlinemem	MB of currently online memory
LPAR/mdisl	Max latency between dispatches (nsecs)
LPAR/pcpu	# of active licensed physical CPUs
LPAR/vcpu	# of current online virtual CPUs
LPAR/lcpu	# of current online logical CPUs
LPAR/pcpuinpool	# physical CPUs in shared pool
LPAR/unalloccap	Unallocated Capacity available in pool
LPAR/entitledcap	Entitled processor capacity for partition
LPAR/varwght	Variable processor capacity weight
LPAR/unallocwght	Unallocated variable weight in lpar group
LPAR/minvcpucap	Minimum required virtual processor capacity
LPAR/phint	Phantom interrupts
LPAR/entpct	Entitlement as a percentage
LPAR/hcalls	Number of Hypervisor™ calls
LPAR/hyppct	Percent time spent in Hypervisor

Installing Performance Toolbox for AIX filesets

Performance Toolbox for AIX contains two components:

- Manager (client)
- Aide (agent) - this function should be installed on every system to be monitored, including the managing client.

These components ship as separate filesets. For AIX 5.1 and later, the filesets must be installed in the following sequence:

1. **perfagent.tools**, **bos.perf.tools**, **bos.perf.perfstat** (from the AIX base installation media)
2. **Java14.sdk** (available on the AIX 5.2 and AIX 5.3 media and the Bonus Pack or download for AIX 5.1)
3. **perfagent.server** (from the Performance Aide Version 3.1 media)
4. **perfmgr.*** filesets (from the Performance Toolbox Version 3.1 media)

Performance Toolbox and Performance Aide use Java™ 1.4. This might require an additional 30 MB of disk space for installation.

Configuration instructions for preinstallation customers

Performance Aide can be ordered preinstalled on customer systems. The preinstalled version is configured so that it does not automatically update the **/etc/inittab** file to execute services that support the **jtopas** client. To use this function, preinstallation customers need to do one of the following:

- Manually update the **/etc/inittab** file with the following entries:

```
ptxnameserv:2:respawn:/usr/java14/jre/bin/tnameserv -ORBInitialPort 2279 2>&1 >/dev/null
ptxfeed:2:respawn:/usr/perfagent/codebase/jtopasServer/feed 2>&1 >/dev/null
ptxtrend:2:once:/usr/bin/xmtrend -f /etc/perf/jtopas.cf -d /etc/perf/Top -n jtopas 2>&1 >/dev/null
```

- Use the **/usr/lpp/perfagent/cfg_jtopas** script to update the **/etc/inittab** file. This utility is available with APAR IY47932.

The preinstalled version of Performance Aide is configured differently than the version that is not preinstalled. This is because of anticipated usage differences in customers who use the full-time Performance Toolbox **jtopas** monitoring and recording function. This function imposes some overhead on the system that preinstallation customers will not need if **jtopas** is not being used.

The CD Media version of Performance Aide is 3.1.0.0, and will automatically update the **/etc/inittab** file entries for 24-hour monitoring and recording. The preinstalled version of the Performance Aide is 3.1.0.10.

Migrating Performance Toolbox for AIX from Version 3.0 using SMIT

If you choose to migrate your Performance Toolbox and Performance Aide for AIX from Version 3.0 to Version 3.1 using SMIT, you must use the **smit install_latest** fastpath instead of the **smit update_all** fastpath. If the **smit update_all**fastpath is used, errors will occur because of Performance Toolbox for AIX name changes.

Online documentation for Performance Toolbox

Installing and viewing the online documentation

The *Performance Toolbox Version 2 and 3 Guide and Reference* is available at the following Web address:

`http://publib16.boulder.ibm.com/pseries/en_US/infocenter/base/`

The documentation fileset will be installed in the following path:

`/usr/man/info/en_US/a_doc_lib/perftool/prfusrgd/prfusrgd.htm`

Searching the online documentation

If you download and install the HTML version of the documentation and are viewing the documentation from a AIX 5.1 system, you cannot search the Performance Toolbox documentation through the search links. The documentation search facilities that these search links call are available in AIX 5.2 or later.

Printing the online documentation

Each file of the online documentation may be printed from your Web browser by doing the following:

1. Ensure that your Web browser is set up to print.
2. From any chapter, place your cursor inside the wide frame to the right of your screen, and click to select the frame.
3. From within Netscape Navigator, select the File menu, and then select **Print Frame**.

Note: If you use a different browser, the menus may differ, but the process is similar to the one described above.

Electronic fix distribution instructions

You can order and download available fixes. For more information, see the following Web site:

`http://www.ibm.com/servers/eserver/support/pseries/aixfixes.html`

Appendix. Notices

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