
Release Notes for Platform Analytics

Platform Analytics
Version 8.0
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Release Notes for Platform Analytics

Comments to: doc@platform.com

Support: support@platform.com

Obtaining Platform Analytics 8.0

To obtain Platform Analytics, contact Platform Computing or download the files from the Platform FTP site as follows:

- FTP server: <ftp.platform.com>
- User: lsfuser
- FTP directory: `distrib/8.0/analytcs8`

The FTP directory has the following subdirectories:

- docs: Documentation files.
- nodes: Node installation packages.
- schema: Data schema package.
- servers: Server and report installation packages.
- tableau: Tableau server and desktop installation packages, and the product documentation.
- vertica: Vertica database installation packages, and the product documentation.

What's new in Platform Analytics 8.0

- [Platform Analytics reporting server](#) on page 3
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Platform Analytics reporting server

Platform Analytics 8.0 now uses the Platform Analytics reporting server running Tableau Server 6.0 as the new ROLAP (Relational Online Analytics Processing) tool.

Tableau Server is a ROLAP analytic tool for business intelligence that provides browser-based reports. The Platform Analytics uses Platform Analytics reporting server to generate reports and allows other users to view these reports using a web browser.

The recommended resolution for viewing reports is 1280*1024 or above.

The Platform Analytics reporting server provides the following default workbooks to allow you to analyze your clusters and FLEXnet licenses:

Workbook name	Description
Workload Statistics	Reports information about all jobs in any state that are sampled from all active Platform LSF clusters. This allows you to perform a detailed analysis of current Platform LSF workload at any time period.

Workbook name	Description
Workload Accounting	Reports job information from Platform LSF job finish events. This allows you to perform a detailed analysis of completed Platform LSF jobs in all clusters.
License Usage	Reports on FLEXnet Server license usage on any license server or across multiple license servers. This allows you to analyze the usage, consumption, and utilization of licenses by users and hosts.
Hardware	Reports on the hardware utilization at any time period.
Cluster Capacity	Reports the usage of all slots in Platform LSF and the workload being run. This allows you to identify IDLE, DOWN, CLOSED, and RUNNING capacity.

Vertica database

Platform Analytics 8.0 now supports the use of Vertica Analytic Database 4.1.x for data storage and analysis. You can install the Vertica database on a single host or on a cluster of multiple hosts. Installing Vertica on multiple hosts improves the performance and reliability of your database.

Platform Application Center integration

Platform Analytics 8.0 is now integrated with Platform Application Center. Platform Application Center, which is a portal, provides access to all the Platform Analytics reports. Platform Application Center also provides additional functions such as batch report generation and report subscription.

What's changed in Platform Analytics 8.0

Platform Analytics 8.0 includes the following changes:

- The Tableau Server software replaces Cognos as the ROLAP (Relational Online Analytics Processing) tool.
 Since Platform Analytics no longer uses Cognos as the OLAP tool, Platform Analytics no longer uses cubes or datamarts to process the cluster data stored in the database. Tableau Server provides the equivalent functionality and reports generation that these components used to provide.
- Platform Analytics 8.0 supports Vertica database. Vertica has better performance, ease of maintenance and high availability. Platform recommends the use of Vertica database for data storage and analysis for this release.
- The Platform Analytics server now uses the `perfadmin` command to administer the Platform Analytics services rather than the `daemons` command.

Recommended system requirements

- [Database host](#) on page 5
- [Platform Analytics server host](#) on page 6
- [Platform Analytics reporting server host](#) on page 6
- [Platform Analytics node hosts](#) on page 7

Important:

Do not use a virtual machine (VM) for any of the following hosts. All Platform Analytics hosts should run on physical, standalone machines.

Database host

Supported databases

Platform Analytics supports the Vertica database versions 4.1 or later.

Supported operating systems

The following are the supported operating systems for the Vertica database host running in a production cluster:

- Red Hat Enterprise Linux 4, 64-bit
- Red Hat Enterprise Linux 5, 64-bit
- SUSE Linux Enterprise Server 10, 64-bit
- SUSE Linux Enterprise Server 11, 64-bit
- CentOS 4, 64-bit (Use the Red Hat Enterprise Linux 4, 64-bit RPM)
- CentOS 5, 64-bit (Use the Red Hat Enterprise Linux 5, 64-bit RPM)
- Debian 5.0, 64-bit

The following are the supported operating systems for the Vertica database host for non-production (testing) purposes only:

- Red Hat Enterprise Linux 4, 32-bit
- Red Hat Enterprise Linux 5, 32-bit
- SUSE Linux Enterprise Server 10, 32-bit
- SUSE Linux Enterprise Server 11, 32-bit
- Fedora Core 10, 32-bit
- Fedora Core 10, 64-bit
- Fedora Core 11, 32-bit
- Fedora Core 11, 64-bit

Recommended hardware requirements

The following table describes the recommended hardware requirements for the database host, depending on the size of your cluster. The specific hardware recommendations for each database host are the same:

Cluster size	Number of hosts	RAM	CPU	Local hard disk	Network
Medium (100 - 1000 hosts)	3	16 GB	4 × 2.4GHz (not a VM)	10000 RPM SATA/SCSI/SAS/SSD RAID 01 or 10 300 GB	Gigabit Ethernet
Large (more than 1000 hosts)	more than 3	32 GB	8 × 2.4GHz (not a VM)	10000 RPM SATA/SCSI/SAS/SSD RAID 01 or 10 1 TB	Gigabit Ethernet

Platform Analytics server host

Supported operating systems

The following table describes the supported operating systems for the Platform Analytics server host:

Platform and hardware	Operating systems
Linux x86 64-bit (AMD64, EM64T) - see note above	Red Hat Enterprise Linux 4, 5, and 6 SUSE Linux Enterprise Server 9, 10, and 11
Windows x86 64-bit (AMD64, EM64T)	Windows 2003 (all) Windows 2008 (all)

Recommended hardware requirements

If you are not using asynchronous data loading mode, the following hardware configuration should be sufficient:

RAM	CPU	Local hard disk	Network
4 GB	4 x 2.4 GHz (not a VM)	7200 RPM SATA/SCSI/SAS 50 GB	Gigabit Ethernet

If you are using asynchronous data loading mode, the following table describes the recommended hardware requirements for the Platform Analytics server host, depending on the size of your cluster:

Cluster size	RAM	CPU	Local hard disk	Network
Medium (100 - 1000 hosts)	4 GB	4 x 2.4GHz (not a VM)	7200 RPM SATA/SCSI/SAS 50 GB	Gigabit Ethernet
Large (more than 1000 hosts)	8 GB	4 x 2.4GHz (not a VM)	7200 RPM SATA/SCSI/SAS 50 GB	Gigabit Ethernet

Note:

Using an NFS disk mount instead of a local hard disk is not recommended.

Tip:

If you select a host that also meets the Tableau Server system requirements, you can also select the Platform Analytics server host to be the Platform Analytics reporting server host.

Platform Analytics reporting server host

The following table describes the system requirements for the Tableau Server host:

Operating system	RAM	CPU	Services	User accounts
Windows Server 2003 (SP2 or higher)	2GB	Dual-core (not a VM)	Do not run Internet Information Services (IIS) to avoid conflicts with the web server port 80.	This requirement is good for a limited number of hosts, for example 100 hosts.
Windows Server 2008				Access to a user account that the service can use (optional).
Windows Server 2008 R2				

Tip:

If the Platform Analytics server host also meets the Tableau Server system requirements, you can select the Platform Analytics server host to also be the Platform Analytics reporting server host.

The following table describes the optimal hardware configuration of the Platform Analytics reporting server, depending on the size of your cluster:

Cluster size	RAM	CPU	Local hard disk	Network
Medium (100 - 1000 hosts)	4 GB	4 × 2.4GHz (not a VM)	7200 RPM SATA/SCSI/SAS 50 GB	Gigabit Ethernet
Large (more than 1000 hosts)	8 GB	4 × 2.4GHz (not a VM)	7200 RPM SATA/SCSI/SAS 50 GB	Gigabit Ethernet

Platform Analytics node hosts

The following table describes the supported operating systems for the Platform Analytics node installed in a cluster running Platform LSF versions 7.0 or later. Contact Platform Computing if you require support for other operating systems.

Platform and hardware	Operating systems
Linux x86 64-bit (AMD64, EM64T)	Red Hat Enterprise Linux 4, 5, and 6 SUSE Linux Enterprise Server 9, 10, and 11

Recommended hardware requirements

The following table describes the optimal hardware configuration of the Platform Analytics node depending on the size of the clusters in which the node resides:

Cluster size	RAM	CPU	Local hard disk	Network
Medium (100 - 1000 hosts)	4 GB	2 × 2.4GHz (not a VM)	7200 RPM SATA/SCSI/SAS 50 GB	Gigabit Ethernet

Cluster size	RAM	CPU	Local hard disk	Network
Large (more than 1000 hosts)	8 GB	4 × 2.4GHz (not a VM)	7200 RPM SATA/SCSI/SAS 50 GB	Gigabit Ethernet

Scalability

The following table describes the maximum scale of clusters that Platform Analytics supports depending on the Vertica database:

Data type	Scalability factor	Value
LSF data	Number of hosts	20 000
	Number of finished jobs per day	4 000 000
FLEXnet server data	Number of license features	2 000
	Number of license servers	450
FLEXnet Manager data	Number of license events per day	3 000 000

Known issues and limitations

- *Some or all of the Vertica nodes fail to start up due to a memory error on page 9*
- *Data loaders on clusters running Platform LSF versions 7.0.4 or later do not obtain any job data if `lsb.stream` is not enabled on page 9*
- *Platform Analytics node does not send events after installation if it is started before the Platform Analytics server on page 10*
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- *The Projects dashboard of Workload Accounting report throws session busy error when sorting big data on page 13*

Platform Analytics known issues and limitations

Some or all of the Vertica nodes fail to start up due to a memory error

Some or all of the Vertica nodes may fail to start up and have the following error:

```
Large: Memory(KB) Exceeded: Requested = number, Free = number
```

This error occurs because of an issue with the Resource Manager in Vertica. To resolve this issue, you need to disable the Resource Manager before running the database, then enable the Resource Manager after the database has started up. The resolution method depends on whether all Vertica nodes failed to start up, or if only some Vertica nodes failed to start up.

Start the Vertica database if all nodes fail to start up

1. Manually disable the Resource Manager on all Vertica nodes.

Perform the following steps on each host in the database cluster.

- a) Log into a host in the database cluster.
- b) Navigate to the directory containing the `vertica.conf` file.

The directory is the directory of the catalogs of the database that you want to start up. This is the Catalog pathname that you were initially prompted to specify when you first created the database.

- c) Edit the `vertica.conf` file and add the following line to the end of the file:

```
EnableResourceManager=0
```

2. Start the Vertica database on all database nodes.
3. Re-enable the Resource Manager.
 - a) Log into a host in the database cluster.
 - b) Run the following SQL statement from the `vsq1` command line:

```
SELECT SET_CONFIG_PARAMETER('EnableResourceManager', '1');
```

Start the Vertica database if some nodes fail to start up

1. Log into one of the Vertica nodes that are still running.
2. Disable the Resource Manager.

Run the following SQL statement from the `vsq1` command line:

```
SELECT SET_CONFIG_PARAMETER('EnableResourceManager', '0');
```

3. Start the Vertica database on all the database nodes that failed to start up.
4. Re-enable the Resource Manager.
 - a) Log into a host in the database cluster.
 - b) Run the following SQL statement from the `vsq1` command line:

```
SELECT SET_CONFIG_PARAMETER('EnableResourceManager', '1');
```

Data loaders on clusters running Platform LSF versions 7.0.4 or later do not obtain any job data if `lsb.stream` is not enabled

After installing Platform Analytics on a cluster running Platform LSF versions 7.0.4 or later, the data loaders do not obtain any job data. This is because, by default, Platform LSF versions 7.0.4 or later do not

enable the `lsb.stream` file for the exporting of Platform LSF job event data, while Platform Analytics requires this to be enabled for the data loaders to obtain job data.

To resolve this issue, you need to enable the `lsb.stream` file for the exporting of Platform LSF job event data.

Enable the `lsb.stream` file

1. Edit the `lsb.params` file.
 - UNIX: `$LSF_ENVDIR/lsbatch/cluster_name/configdir/lsb.params`
 - Windows: `%LSF_ENVDIR%\lsbatch\cluster_name\configdir\lsb.params`
2. In the `lsb.params` file, edit the Parameters section to enable the exporting of Platform LSF job event data to the `lsb.stream` file.

Add the following lines to the Parameters section:

```
# Enable streaming of lsbatch system events
ENABLE_EVENT_STREAM=y
# Determines the location of the lsb.stream file. This parameter is optional.
# The default location is: $LSB_SHAREDIR/{clustername}/logdir/stream.
# EVENT_STREAM_FILE=LSF_TOP/work/cluster_name/logdir/stream/lsb.stream
# Determines the maximum size of the lsb.stream file. This parameter is optional.
# The default size is 1024MB.
# MAX_EVENT_STREAM_SIZE=1024
```

3. Reconfigure `mbatchd` to apply these changes.

badmin mbdrestart
4. To verify that these changes are in effect, verify that the `lsb.stream` files exists.

By default, `lsb.stream` is located at the following directories:

- UNIX: `$LSB_SHAREDIR/cluster_name/logdir/stream`
- Windows: `%LSB_SHAREDIR%\cluster_name\logdir\stream`

If you defined the `EVENT_STREAM_FILE` parameter in `lsb.params`, check the specified file path for the `lsb.stream` file.

Platform Analytics node does not send events after installation if it is started before the Platform Analytics server

After installing Platform Analytics using a clean database, if you start the Platform Analytics node before starting the Platform Analytics server, the node will not send events. This problem only occurs the first time after installation.

The `EVENT_MANAGER_CONF` table for the event locator is not initialized until you start the Platform Analytics server for the first time. Therefore, if you start the Platform Analytics node without first starting the Platform Analytics server after initial installation with a clean database, the event sender does not have access to the `EVENT_MANAGER_CONF` TABLE until you start the Platform Analytics server.

To resolve this issue, restart the Platform Analytics node after you start the Platform Analytics server.

FLEXnet events data loader does not support mapped network drives on Windows

In the FLEXnet events data loader properties file (`flexneteventloader.properties`), if you defined the `LicenseLogFile` parameter to point to a Windows UNC file path or to a mapped network drive, the data loader log file shows a "not a valid file" or "does not exist" error for "FlexlmEventParser.java".

The FLEXnet events data loader (flexneteventsl oader) does not support mapped network drives and has limited support for UNC file paths.

To work around this issue, use a slash (/) to define a UNC file path or a local Windows file path rather than a backslash (\). For a mapped network drive, use the UNC file path instead of the mapped network file path.

For example,

- For a local log file (c:\logs\flexneteventsl oader), use the following to define a Windows file path:

```
LicenseLogFile=c:\logs\flexneteventsl oader
```
- For a mapped network drive (\\fileserver\logs\flexneteventsl oader mapped to z:\logs\flexneteventsl oader), use the following to define a UNC file path instead of the mapped network file path:

```
LicenseLogFile=//fileserver/logs/flexneteventsl oader
```

FLEXnet usage data loader could not obtain license usage data due to insufficient swap space

If you have a Platform Analytics node running on a UNIX host, the FLEXnet usage data loader (flexnetusage loader) log may report "Failed to obtain license usage from the license server" and "Not enough space" errors. This problem does not apply to Windows hosts.

This error occurs if you have insufficient disk space allocated to the swap space on that host. To work around this issue, extend the swap space so it has at least 2 GB of free space on that host before starting the Platform Analytics node on the host.

In certain configurations, the Platform Analytics Console shows that the loader controller is down, but perfadmin shows it is running

In the Platform Analytics Console, if you click Data Collection Nodes, you may see that the loader controller is Down. However, if you examine the loader controller service (plc) in the Platform Analytics node (using perfadmin list) the loader controller service is STARTED.

This issue may occur because you incorrectly defined the loopback IP address (127.0.0.1) as the name of your host rather than local host in the /etc/hosts file, or if your host has multiple network interface cards (NICs).

To fix this problem, you need to change the loopback IP address and NSS (Name Service Switch) configuration.

Change the loopback IP address and NSS configuration

- Change the loopback IP address to local host.
 - Edit the /etc/hosts file.
 - Navigate to the line where you defined the loopback IP address (127.0.0.1).

If this IP address is not defined as local host, you need to change the definition

For example, if your host is hostA in the example.com domain, you need to navigate to and change the following line :

```
127.0.0.1      hostA      hostA.example.com
```

- Either delete the line or change the definition to local host and save the file.

For example, either delete the line or change it to the following:

```
127. 0. 0. 1      local host      local host. local domain
```

2. If your host has multiple network interface cards (NICs), change the NSS (Name Service Switch) configuration to look up NIS before looking up the file for host names and numbers.

- a) Edit the `/etc/nsswitch.conf` file.
- b) Navigate to the line with the definition for `hosts`.

For example, by default, this line is as follows:

```
hosts:      files nis dns
```

- c) Change the line so "nis" appears before "files" and save the file.

For example,

```
hosts:      nis files dns
```

3. Restart the services on the Platform Analytics node.

```
perfadmin stop all
```

```
perfadmin start all
```

Fail to install Platform Analytics

A crashed InstallShield database may cause the Platform Analytics installation to fail. If you failed to install Platform Analytics, you may need to manually remove the InstallShield Multi-Platform (ISMP) database.

Remove the ISMP database from the following directories:

- Windows: `C:\Program Files\Common Files\InstallShield\Universal\common`
- UNIX: `~/InstallShield`

The Cluster Capacity and Workload Statistics workbook displays only the first execution host in the execution host list for parallel job

The Cluster Capacity and Workload Statistics workbook displays parallel job execution hosts as one host and gets the data from the first execution host even though parallel jobs are running on different hosts. For example, if a parallel job execution host is "3*hostA 4*hostB", the cluster capacity data transformer assumes that 7 slots are occupied by host A.

Number of down slots reported is not correct

If the number of job slots are defined using "!" in the `lsb.hosts` file and a host is down, then the number of down slots reported is not correct. To work around this issue, define the number of slots for each host in the cluster in `lsb.hosts`.

The license usage data collected for the license vendor daemons is not accurate

If you have multiple license vendor daemons on a license server sharing the same port, the license usage data for those license vendor daemons may not be correct. To work around this issue, download the older version of `lmutil` from the Platform FTP site.

Download the `lmutil` binary from `patches/l_sf_analytics/8.0/FLEXIm9.2/<platform>` and move it to `ANALYTICS_TOP/license/7.0/<platform>/...`

Cannot install the Platform Analytics node

The Platform Analytics node installation will fail when the `LSF_VERSION` defined in the `lsf.conf` file is not the actual version.

To resolve this issue, before you install the Platform Analytics node, edit `lsf.conf` to change `LSF_VERSION` to an appropriate version. For example, if the actual LSF version is 7.x but if the `LSF_VERSION` in `lsf.conf` is set to "active", then before you install the node change the `LSF_VERSION` to 7.0. After installing the node change the `LSF_VERSION` back to "active".

Third-party known issues and limitations

A message “Out of memory” displays after clicking on the Data tab

This error message is displayed when you try to view big data, which is more than 4GB. To avoid the error, you can either narrow down the data range or increase the memory size of the host.

Average data on the Cluster Usage table is not as accurate as the data on the Cluster Usage graph

Data shown in the table is not accurate in some of the roll-up levels as it considers the sampling points of data instead of whole date period.

For example, the following data shows sampling points of data for slots number with different slot status:

Sampling points for different slot status	10:00	10:10	10:20	10:30	10:40	10:50
RUN					1	1
DOWN	2	2	2	2	2	2

In the Cluster Usage table, average slots number for the RUN status rolled up to the hour 10 is $(1 + 1) / 2 = 1$. The graph data shows the correct value, which is $(1 + 1) / 6 = 0.33$

As a workaround, refer to the Cluster Usage graph for more accurate data.

The Projects dashboard of Workload Accounting report throws session busy error when sorting big data

In the Projects dashboard of Workload Accounting report, if you select big data and try to sort, the reporting server may display the following error: 'Unexpected Server Error: Session busy, please try later.' For example, if you select data more than 3 years and try to drill down to a specific year that has more than 20K projects and sort as project name, you will see that error.

To avoid the error, narrow down the data range or try to view using the Platform Analytics Designer.

Get technical support

Contact Platform Computing

Contact Platform Computing or your Platform Analytics vendor for technical support. Use one of the following to contact Platform technical support:

Web Portal eSupport

You can take advantage of our Web-based self-support available 24 hours per day, 7 days a week ("24x7") by visiting my.platform.com. The Platform eSupport and Support Knowledgebase site enables you to search for solutions, submit your support request, update your request, enquire about your request, as well as download product manuals, binaries, and patches.

Email

support@platform.com

Get patch updates and other notifications

To get periodic patch update information, critical bug notification, and general support notification from Platform Support, contact supportnotice-request@platform.com with the subject line containing the word "subscribe".

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