

# Greenplum Command Center 2.2.0 Release Notes

Greenplum Command Center version: 2.2.0

Greenplum Workload Manager version: 1.1.0

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## About Pivotal Greenplum Command Center

Pivotal Greenplum Command Center is a management tool for Pivotal Greenplum Database. Pivotal Greenplum Command Center monitors system performance metrics, system health, and also provides administrators the ability to perform management tasks such as start, stop, and recovery of systems for Greenplum Database. Pivotal Greenplum Command Center is an interactive graphical web application that can be installed on a web server on the master host, and used to view and interact with the collected system data from Greenplum Database and optionally from EMC Data Computing Appliance (DCA).

Pivotal Greenplum Command Center is comprised of data collection agents that run on the Greenplum Database master host and each segment host. The agents collect data about queries and system utilization and send it to the database's master host at regular intervals. Pivotal Greenplum Command Center stores its data and metrics in a dedicated Greenplum database (the gpperfmon database) whose information is distributed among the master host and segment hosts, like any other Greenplum Database. The data stored in the gpperfmon database can be accessed through the web application or through SQL queries.

Greenplum Database is a requirement for operating Command Center (Command Center stores its information in a Greenplum database).

## About Pivotal Greenplum Workload Manager

Greenplum Workload Manager software is included with Greenplum Command Center and may optionally be installed by running the `gpcmdr --setup` utility. Greenplum Workload Manager collects query execution data and real-time system statistics on each segment host. The Workload Manager rules engine allows you to create rules that specify criteria that trigger an action, for example cancelling a query that runs longer than a specified time or consumes too many resources on a segment host. Real-time query performance can be viewed in the Workload Manager `gptop` curses-based GUI.

## Product Enhancements in Greenplum Command Center Release 2.2.0

### New Command Center Beta User Interface

Greenplum Command Center release 2.2.0 includes a beta release of the new Greenplum Command Center User Interface.

The GPCC installer has an option to include the beta UI (default yes) and the `gpcmdr` command has an option to run the beta (default yes).

The beta UI is installed by default on port 28090. It uses the same login credentials as the existing Command Center Console.

The beta Command Center Console includes the following improvements:

- A non-Flash interface – no dependency on a third-party browser plugin.
- Improved **Active Queries** list.
- A **Recent Queries** list provides access to the last five minutes of completed and canceled queries.
- **Query Details** for SQL text and explain plan.
- Cancel behavior works as expected.
- Each browser view has a unique URL. Navigating forward and backward in the browser works as expected and URLs can be bookmarked. Links to query lists and individual query details can be shared.

See *Known Issues in the Beta Command Center Console* for a list of known issues in the beta UI.

The new Command Center UI is in active development. New features coming soon are:

- Improved cluster-level metrics view.
- Improved host-level metrics view.
- Segment health view.
- Disk usage view.

### Greenplum Workload Manager

Greenplum Command Center release 2.2.0 includes Greenplum Workload Manager version 1.1.0.

Greenplum Workload Manager is included in the Pivotal Greenplum Command Center 2.2.0 package. Greenplum Workload Manager is a management tool for Greenplum Database you can use to monitor and manage queries and to manage resource queues. Greenplum Command Center Release 2.2.0 includes Greenplum Workload Manager 1.1.0.

The Greenplum Workload Manager installer is in the Command Center home directory. You can run the installer at the command line to install or upgrade Workload Manager, or you can install Greenplum Workload Manager when you create a Greenplum Command Center instance.

The `gpcmdr --setup` utility asks if you want to install Greenplum Workload Manager when you create a Greenplum Command Center instance:

```
Would you like to install workload manager?
```

The Greenplum Workload Manager installer detects existing software versions and either installs or upgrades the Workload Manager software.

See "Installing Greenplum Workload Manager" in the *Greenplum Workload Manager User Guide* for command syntax and usage instructions for the Greenplum Workload Manager installer.

## Product Enhancements in Greenplum Workload Manager 1.1.0

The following are enhancements and changes in Greenplum Workload Manager 1.1.0:

### New Features in Greenplum Workload Manager 1.1.0

- Application data can be stored outside of the Greenplum Workload Manager home directory.
- Rules are automatically upgraded when Greenplum Workload Manager is upgraded to a new version.
- A new datum, `gpdb:total_master_connections`, is the sum of `datid:numbackends` on the master segment.
- The database where the `gp_wlm_records` table is located can be changed by using the `--dbname-records` installer option.
- All rules can be deleted at once using `--rule-delete=all` in batch mode or `rule delete all` in interactive mode.
- A new `rule import <path>` command imports rules from a file into the set of existing rules. An imported rule with the same name as an existing rule replaces the existing rule. The corresponding command-line option is `rule-import=<path>`.
- The behavior of the `rule restore <path>` command is changed. In earlier releases, if the file to restore contained one or more rules with names matching existing rules, the restore would fail. Now `rule restore <path>` replaces all existing rules with the rules in the file. The behavior is the same as `rule delete all` followed by `rule restore <path>`.

### Improvements in Greenplum Workload Manager 1.1.0

- The expression compiler is versioned.
- An error message is printed when init script config files are missing.
- Improved rabbitmq startup logging.
- A separate configuration file is used in each daemon to describe enabled plugins.
- Improved the interface to libpq to support connecting to multiple databases.
- Improved the logic to detect whether or not to perform a bootstrap.
- No longer link with `-lssl`, since this is done implicitly when linked to libpq.
- Fixed a rare segfault in `gpdb_clustermon`.
- Fixed the computed path to the `gp_wlm_records` external table.
- Fixed segfault in the YAML parser.
- Fixed buffer overrun when searching a full `ds_arr`.

## Supported Platforms

Greenplum Command Center may be installed on the following platforms:

- Red Hat Enterprise Linux 5 or 6, 64-bit
- CentOS 5 or 6, 64-bit

- Greenplum Database 4.3.x

Greenplum Workload Manager may be installed on the following platforms:

- Red Hat Enterprise Linux 5.5+ or 6, 64-bit
- CentOS 5.5+ or 6, 64-bit
- Greenplum Database 4.3.x

Greenplum Command Center includes:

- OpenSSL version 1.0.1o.
- lighttpd web server version 1.4.35

## Greenplum Command Center Compatibility

Pivotal Greenplum Command Center is currently certified for the EMC Data Computing Appliance (DCA) and Greenplum Database software-only environments. Command Center monitors the following for each environment:

### ***Greenplum Data Computing Appliance***

- Greenplum Database Module 4.3.x
- Greenplum Data Integration Accelerator (DIA) Module
- Greenplum Data Computing Appliance Hardware (V1.2.x and V2.x)

If you have been using Greenplum's earlier monitoring tool, Performance Monitor, with an older DCA release, we recommend you upgrade to a supported version of DCA.

### ***Greenplum Database (Software-only Environments)***

- Greenplum Database 4.3.x

## Installation and Upgrade Instructions

**Note:** Greenplum Command Center requires Adobe Flash Player version 11 or higher. If this requirement is not met, you see the following screen:



## Greenplum Data Computing Appliance

Pivotal Greenplum Command Center is already installed on the DCA appliance (versions 1.2.x and 2.x).

For more information about setting up, upgrading, and configuring Pivotal Greenplum Command Center on an EMC Greenplum DCA, refer to the appropriate versions of the *Greenplum Data Computing Appliance Software Upgrade Guide* and *Greenplum Data Computing Appliance Installation and Configuration Guide*.

## Greenplum Database Software-only

Instructions for installing, configuring, and upgrading your system for Pivotal Greenplum Command Center are provided in the latest *Pivotal Greenplum Command Center 2.2 Administrator Guide* (see *Pivotal Documentation* for availability).

Pivotal Greenplum Command Center replaced a monitoring tool called Greenplum Performance Monitor. You are not required to upgrade to Pivotal Greenplum Command Center; you can continue using Performance Monitor as before. To continue running Performance Monitor, do not set up Command Center. You will not be able to access new monitoring features if you decide not to upgrade. You may also run Performance Monitor and Command Center in parallel (for example, to compare functionality before upgrading). For parallel operations, assign a different port number to Command Center during setup.

## Installing and Upgrading Greenplum Workload Manager

The `gpcmdr --setup` utility offers the option to run the Greenplum Workload Manager installer when you create a Greenplum Command Center instance. The Greenplum Workload Manager installer detects existing software versions and either installs or upgrades the Workload Manager software.

The Greenplum Workload Manager installer may also be run separately at the command line. See "Installing Greenplum Workload Manager" in the *Greenplum Workload Manager User Guide* for command syntax and usage instructions.

## Accessing Command Center

For enhanced security, beginning with Greenplum Command Center release 1.3.0.1, the `gpadmin` user is not permitted to log in to the Command Center. The Command Center does not accept logins from any user on the host running GPCC configured with `trust` authentication in the `pg_hba.conf` file.

You should create new administrative, operator, and regular Command Center users for Command Center. To create a new Command Center user, first you create a Greenplum Database role, then edit the `pg_hba.conf` file to give that user access to Command Center. An example of this procedure is provided in the *Pivotal Greenplum Command Center Administrator Guide* and more detailed information can be found in the *Pivotal Greenplum Database Administration Guide*.

## Greenplum Command Center Resolved Issues

The following table lists issues that were resolved in Pivotal Greenplum Command Center.

Issue	Description	Fixed In
—	Disk Usage is not appearing in the Dashboard or Administration tabs.	2.2.0
MPP-26312	The <code>gpcmdr -start</code> command fails with <code>ERROR: syntax error at or near "{"</code> .	2.2.0

Issue	Description	Fixed In
CMDR-1988	Running <code>gpcmdr --setup</code> failed when copying the instance directory to the secondary master due to incorrect softlinks created by a previous GPCC release. Before running <code>gpcmdr --setup</code> , run the GPCC 2.0.0 <code>gpccinstall</code> utility, which fixes the incorrect softlinks and allows <code>gpcmdr --setup</code> to succeed.	2.0.0

## Greenplum Command Center Known Issues

This section lists the known issues in Pivotal Greenplum Command Center 2.0. A work-around is provided where applicable.

Issue	Description
CMDR-297	Heavy workload on the Greenplum Database can affect responsiveness. The refresh rate of the Command Center user interface can be adversely affected by simultaneous heavy workload on the underlying Greenplum Database.
PT-87736724	The Command Center installer does not have support to upgrade existing Command Center instances when upgrading to a new release.

### Known Issues in the Beta Command Center Console

In Beta Query Details:

- The Query Text and Plan panels may not scroll until the divider is resized.
- When viewing a running query that completes with a total runtime under 20 seconds, on the next screen refresh, the query will be not found because it is below the threshold execution time for queries to be written to `queries_history`.

In Beta Active and Recent Queries:

- Canceled queries will show status "Canceling" until the next 15 second data refresh, even if the cancel completed sooner.
- There is a delay of several seconds after a query finishes before it is displayed in the Recent Queries list.
- Refresh timer may not begin counting down until first data refresh.

## Greenplum Workload Manager Known Issues

This section lists the known issues in Pivotal Greenplum Workload Manager. A work-around is provided where applicable.

Issue	Description
—	In rare cases it is possible for installations or upgrades to fail at the <code>cluster-health-check</code> stage. In the event that the cluster is not healthy, re-run the Workload Manager installer with the <code>--force</code> option. See "Installing Greenplum Workload Manager" in the <i>Pivotal Greenplum Workload Manager User Guide</i> for instructions to run the installer at the command line.

## Pivotal Documentation

The following Pivotal Greenplum Command Center and related documentation is available in HTML and PDF formats on our website at <http://gpcc.docs.pivotal.io/>.

Title	Revision
<i>Pivotal Greenplum Command Center 2.2 Administrator Guide</i>	A01
<i>Pivotal Greenplum Command Center 2.2.0 Release Notes (this document)</i>	A01
<i>Pivotal Greenplum Workload Manager 1.1 User Guide</i>	A04

Additionally, we provide Command Center end user information via online help. To launch the online help, click the **Help** button at the top right of the GPCC user interface.