

GPDB Command Center



Pivotal® **Greenplum**
Database

Pivotal™

Greenplum Command Center Overview

Greenplum Command Center:

- Collects system metrics and query details
- Aggregates historical information
- Monitors key metrics
- Controls instance power
- Modifies resource management

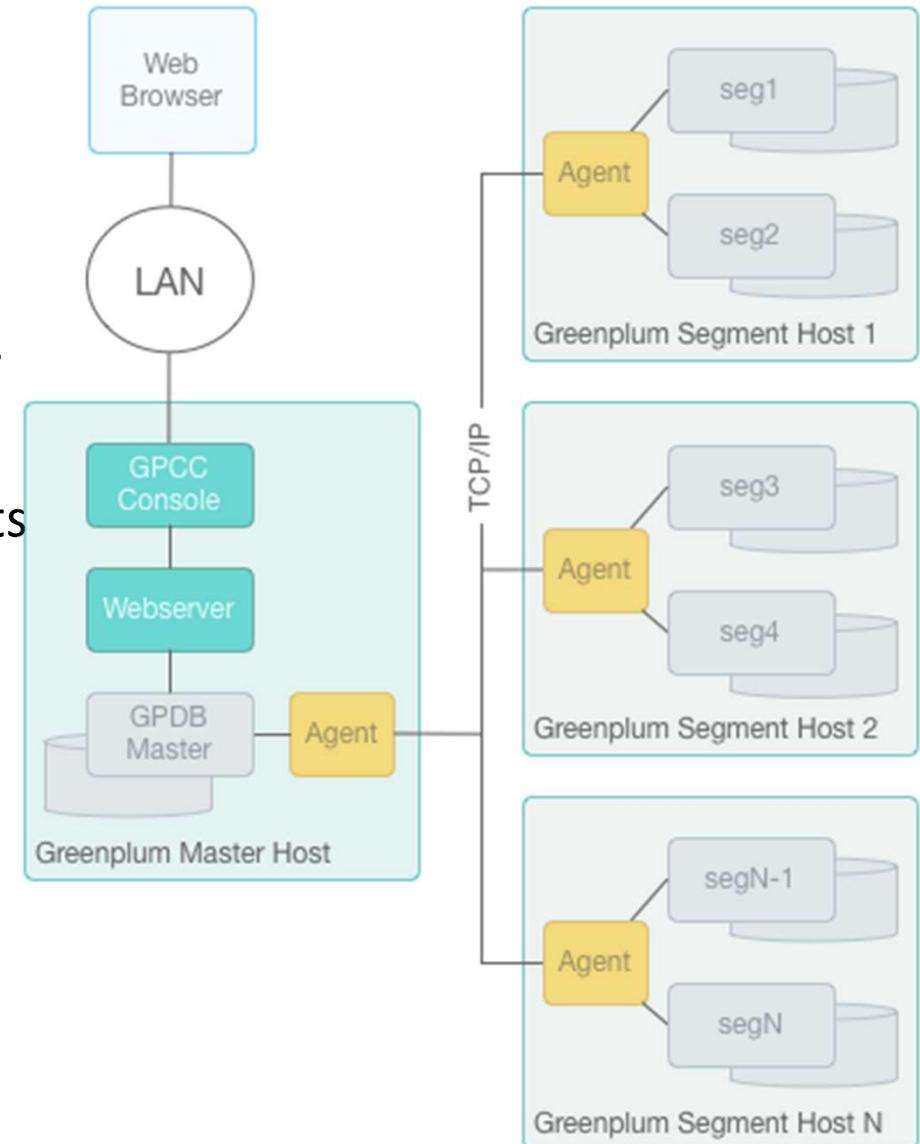
The figure displays four screenshots of the Greenplum Command Center interface, each highlighting a different feature:

- Cluster metrics:** Shows various system metrics including Queries, CPU, Disk I/O, Network, and Load.
- Segment Status:** Displays Segment Summary and Segment Health information.
- Host metrics:** Monitors memory, disk, and network usage across hosts.
- Query Monitoring:** Provides a list of active queries with details like status, user, database, and run time.

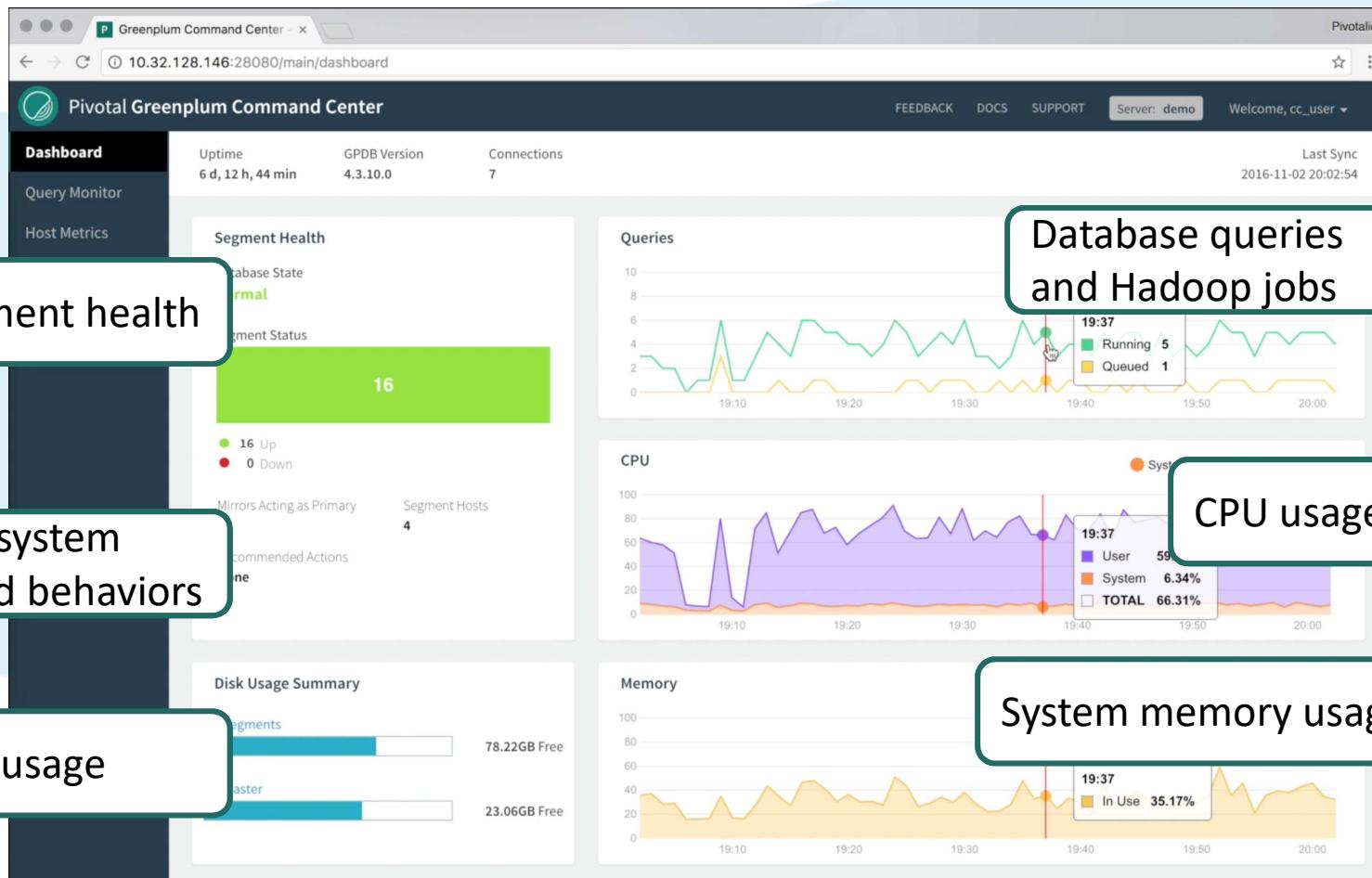
Greenplum Command Center Architecture

Greenplum Command Center:

- Installs GPCC on Greenplum Master and Standby hosts
- Installs GPCC Agents on all Segments (including the Master and Standby)
- Collects system metrics and query details
- Aggregates historical information
- Monitors key metrics
- Controls instance power
- Modifies resource management

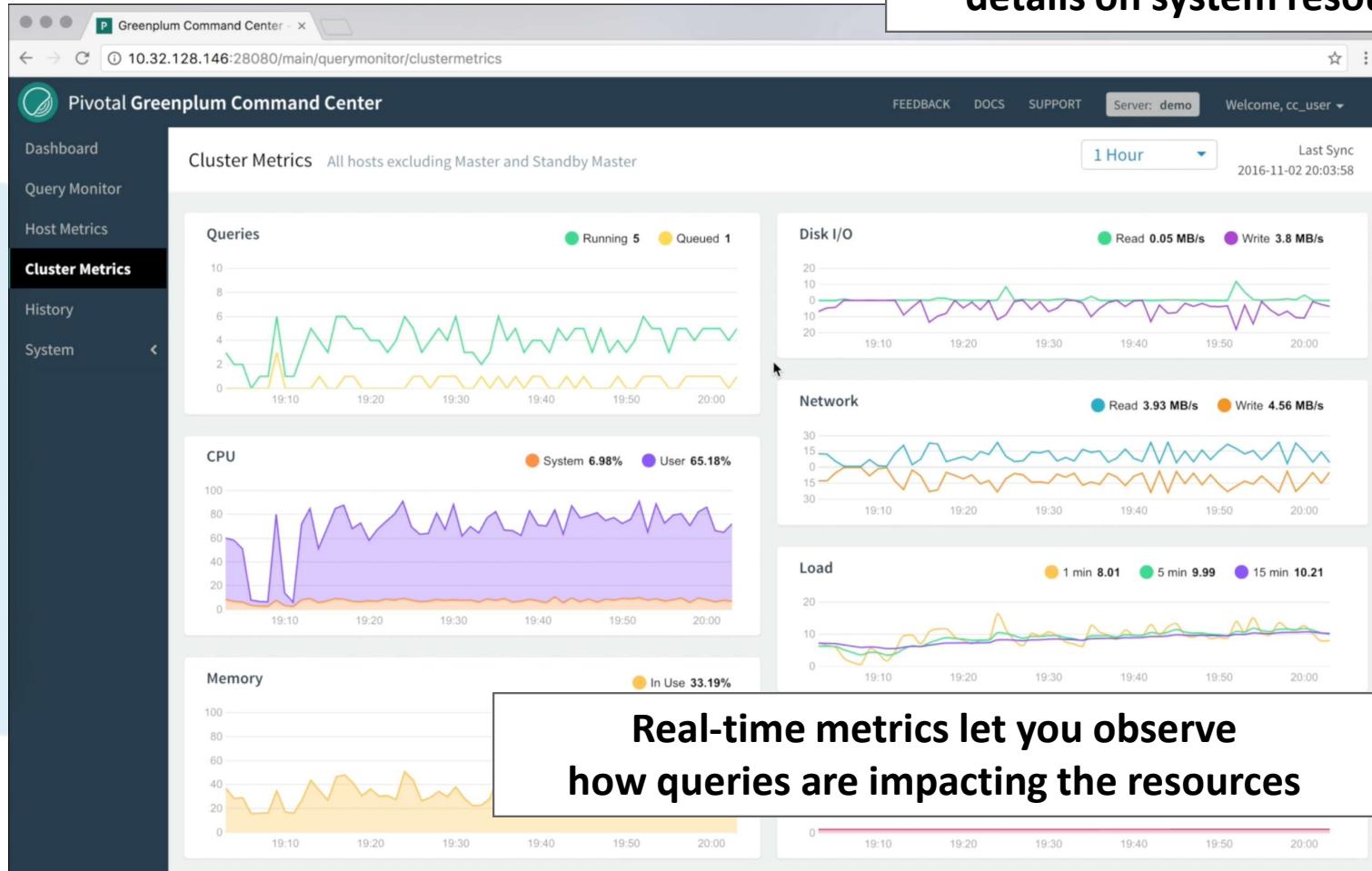


Monitoring and Managing with Greenplum Command Center



Cluster Metrics

Cluster Metrics provide greater details on system resources



Interactive Management of Queries

Pivotalio

Greenplum Command Center - X

10.32.128.146:28080/main/querymonitor/active

Pivotal Greenplum Command Center

FEEDBACK DOCS SUPPORT Server: demo Welcome, cc_user

Last Sync 2016-11-02 20:03:23

Dashboard Query Monitor Host Metrics Cluster Metrics History System

Query Monitor Current queries by all users

5 Running 1 Queued

	Query ID	Status	User	Database	Submitted	Queue Time	Run Time	CPU %	CPU Skew	Row Skew	Queue	Priority
<input type="checkbox"/>	1477567101-204602-2	Running	tpch_1	gpadmin	2016-11-02 20:02:57	0s	18s	59.08	40.72	27.40	tpch	medium
<input type="checkbox"/>	1477567101-204607-2	Running	tpch_4	gpadmin	2016-11-02 20:03:02	0s	13s	29.01	17.77	57.70	tpch	medium
<input type="checkbox"/>	1477567101-204543-2	Running	tpch_4	gpadmin	2016-11-02 20:01:56	0s	1m 19s	11.96	44.94	23.56	tpch	medium
<input type="checkbox"/>	1477567101-204560-2	Running	tpch_4	gpadmin	2016-11-02 20:02:26	0s	49s	0.02	31.95	46.06	tpch	medium
<input type="checkbox"/>	1477567101-204609-2	Queued	tpch_1	gpadmin	2016-11-02 20:03:04	11s		0	0	0	tpch	medium
<input type="checkbox"/>	1477567101-204608-2	Running	tpch_1	gpadmin	2016-11-02 20:03:03	0s	12s	0	48.17	48.04	tpch	medium

Cancel Query Export

Query monitoring screen

Segment Status and Storage Status Reports

The screenshot displays two main sections of the Pivotal Greenplum Command Center interface:

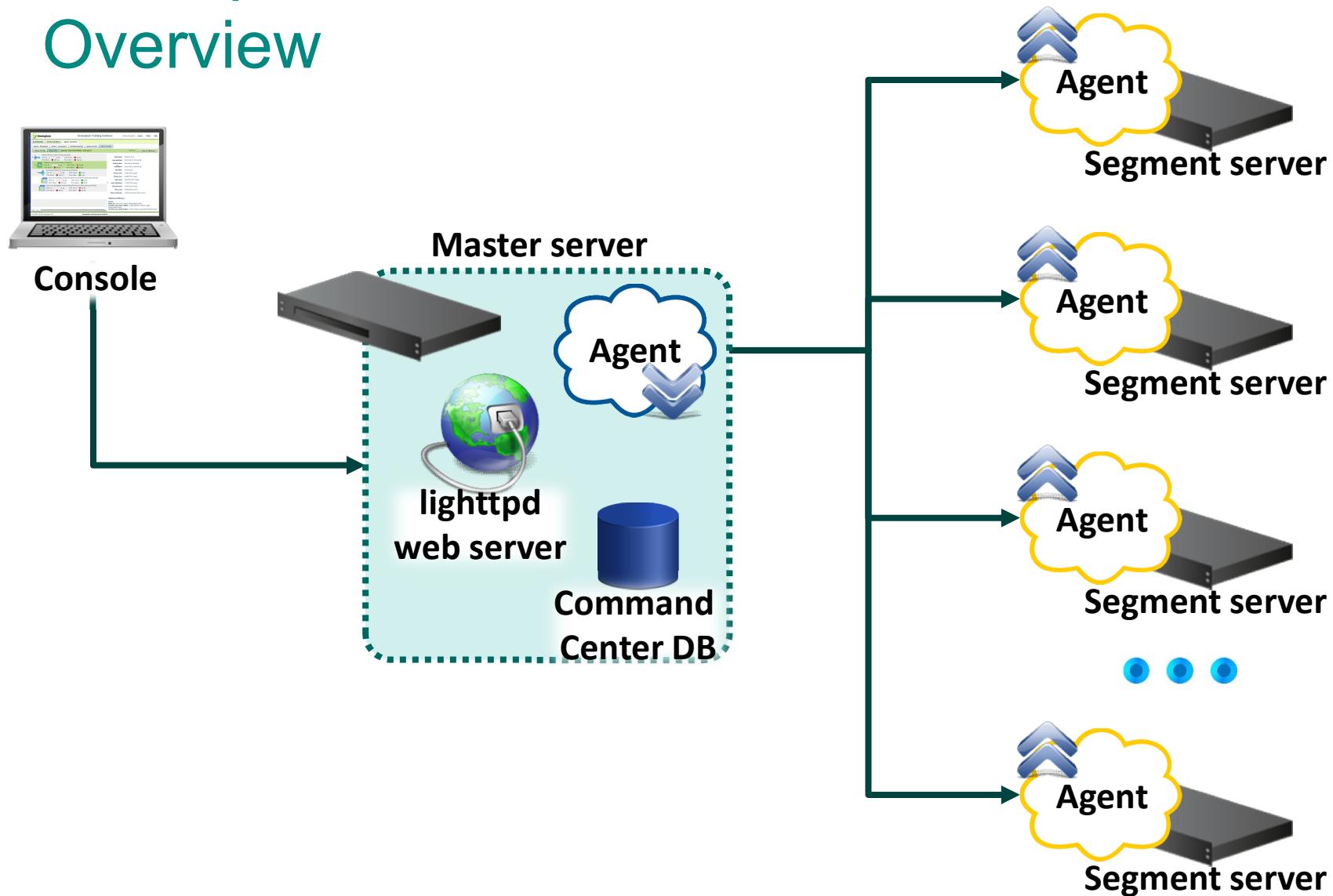
Segment Status usage report (highlighted in a green box): This section shows the Segment Status page. It includes a Segment Summary table with details like Database State (Normal), Total Segments (16), and Mirrors Acting as Primary (0). Below this is a Segment Health dashboard with three horizontal bar charts: Status (all green, 16 Up), Replication Mode (all green, 16 Synced), and Preferred Role (all green, 16 Preferred).

Storage Status reports (highlighted in a green box): This section shows the Storage Status page. It features a Disk Usage Summary chart for GP Segments (78.38GB Free) and GP Master (23.06GB Free). Below this is a GP Segments Usage History chart for the last 7 days, showing usage at 69.32%. The page also includes a table of Storage Status metrics for various hosts.

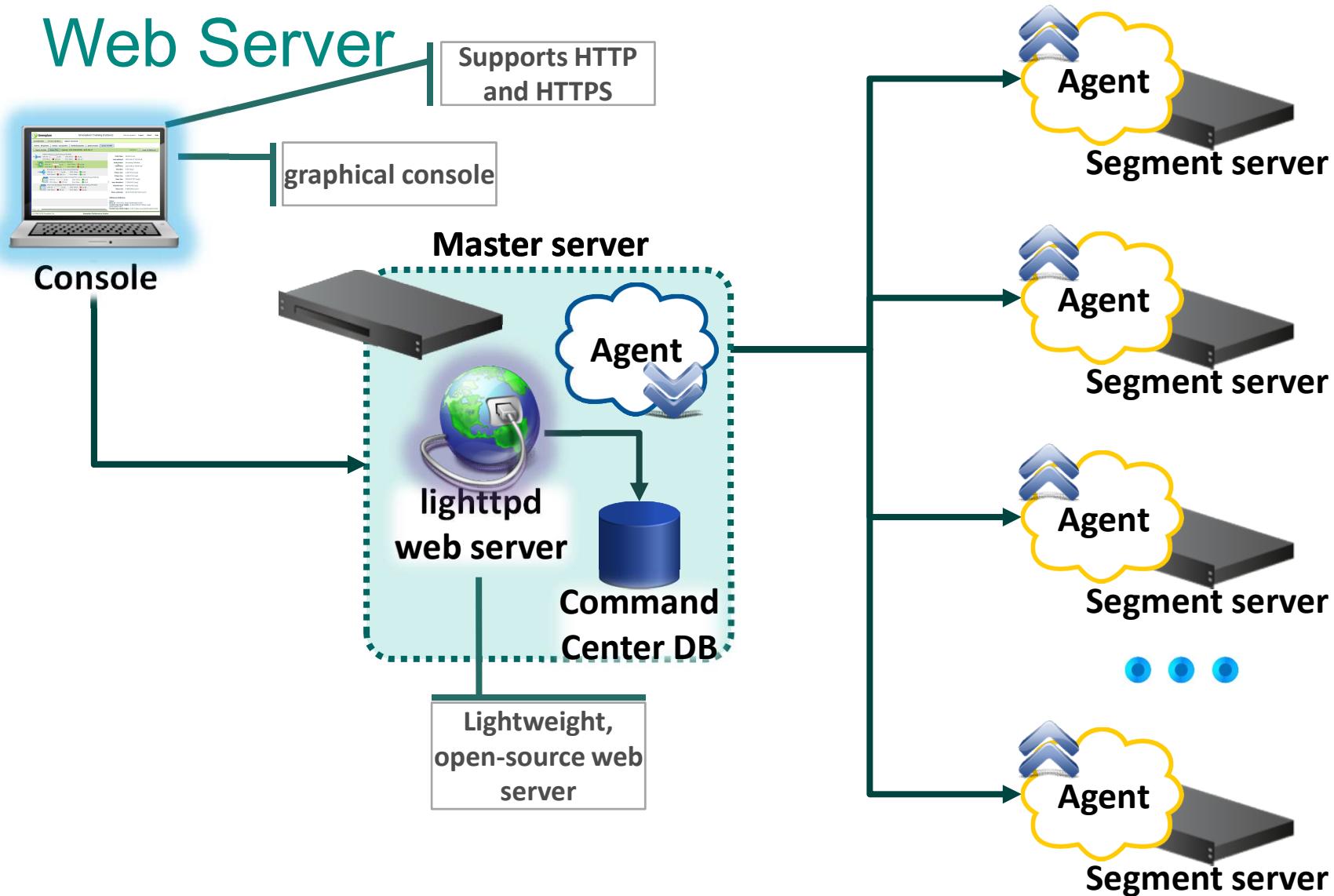
Hostname	Data Directory	Disk Space Used (%)	Disk Space Free(GB)	Total Space(GB)
sdw2.gphd.local	/	69.56	19.47 (30.43%)	63.99
sdw1.gphd.local	/	69.40	19.58 (30.60%)	63.99
sdw3.gphd.local	/	69.40	19.58 (30.60%)	63.99
sdw1.gphd.local	/	69.29	19.65 (30.71%)	63.99
sdw3.gphd.local	/	69.25	19.68 (30.75%)	63.99

Pivotal™

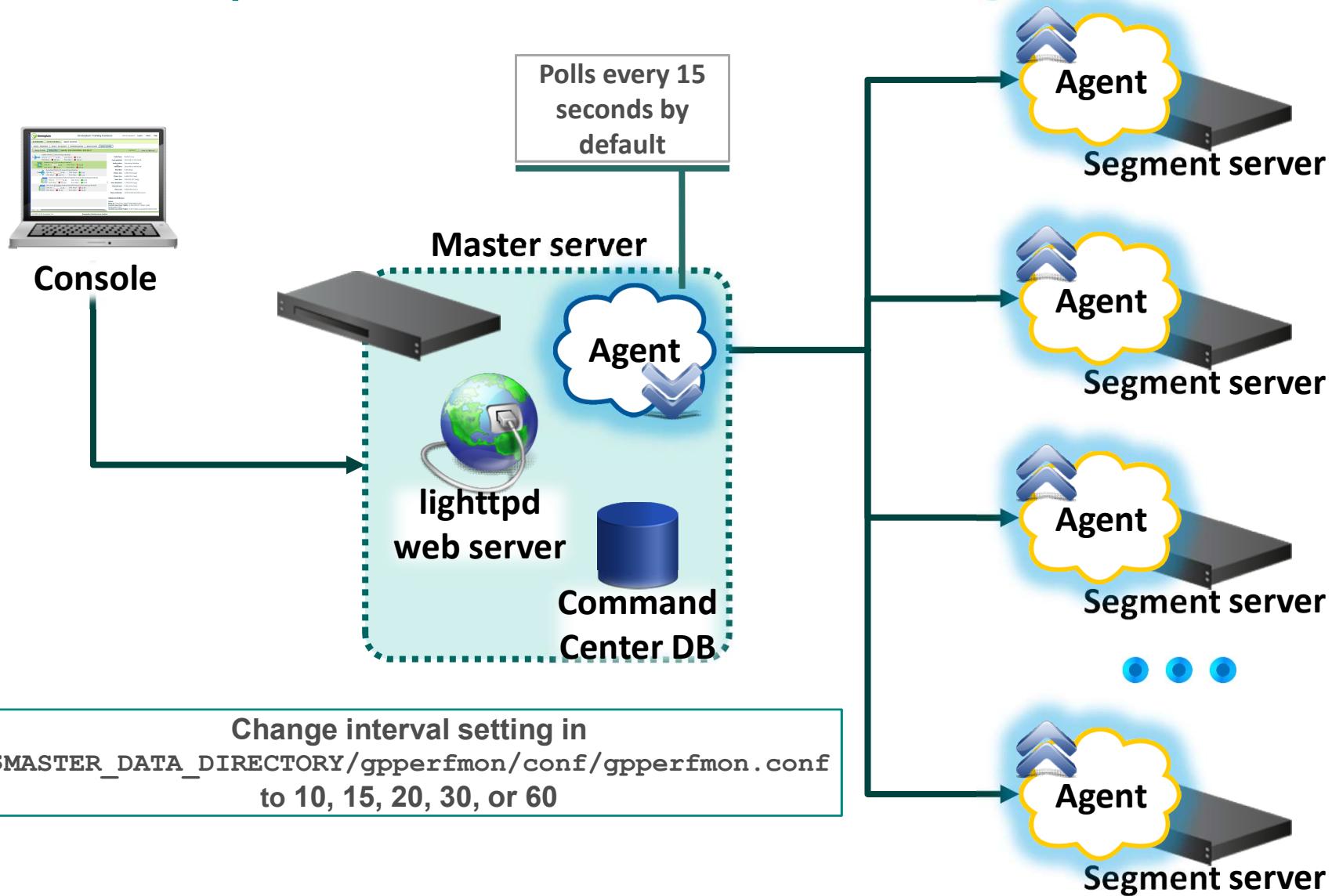
Greenplum Command Center Architectural Overview



Greenplum Command Center Console and Web Server

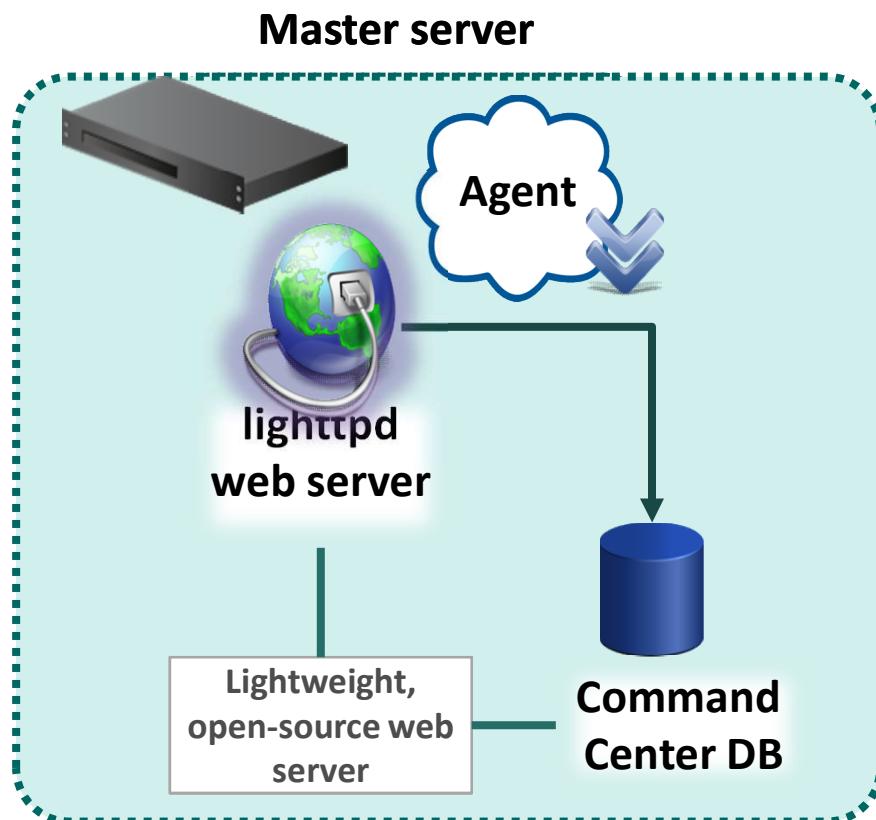


Greenplum Command Center Agents

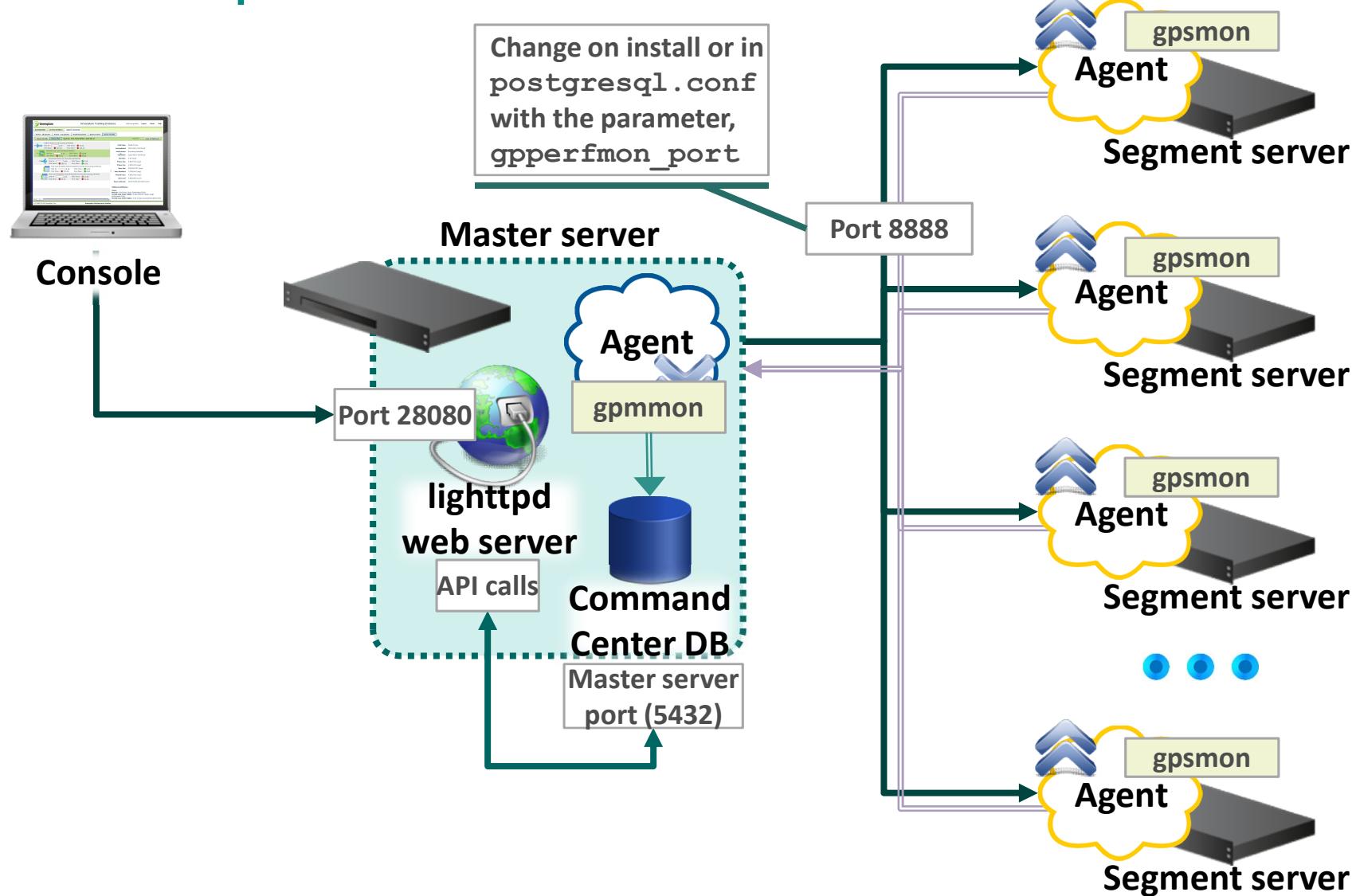


Greenplum Command Center Database

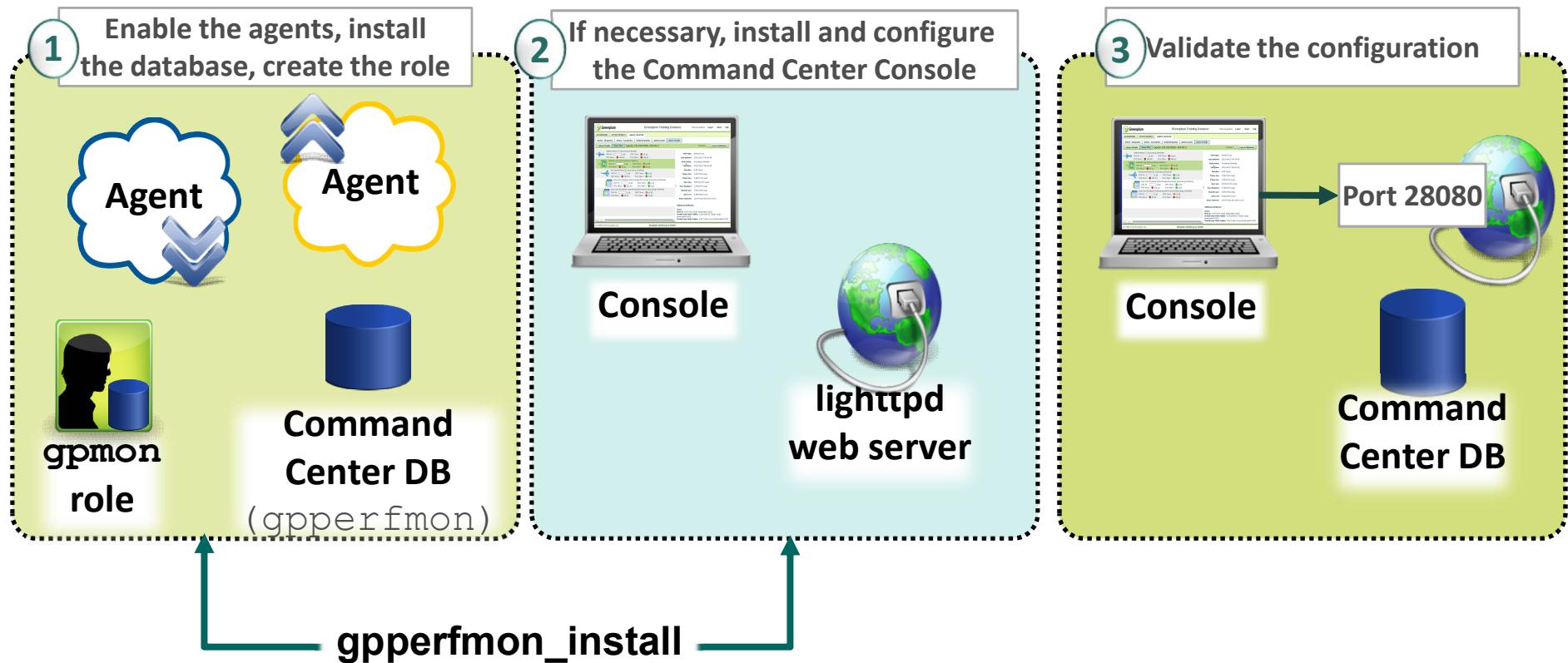
Command Center stores the data collected by the agents in to the gpperfmon database under the gpmon role.



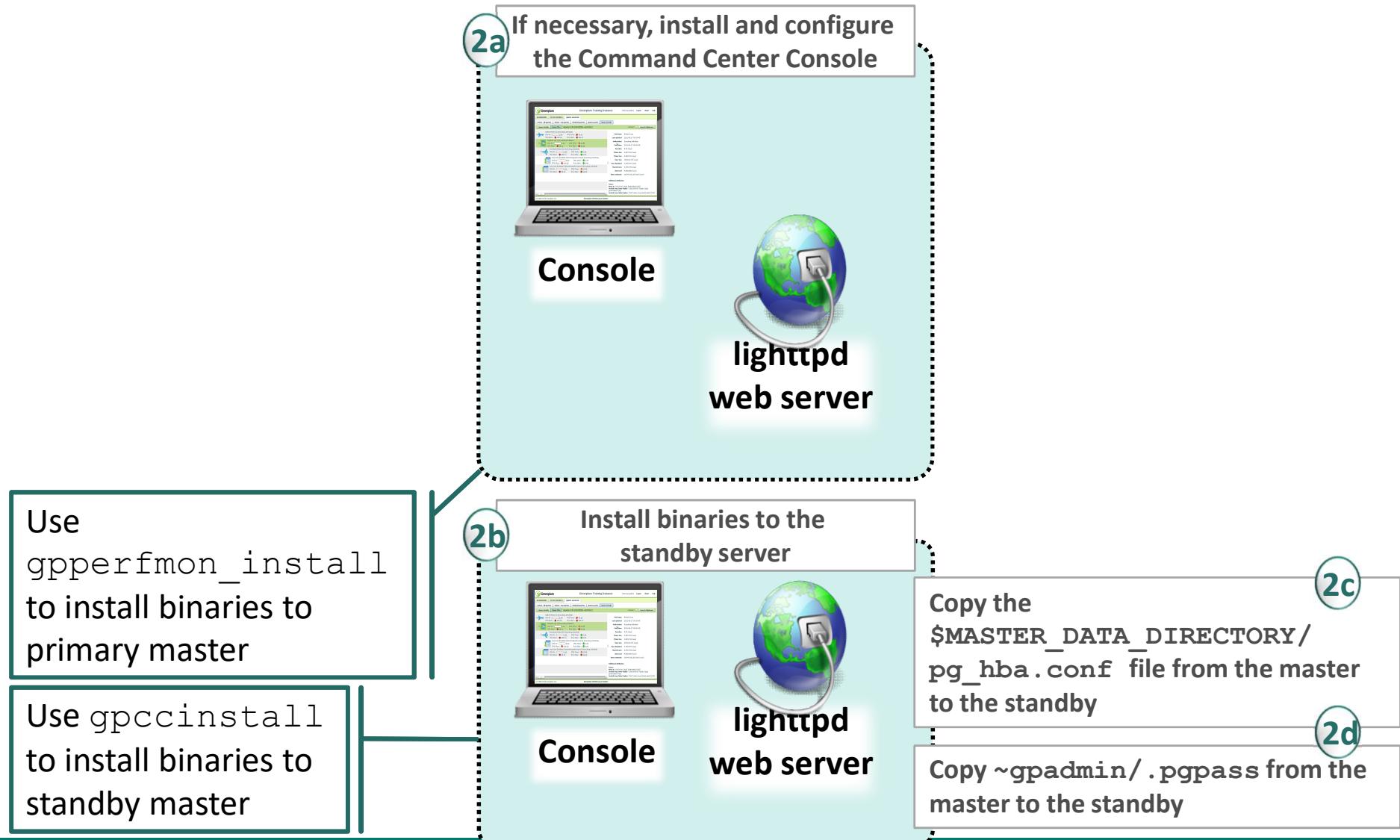
Greenplum Command Center Data Flow



Configuring Greenplum Command Center



Configuring the Standby Server



Greenplum Command Center Users and Roles



Superuser

- Uses all Command Center features
- Can view all database queries
- Can access all metrics
- Can perform all administrative tasks

Requires MD5-encrypted password by default

Operator

- This is a role that you must create in Greenplum
- Assign GPDB users to the role
- Can view and cancel all queries
- Limited administrative task access



Regular User

- All GPDB users have access
- Can only view their own database queries
- Cannot access the Administrative tab

Multi-Cluster Support

P GREENPLUM COMMAND CENTER

Welcome gpadmin | Pivotal | Support | Feedback | Help | Logout

gp1

Normal

Uptime: 0d 0h 49m
GPDB Version: 4.3.4.0 build 1
Connections: 1
Active Queries: 0

Training2

Normal

Uptime: 0d 0h 49m
GPDB Version: 4.3.4.0 build 1

Multi-Cluster configuration file to monitor Health status of each GPCC cluster. The brief explanation of following fields are as follows :

SERVER : Server acts as primary key to uniquely identify each GPCC cluster. In UI this is used as a display name.
If any duplicate entries exist in this column then UI throws an error message. It won't allows special characters except space, underscore(_) and hyphen(-).

HOST : It is GPCC Hostname/ IP address to be contacted to get health information.

PORT : The port number on which the GPCC is running.

TABGROUP : This field is used for segregation of GPCC clusters.(like Production, Testing, Deployment, etc...)
It won't allow special characters except space, underscore(_) and hyphen(-).

SERVER : HOST : PORT : TABGROUP : AUTOLOGIN : SSL
gp1:10.126.88.204:28080:Production:false:true
Training2:10.126.88.204:28081:Production:false:true

Note : SERVER,HOST,PORT and TABGROUP are mandatory fields separated by colon(:)

Example :
Miracle:www.miracle.com:28080:Production:True:false
Deforest:10.81.17.186:28080:Development:False:true
Grandalpha:grandalpha:32020:Development:True

SERVER : PORT : TABGROUP : AUTOLOGIN : SSL
gp1:10.126.88.204:28080:Production:false:true
Training2:10.126.88.204:28081:Production:false:true

"/gp1/conf/clusters.conf" 30L , 1775C

Click Multi-Cluster link after updating clusters.conf file

Pivotal™

Defining and Managing Console Instances

gpcmdr Option	Description
--setup	Configure a unique Greenplum Command Center instance
--restart [instance]	Restart Greenplum Command Center instance(s)
--start [instance]	Start Greenplum Command Center instance(s)
--stop [instance]	Stop Greenplum Command Center instance(s)
--status [instance]	Display Greenplum Command Center instance information

Instance information is stored in
`$GPPerfmonHome/instances/<instance_name>`

Accessing Console Log Files

The screenshot shows a terminal window with several tabs open, each displaying log file content:

- lighttpd-access.log**: Shows access logs for the lighttpd server, including IP addresses, ports, dates, and user agents.
- gpadmin@mdw:/usr/local/greenplum-cc-web/instances/gp1/logs**: Shows logs from the Greenplum instance gp1, including server starts/stops and configuration details.
- gpadmin@mdw:/usr/local/greenplum-cc-web/instances/**: Shows logs for gpmonws, including configuration settings like quantum, disk threshold, and SSL enabled status.
- lighttpd-error.log**: Shows error logs for the lighttpd server, indicated by a red exclamation mark icon.
- gpmonws.log**: Shows logs for gpmonws, including configuration settings like quantum, disk threshold, and SSL enabled status.

```
gpadmin@mdw:/usr/local/greenplum-cc-web/instances/gp1/logs
10.96.50.71 10.126.88.204:28080 - [04/Mar/2015:08:42:18 -0500] "GET /heatinfo?serverName=gp1&callback=_jqjsp&_1425480517983= HTTP/1.1" 200 316
"https://10.126.88.204:28080/multiCluster?auto" "Mozilla/5.0 (Windows NT 6.1; WOW64; rv:35.0) Gecko/20100101 Firefox/35.0"
10.96.50.71 10.126.88.204:28080 - [04/Mar/2015:08:42:48 -0500] "GET /heatinfo?serverName=gp1&callback=_jqjsp&_1425480547985= HTTP/1.1" 200 316
"https://10.126.88.204:28080/multiCluster?auto" "Mozilla/5.0 (Windows NT 6.1; WOW64; rv:35.0) Gecko/20100101 Firefox/35.0"

lighttpd-access.log

gpadmin@mdw:/usr/local/greenplum-cc-web/instances/gp1/logs
2015-02-25 10:12:48: (log.c.164) server started
2015-02-25 10:21:34: (connections.c.305) SSL: 1 error:1407609C:SSL routines:SSL23_GET_CLIENT_HELLO:http request
2015-02-25 10:22:03: (server.c.1563) server stopped by UID = 501 PID = 6732
2015-02-25 10:22:22: (log.c.164) server started
2015-02-27 12:45:26: (log.c.164) server started
2015-03-03 09:37:53: (server.c.1563) server stopped by UID = 501 PID = 9150

gpadmin@mdw:/usr/local/greenplum-cc-web/instances/
2015-02-25 10:12:48,508 - gpmonws started
2015-02-25 10:12:48,512 - Configuration file: {"GPMMON": {"quantum": 15}, "WEB_APP": {"allowautologin": "True", "server_name": "traindb", "disktresholdvalue": '80', "maxconnections": '10', 'ssh_full_path': 'ssh', 'timeout': '1800', 'master_port': '5432', 'csrf_protect': 'False', 'ssl_enabled': 'True', 'pollinterval': '30000', 'securedbhealth': 'False'}}
2015-02-25 10:12:48,512 - remote = False
2015-02-25 10:12:48,512 - verbose = False
2015-02-25 10:12:48,512 - server_name = traindb
2015-02-25 10:12:48,512 - ssl_enabled = True
2015-02-25 10:12:48,512 - quantum = 15
2015-02-25 10:12:48,512 - csrf_enabled = False
2015-02-25 10:12:48,512 - ssh_full_path = ssh
2015-02-25 10:12:48,512 - diskThresholdvalue = 80
2015-02-25 10:12:48,513 - allowAutoLogin = True
2015-02-25 10:12:48,513 - setting default GRANTS on tables
2015-02-25 10:12:48,513 - GRANT ALL ON TABLE database_history TO public

lighttpd-error.log

gpmonws.log
```

Accessing Agent Log Files

```
gpadmin@mdw:/data/master/gpseg-1/gpperfmon/logs
2015-03-03 09:41:06|:-LOG: check partitions on diskspace_history
2015-03-03 09:41:06|:-LOG: check partitions on diskspace_history done
2015-03-03 09:41:06|:-LOG: check partitions on log_alert_history
2015-03-03 09:41:06|:-LOG: check partitions on log_alert_history done
2015-03-03 09:41:06|:-LOG: not an appliance ... not reading devices.crf
2015-03-03 09:41:06|:-LOG: Not an appliance: checking for SW only hadoop
hosts.
2015-03-03 09:41:06|:-LOG: hadoop_smon_path not specified in gpmmmon conf
ig. not processing hadoop nodes
2015-03-03 09:41:06|:-LOG: found 4 unique live hosts from catalog
2015-03-03 09:41:06|:-LOG: HOST: (hostname sdw2) (is_master 0) (datadir
/data/primary/gpseg1) (host_alias_count 2) (hdm 0) (hdw 0) (hbw 0) (hd
c 0) (dia 0)
2015-03-03 09:41:06|:-LOG: HOST: (hostname mdw) (is_master 1) (datadir /
data/master/gpseg-1) (host_alias_count 2) (hdm 0) (hdw 0) (hbw 0) (hd
c 0) (dia 0)
2015-03-03 09:41:06|:-LOG: HOST: (hostname smdw) (is_master 1) (datadir
/data/master/gpseg-1) (host_alias_count 2) (hdm 0) (hdw 0) (hbw 0) (hd
c 0) (dia 0)
2015-03-03 09:41:06|:-LOG: HOST: (hostname sdw1) (is_master 0) (datadir
/data/primary/gpseg0) (host_alias_count 2) (hdm 0) (hdw 0) (hbw 0) (hd
c 0) (dia 0)
2015-03-03 09:41:06|:-LOG: Can't open /etc/gpdb-appTiance-version2015-03
-03 09:41:06|:-LOG: check partitions on health_history
2015-03-03 09:41:06|:-LOG: check partitions on health_history done
2015-03-03 09:41:06|:-LOG: check partitions on emcconnect_history
2015-03-03 09:41:06|:-LOG: check partitions on emcconnect_history done
2015-03-03 09:41:06|:-LOG: check partitions on system_history
2015-03-03 09:41:06|:-LOG: check partitions on system_history done
```

gpmmmon.log

gpsmon.log

```
gpadmin@sdw1:/data/primary/gpseg0/gpperfmon
015-02-24 16:30:41|:-LOG: HOSTNAME = 'sdw1'
015-02-24 16:32:31|:-LOG: exit peer closed
```

Pivotal™

Lab: Install and Configure Pivotal Greenplum Command Center

In this lab, you install Greenplum Command Center and validate that it was successfully installed.

You will:

- Enable the Greenplum Command Center agents
- Install the Greenplum Command Center Console
- Configure the Greenplum Command Center Console and enable access to the console for gpadmin

Lab: Navigating Pivotal Greenplum Command Center

In this lab, you install Greenplum Command Center and validate that it was successfully installed.

You will:

- Navigate the Pivotal Greenplum Command Center dashboards
- Obtain information on the Greenplum environment using the tabs

Pivotal

A NEW PLATFORM FOR A NEW ERA