Starting and Stopping the System

Contents

Starting and Stopping the System..... 3
Start the System..... 3
Stop the System..... 4

Starting and Stopping the System

From a cold state, the components of PHEMI Central must be started in order. From a running system, PHEMI Central components are stopped in essentially the reverse order to that in which they were started.

Start the System

First, start the Hadoop cluster.

1. Start the service for the Ambari server.

   Log on to the node running the Ambari server as a user with sudo privileges. At the command prompt, enter the following command:

   ```
   sudo service ambari-server start
   ```

2. When the command line returns a success message, use a web browser to access the Ambari console, which runs on port 8080.
3. In the Ambari console, select your cluster.

   The cluster services show yellow question mark icons, which means that the Ambari server has not discovered the services yet. Wait for the Ambari server to establish communication with the Ambari service on the cluster.

   When the server and the cluster have discovered one another, the Ambari dashboard will learn that the services are stopped. The yellow question marks change to red "stopped" icons. This can take a few minutes.
4. Start Accumulo and the Hadoop cluster.

   Log on to the Accumulo master node as a user with sudo privileges. From the command line, become the Accumulo user.

   ```
   sudo su accumulo
   ```

   Start the Hadoop cluster.

   ```
   /usr/lib/accumulo/bin/start-cluster.sh
   ```

5. Verify that the cluster has started correctly.

   When the server returns a success response to the command starting the cluster, return to the Ambari console. The Ambari console should show green checkmark icons next to each service to indicate that the service is running.

   If any service still shows as stopped, you can individually start the service from within Ambari. Select the service, click the **Service-Actions** button, and select **Start**.

After the Hadoop cluster is started, start the Docker containers that make up the PHEMI Central application.

6. Start the Docker service.

   Log on to the server running PHEMI Central as a user with sudo privileges. Start the Docker service.

   ```
   sudo service docker start
   ```

7. Start the MongoDB container.

   ```
   sudo docker start phemi_mongo
   ```

8. Start the PHEMI Central container.

```
sudo docker start phemi_central
```

9. Start the Nginx container.

```
sudo docker start phemi_nginx
```

10. Check that the containers are all running.

```
sudo docker ps
```

The system displays a list of running Docker containers. The list should show all the containers you started.

Once the containers are started, start the web proxy server and the PHEMI Central tenants.

11. Start the Nginx web proxy server.

From the PHEMI Central server command line, attach to the Nginx container.

```
sudo docker attach phemi_nginx
```

You may have to press <Enter> for the container command prompt to appear. At the container command line, become the Ubuntu user, so that you have sudo privileges. Start the Nginx server.

```
su ubuntu
sudo /etc/init.d/nginx start
```

12. Detach from the Nginx container but be careful not to kill it.

To detach from the container without killing it, press the key sequence <Ctrl>+p, <Ctrl>+q.

13. Start the PHEMI Central tenants.

From the PHEMI Central server command line, attach to the PHEMI Central container.

```
sudo docker attach phemi_central
```

You may have to press <Enter> for the container command prompt to appear. At the container command line, become the Ubuntu user.

```
su ubuntu
```

Navigate to the directory that contains your tenants.

```
cd /home/ubuntu/agile/bin/
```

Start each tenant in your deployment.

```
./<tenant_01>/start-phemi.sh
./<tenant_02>/start-phemi.sh
./<tenant_03>/start-phemi.sh
```

14. Detach from the PHEMI Central container but be careful not to kill it.

To detach from the container without killing it, press the key sequence <Ctrl>+p, <Ctrl>+q.

Stop the System

First, stop the PHEMI Central Docker containers.

1. Log on to the server running PHEMI Central as a user with sudo privileges.

2. Stop the Nginx container.

```
sudo docker stop phemi_nginx
```

3. Stop the PHEMI Central container.

```
sudo docker stop phemi_central
```

4. Stop the MongoDB container.

```
sudo docker stop phemi_mongo
```

5. Check that the containers are all stopped.

```
sudo docker ps
```

   The system displays a list of running Docker containers. The list should be empty.

6. Stop the Docker service.

```
sudo service docker stop
```

After stopping the PHEMI Central Docker containers, stop the Hadoop cluster and the Ambari server.

7. Stop the cluster.

   Log on to the Accumulo master node as a user with sudo privileges. From the command line, become the Accumulo user.

```
sudo su accumulo
```

   Stop all the cluster and accumulo services.

```

/usr/lib/accumulo/bin/stop-cluster.sh
```

8. Verify that all the services are stopped.

   Use a web browser to access the Ambari console, which runs on port 8080

   In the Ambari console, select your cluster.

   The cluster services show yellow question mark icons, which means that the Ambari server has not discovered the services yet. Wait for the Ambari server to establish communication with the Ambari service on the cluster.

   When the server and the cluster have discovered one another, the Ambari dashboard will learn that the services are running. The yellow question marks change to red "stopped" icons. This can take a few minutes.

9. Stop the Ambari server.

   Log on to the node running the Ambari server as a user with sudo privileges. Stop the server.

```
sudo service ambari-server stop
```