Starting and Stopping the System

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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 the reverse order to that in which they were started.

Start the System

First, start the Hadoop cluster.

1. Start the Ambari server.

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

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

2. Access the Ambari console.

   Use a web browser to log on to the node running the Ambari server. The console runs on port 8080.

3. From within the Ambari console, select the cluster.

   The Hadoop services show yellow, which means they they have not been discovered yet. Wait for the Ambari server to establish communication with the Ambari service on the cluster. When the server and the cluster discover one another, the Ambari dashboard will show the services as stopped (red icon).

4. Start the cluster.

   Using SSH, log on to the Accumulo master node as a user with sudo privileges. At the command line, issue the following commands:

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

After the Hadoop cluster is started, start PHEMI Central Docker containers.

5. Start Docker.

   Log on to the server running PHEMI Central as a user with sudo privileges. At the command line, issue the following command:

   ```
   sudo service docker start
   ```

6. Start MongoDB.

   From the PHEMI Central server, start the Docker container for MongoDB, using the following command:

   ```
   sudo docker start phemi_mongo
   ```

7. Start the Tornado web application framework.

   The Tornado framework runs the PHEMI Central Management and Governance Console. From the PHEMI Central server, start the Docker container for the Management and Governance Console, using the following command:

   ```
   sudo docker start phemi_central
   ```

8. Start Nginx.

From the PHEMI Central server command line, start the Docker container for Nginx, using the following command:

```
sudo docker start phemi_nginx
```

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 Nginx.

   From the PHEMI Central server command line, stop the Docker container for Nginx, using the following command:

   ```
   sudo docker stop phemi_nginx
   ```

3. Stop Tornado.

   The Tornado web application framework runs the PHEMI Central Management and Governance Console. From the PHEMI Central server command line, start the Docker container for the Management and Governance Console, using the following command:

   ```
   sudo docker stop phemi_central
   ```

4. Stop MongoDB.

   From the PHEMI Central server command line, stop the Docker container for MongoDB, using the following command:

   ```
   sudo docker stop phemi_mongo
   ```

5. Stop Docker.

   From the PHEMI Central server, stop the Docker service, using the following command:

   ```
   sudo service docker.io. stop
   ```

After the PHEMI Central Docker containers have all been stopped, stop the Hadoop cluster.

6. Log on to the Accumulo master node.

   Using SSH, log on to the Accumulo master node as a user with sudo privileges. Become the Accumulo user, by issuing the following command:

   ```
   sudo su accumulo
   ```

7. Stop the cluster.

   At the Accumulo master node's command line, issue the following command:

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

8. Access the Ambari console.

   Use a web browser to log on to the node running the Ambari server. The console runs on port 8080.

9. From within the Ambari console, select the cluster.

   The Hadoop services show yellow, which means they have not been discovered yet. Wait for the Ambari server to establish communication with the Ambari service on the cluster. When the server and the cluster discover one

another, the Ambari dashboard will show the services as either started (green icon) or stopped (red icon). Wait for all the cluster services to stop.

10. Stop the Ambari server.

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

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