Exercise 01:

Understanding

YARN

Managing the YARN Service Using Cloudera Manager UI

Objective: To Use the **Cloudera Manager UI** and the ResourceManager UI

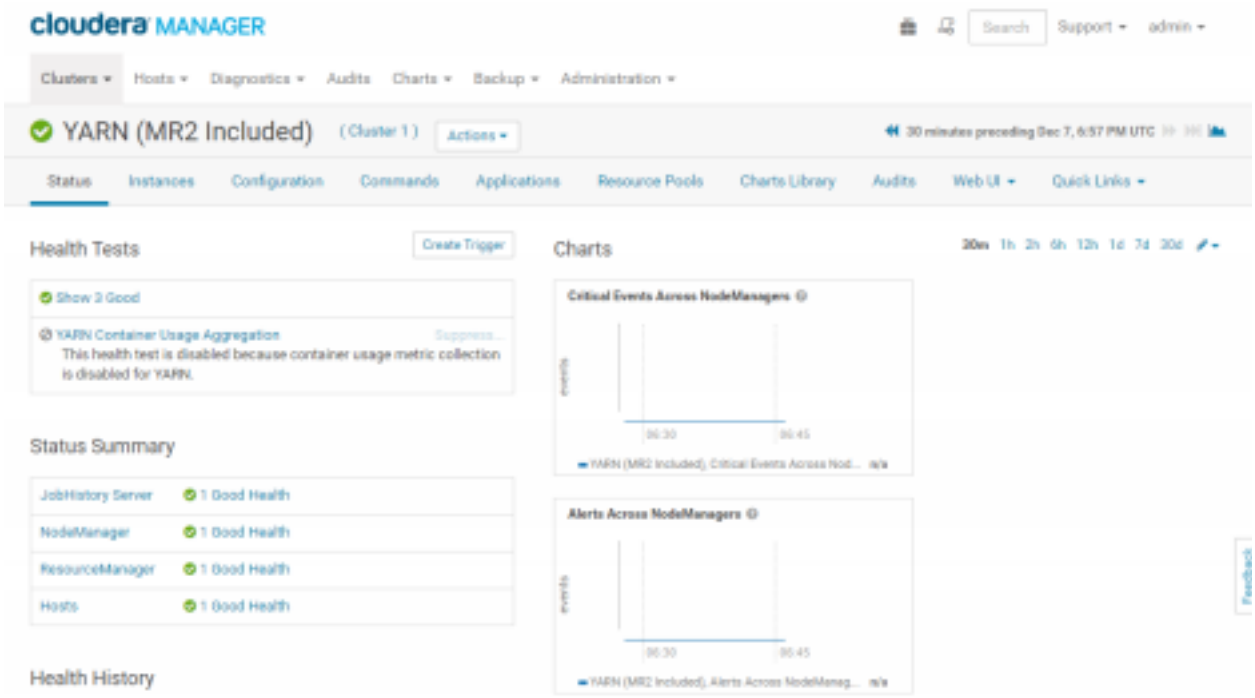
Exploring the Cloudera Manager UI

Explore the **Cloudera Manager UI** service management and configuration features for YARN

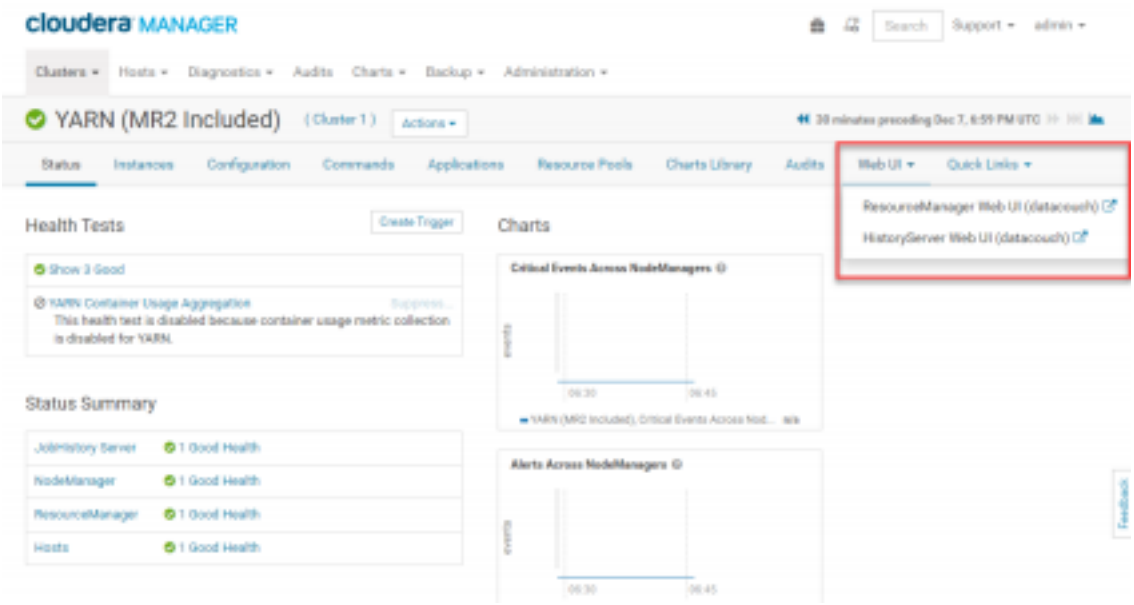
1. Open the browser and connect to the CM at the URL

   http://localhost:7180

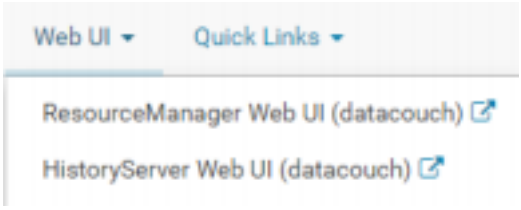
2. Login to the **Cloudera Manager UI** using the user name **admin** and the password **admin**.
3. Click Yarn Services in the **Cloudera Manager UI**.
4. Select the YARN service on the Services page.



5. Click on Web UI in the top right-side corner of the YARN Services page.

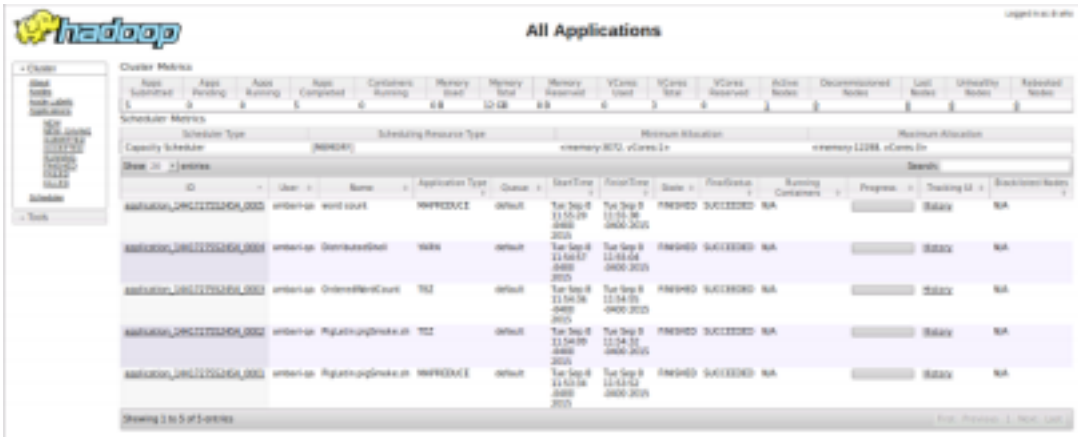


6. Click Web UI and select ResourceManager Web UI.



The ResourceManager UI Web interface opens on another browser tab.

If simply clicking the quick link fails to open the ResourceManager UI or you want to view the original ResourceManger UI replace the default URL in the browser tab with http://localhost:8088



7. Take a few moments to click on the links in the menu on the left and familiarize yourself with the various pages and the information they provide. Answer the following questions:

   Where can you find information regarding the current version, last restart, and current status of the ResourceManager, as well as the current version of Hadoop and the Cluster ID?

   Where can you find information for a node, such as its rack location, current state, address, HTTP address, Hadoop software version, and available resources?

   Where can you find a list of all jobs that have been submitted but have not yet been accepted/approved to run?

   Where can you find a list of all jobs that have been accepted but are not yet running?

   Where can you find information on a job that has failed?

   Where can you find information on a job that has successfully finished? Where can

   you find information on queues and the jobs that are using them?

8. Close the ResourceManager UI browser tab.

9. With the YARN service still selected in the Cloudera Manager UI, view the types of information available on the Summary page. Use this page to answer the following questions:

   What is the current status of the ResourceManager?

How many NodeManagers have been configured, and how many are currently started?

How long has it been since the last time the ResourceManager was restarted? What

percentage of ResourceManager Heap is being used?

How many applications have been submitted? How many are currently running? How many have completed? How many have failed?

Working with YARN Service Using the CLI

Objective: To use CLI commands and the YARN API to manage the YARN service YARN CLI

User Commands

Use YARN CLI commands useful to users of a Hadoop cluster.

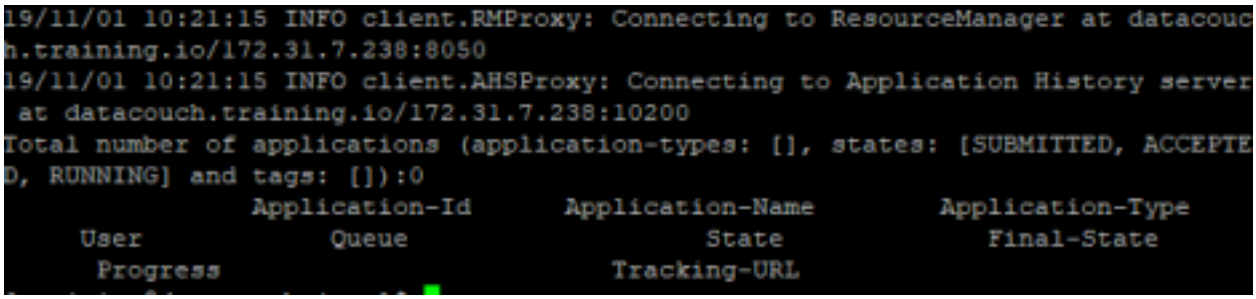
1. Open Terminal.
2. Find out what version of Hadoop is running on the system.

```
yarn version
```

3. Find out what happens when the yarn application -list command is executed without supplying any application types or states.

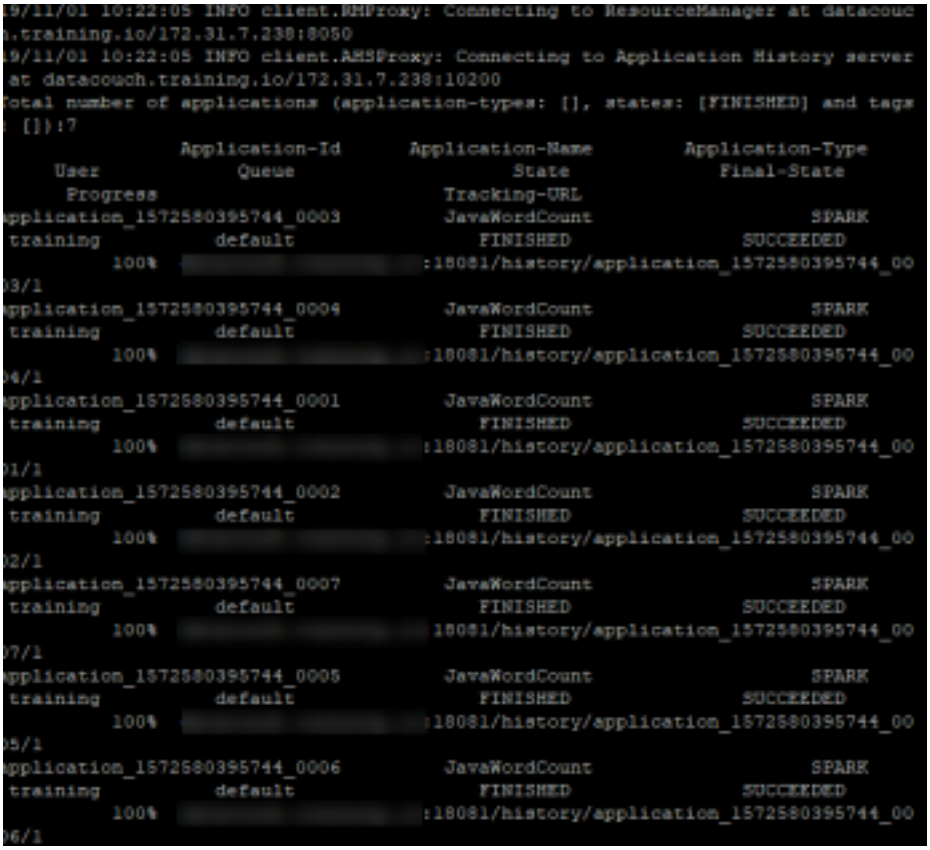
```
yarn application -list
```

NOTE: That by default, only applications that are in the SUBMITTED, ACCEPTED, or RUNNING state is listed.



4. Generate a list of all applications that are in the FINISHED state.

```
yarn application -list -appStates FINISHED
```



5. Generate a list of nodes running the NodeManager daemon.

```
yarn node -list
```

   What command would filter the list of nodes by those in the DECOMMISSIONED state? Hint: Use yarn node -help.

6. Run the yarn logs command without an application ID (which will cause it to fail) and pipe the resulting help information to the application to read.

```
yarn logs | more
```

Scroll through the information, noting the options that can be applied with this command once an application ID is provided, or simply press q to quit the application.

End of Exercise