Extras/Monitoring YARN

Monitoring YARN

READY

This notebook shows you some tricks for monitoring YARN, the resource scheduling system for Hadoop. These can be useful on very small BDCS-CE clusters (especially the 2OCPU OC2M shape) where YARN processes can get stuck waiting for resources.

Here are 3 techniques for monitoring YARN

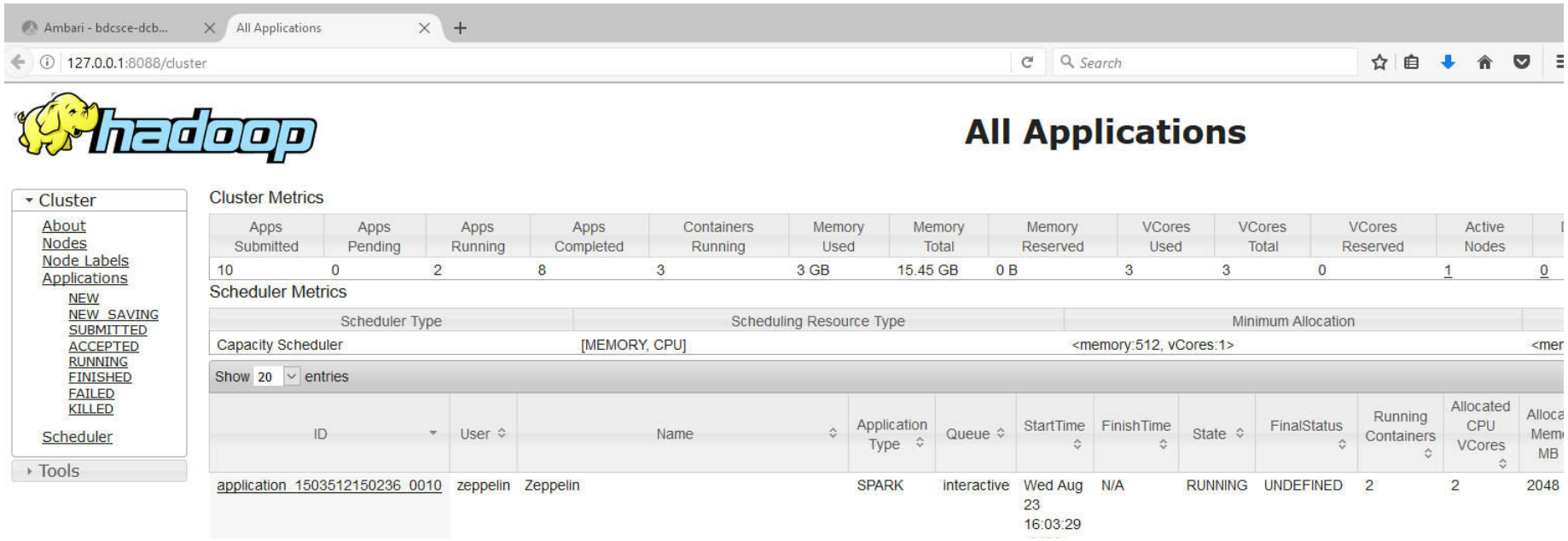
- Connect to the Resource Manager web UI
- Run the "yarn top" command via SSH
- Run various yarn commands via notebook

Connect to Resource Manager web UI

READY

The Resource Manager web UI runs on port 8088 on the BDCS-CE Master server. You can either open this port via an Access Rule or connect to it via SSH Tunneling.

To do so, follow the instructions in the note "xtra Connecting to Ambari" but use port 8088 instead of 8080 and http instead of https.

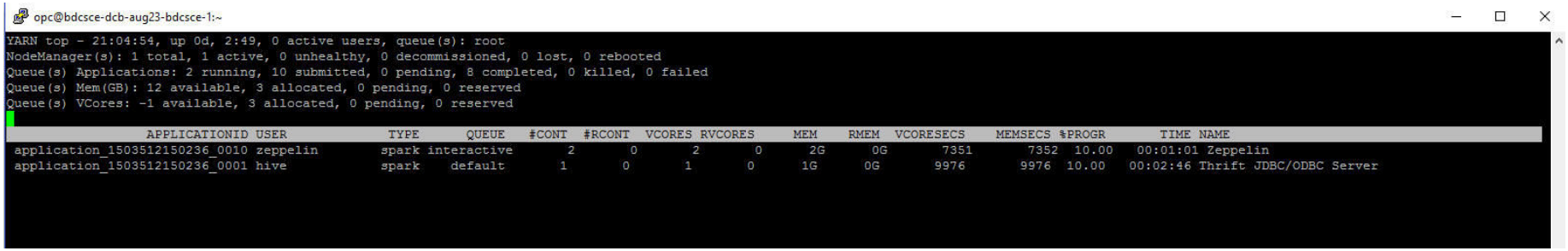


					-0400 2017						
application_1503512150236_0009	zeppelin	HIVE-63191098-0263-4bc6-981b-cce70314facf	TEZ	default	Wed Aug 23	Wed Aug 23	FINISHED	SUCCEEDED	N/A	N/A	N/A

Run the “yarn top” command via SSH

READY

Another way you can monitor yarn is via logging into BDCS-CE via SSH and running the “yarn top” command. Refer to the note “xtra Connecting via SSH” to connect via SSH. Then type “yarn top” to launch the tool. Type “h” followed by enter to view help.



Run various yarn commands via notebook

READY

Another way to monitor yarn is via a series of yarn commands run in the notebook shell interpreter. The following paragraphs provide a few examples you can use and modify.

Script to see the Used versus Capacity for YARN CPU and Memory

FINISHED

```
%sh
export YARN_ROOT_LOGGER=WARN
export NODEID=`yarn node -list -all | tail -1 | cut -f1`
echo $NODEID
yarn node -status $NODEID
```

```
dcbnov15c-bdcsce-1.compute-gse00002281.oraclecloud.internal:45454
Node Report :
        Node-Id : dcbnov15c-bdcsce-1.compute-gse00002281.oraclecloud.internal:45454
        Rack : /default-rack
        Node-State : RUNNING
        Node-Http-Address : dcbnov15c-bdcsce-1.compute-gse00002281.oraclecloud.internal:8042
        Last-Health-Update : Thu 16/Nov/17 04:22:56:328UTC
        Health-Report :
        Containers : 2
        Memory-Used : 2048MB
        Memory-Capacity : 15821MB
        CPU-Used : 2 vcores
        CPU-Capacity : 3 vcores
```

```
        Node-Labels :
```

Took 5 sec. Last updated by anonymous at November 16 2017, 11:23:28 AM. (outdated)

Script to see the current YARN applications and State

FINISHED

```
%sh
export YARN_ROOT_LOGGER=WARN
yarn application -list
```

```
Total number of applications (application-types: [] and states: [SUBMITTED, ACCEPTED, RUNNING]):2
                Application-Id      Application-Name        Application-Type          User           Queue                   State             Final-State             Progress
Tracking-URL
application_1510769091693_0011  Thrift JDBC/ODBC Server               SPARK          hive         default                 RUNNING               UNDEFINED                 10%
http://10.196.177.198:4040
application_1510769091693_0007              Zeppelin                  SPARK      zeppelin      interactive                 RUNNING               UNDEFINED                 10%
http://10.196.177.198:4041
```

Took 3 sec. Last updated by anonymous at November 16 2017, 11:23:47 AM. (outdated)

```
%sh
```

READY