Cloudera Operational Database ..

Onboarding Cloudera Operational Database Users

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Onboarding Cloudera Operational Database users

To enable users to work on Cloudera Operational Database and various Cloudera components, like HBase and Phoenix, you can onboard them to Cloudera Operational Database.

Before you begin

1. You have created a Cloudera environment. See *Cloudera environments*.
2. You have created the IDBroker mapping. See *Create IDBroker mapping*.
3. You have a prior knowledge of HBase and Phoenix.

Procedure

1. Set up a workload password in Cloudera to compile any application against Cloudera Operational Database. See *Setting the workload password*.
2. Create an Operational Database on your Cloudera environment. See *Creating a database using Cloudera Operational Database*.
3. Assign the appropriate roles to the Cloudera Operational Database users. See *User management in Cloudera Operational Database*.
4. Configure and deploy an edge node to work with HBase and Phoenix thick clients. See *Configuring edge nodes*.

Related Information

Cloudera environments
Create IDBroker mapping
Setting the workload password
Creating a database using Cloudera Operational Database
User management in Cloudera Operational Database
Cloudera Operational Database edge node overview
How to setup a user in Cloudera
(Admin user) How to create Cloudera Operational Database
How to Deploy an edge node (for use with HBase/Phoenix thick clients)

Onboarding to Apache components

You can create an Operational Database Docker Container to experiment with a simplified setup similar to Cloudera Operational Database, built using Apache HBase, Apache Zookeeper, Apache Omid, and Apache Phoenix.

About this task

Please know that the setup provided in the Docker image is:

- a highly simplified and single node setup, and not comparable to an actual Cloudera Operational Database cluster in performance or management.
- not using the same builds used in Cloudera Operational Database. Docker only contains the freely available upstream builds of some of the components.
- to provide an easy to use and setup environment for learning the basics and experimenting with the technology and not for testing with any load.

Before you begin

1. Launch Docker container and add *OPDB-DOCKER* as localhost in the host file. Run the following command.

   ```
   $ sudo vim /etc/hosts
   ```

   Add the following entry to the host file.

   ```
   127.0.0.1 localhost opdb-docker
   ```

2. The *OPDB-DOCKER* runs many services in the same container so it is recommended to increase the Docker resource configurations under Preferences > Resources to the following:

   - CPUs: 6
   - Memory: 10 GB
   - Swap: 1.5 GB
   - Disk image size: 64 GB

   Note: It is recommended to set higher values to avoid issues with memory allocation.

Procedure

1. Pull the docker image from Docker Hub.

   ```
   $ docker pull cloudera/opdb-docker
   ```

2. Run the *OPDB-DOCKER* container.

   ```
   $ docker run -p 8765:8765 -p 8080:8080 -p 8085:8085 -p 9090:9090 \
       -p 9095:9095 -p 2181:2181 -p 16010:16010 -p 16020:16020 -p 16000:16000
    \
       -p 16030:16030 -d -h "opdb-docker"  --name opdb-docker opdb-docker
   ```

3. Log in to the Docker and run Apache Phoenix or Apache HBase.

   ```
   $ docker exec -it opdb-docker /bin/bash
   $ phoenix-sqlline
   $ hbase shell
   ```

4. Run the following commands to start the HBase Thrift and HBase REST servers as they are not started automatically.

   ```
   $ docker exec opdb-docker /opt/hbase/bin/hbase-daemon.sh start thrift
   $ docker exec opdb-docker /opt/hbase/bin/hbase-daemon.sh start rest
   ```

5. Run the following commands to stop the HBase Thrift and HBase REST servers.

   ```
   $ docker exec opdb-docker /opt/hbase/bin/hbase-daemon.sh stop thrift
   $ docker exec opdb-docker /opt/hbase/bin/hbase-daemon.sh stop rest
   ```

Related Information

GitHub Operational Database repository

Operational Database Docker image

Sample applications for Cloudera Operational Database

Migrating HBase data to Cloudera Operational Database

If you have an existing HBase application running on a CDH or HDP environment, you can migrate your data to a Cloudera Operational Database Cloudera on cloud environment. You can launch a database with the durable and consistent storage technology you may already be familiar with while using CDH or HDP, but with none of the legacy complexity.

About this task

To migrate your HBase data into a Cloudera Operational Database Cloudera on cloud environment, see *HBase Migration through Cloudera Replication Manager*.

Related Information

HBase Migration through Cloudera Replication Manager

Migrating Phoenix data to Cloudera Operational Database

Cloudera Operational Database Replication plugin enables HBase replication from a number of products which also include Phoenix to Cloudera Operational Database, such as CDH 5, CDH 6, HDP 2.6, and HDP 3.1. You can replicate Phoenix tables to Cloudera Operational Database using the Replication plugin.

About this task

Currently, Cloudera Operational Database includes Apache Phoenix 5.1.1 while other products include a range of versions of Phoenix from 4.7.0 to 5.0.0.

To migrate your Phoenix data into a Cloudera Operational Database Cloudera on cloud environment, see *Phoenix Replication to Cloudera Operational Database*.

Related Information

Phoenix Replication to Cloudera Operational Database