Streams Replication Manager for HDF and HDP 1.0.0

SRM Installation

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Contents

Deployment recommendations

Learn about the recommended ways to deploy SRM in your system.

SRM can be deployed in two different ways:

- Co-located with existing Kafka brokers.
- On dedicated machines outside of existing Kafka brokers.

Co-located deployment

Use a co-located deployment approach when your existing Kafka Brokers are not heavily utilized. For this deployment approach, configure each instance of SRM to only write to the cluster that it is running on. This avoids scenarios in which SRM clients deployed on Cluster 1 would write to brokers in Cluster 2. Depending on the available network bandwidth between the two clusters, this approach can increase the replication performance.

Figure 1: Co-located deployment
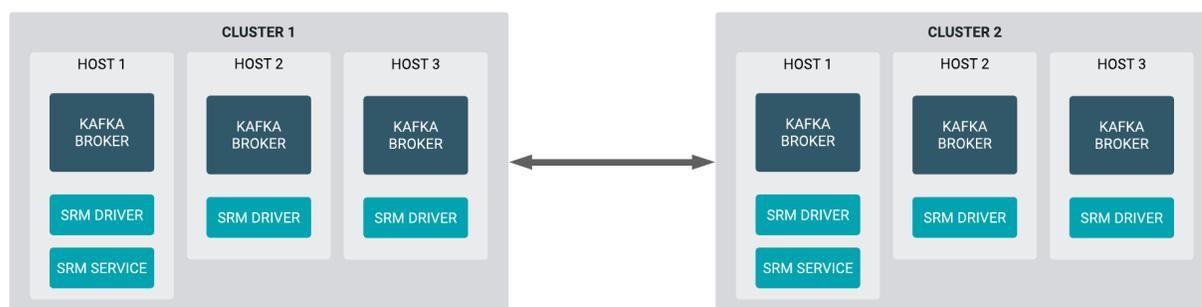
Dedicated deployment

SRM mainly consumes memory and network bandwidth on the hosts it is installed on. If your existing Kafka Brokers do not have a lot of headroom left for these resources, consider deploying SRM on dedicated machines or expanding your Kafka deployments.

If you have data centers with multiple Kafka clusters, a dedicated SRM deployment in each data center can help to simplify management of the SRM nodes. In this scenario, configure each instance SRM to write to all Kafka clusters running in the local data center.

Figure 2: Dedicated deployment
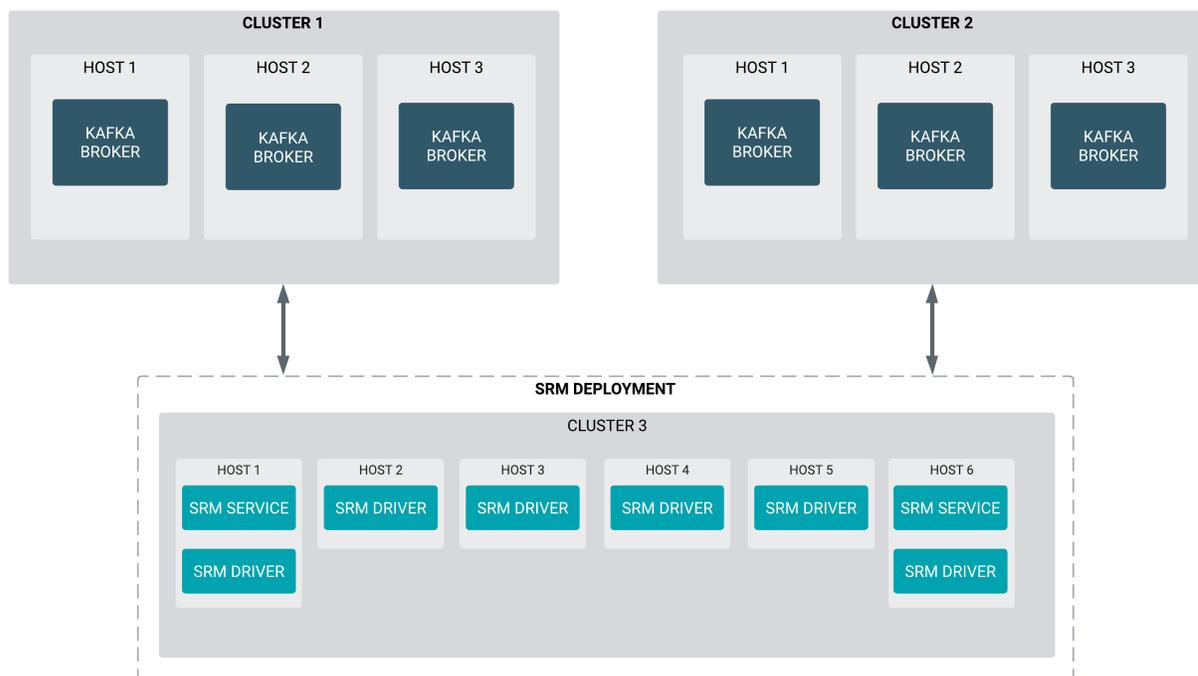
System Requirements

SRM can be installed on an HDF or HDP cluster that is running Kafka as a service. For a comprehensive list of supported operating systems, platforms and services, see the Hortonworks Support Matrix.

Related Information

Hortonworks Support Matrix

Installation

Installing from Packages

Install SRM from packages.

Before you begin

Obtain the SRM software artifacts from the Cloudera Downloads portal. For more information, see Download from the SRM repository.

Procedure

1. Copy the package to the machine you want to install SRM on.
2. Install SRM:
   a) For RHEL/CentOS:

   ```
   yum install [SRM_PACAKAGE_NAME]
   ```

   b) For Ubuntu/Debian

   ```
   dpkg -i [SRM_PACAKAGE_NAME]
   ```

   c) For SLES

   ```
   zypper install [SRM_PACAKAGE_NAME]
   ```

   Replace *[SRM_PACAKAGE_NAME]* with the name of the package you have downloaded. For example. `stre ams-replication-manager-0.0.1.1.0.0.0-42.x86_64.rpm`.
3. Optional: Specify an alternate temporary-file directory for RocksDB.

   This step is only required if you have mounted `/tmp` with the `noexec` option. In this case you have to specify an alternate `tmp` directory for RocksDB. You can achieve this by adding the alternate directory path to `srm-env. sh`:

   a) Navigate to the SRM config directory located at `/opt/streams-replication-manager/config`.
   b) Open `srm-env.sh` with an editor of your choice and add the following environment variable:

   ```
   export ROCKSDB_SHAREDLIB_DIR=/root/tmp/srmrocksdb
   ```

   > **Note:** Verify that the specified directory exists and that the users running SRM have read, write and execute permissions. If the directory does not exist, create it and assign the correct permissions.

Results
SRM is installed on the host.

What to do next
Use the command line tools provided with SRM to start the driver and service.
Related Information
SRM Command Line Tools

Installing from ZIP or TAR Archives

Install SRM from ZIP or TAR archives.

Before you begin

Obtain the SRM software artifacts for your system from the Cloudera Downloads Portal. For more information, see Download from the SRM repository.

Procedure

1. Create a home directory for SRM.

   Cloudera recommends `/opt/streams-replication-manager/`.

   ```
   mkdir -p /opt/streams-replication-manager/
   ```

2. Extract the files from the downloaded archive.

   Use the `unzip` or `tar` command or any other archive manager to extract the archives. For example:

   ```
   tar -xzvf [ARCHIVE_PATH] -C /opt/streams-replication-manager/
   ```

   ```
   unzip -o [ARCHIVE_PATH] -d /opt/streams-replication-manager/
   ```

   Replace *[ARCHIVE_PATH]* with the path to the archive you have downloaded. For example, `/root/stream s-replication-manager-0.0.1.1.0.0.0-42.tgz`.

3. Verify that the directories have correct file permissions. If not assign them.

   ```
   chmod -R 755 /opt/streams-replication-manager/
   ```

4. Set environment variables:

   a) Navigate to the SRM config directory. For example, `/opt/streams-replication-man ager/[ARCHIVE_NAME]/config`.

   Replace *[ARCHIVE_NAME]* with the full name of the archive that you have downloaded. For example, `stre ams-replication-manager-0.0.1.1.0.0.0-42`.

   b) Open `srm-env.sh` with an editor of your choice and add the following environment variables:

   ```
   export SRM_HOME=/opt/streams-replication-manager/[ARCHIVE_NAME]
   export SRM_BIN_DIR=${SRM_HOME}/bin
   export SRM_CONF_DIR=${SRM_HOME}/config
   export SRM_LOG_DIR=${SRM_HOME}/logs
   export SRM_PID_DIR=${SRM_HOME}/run
   ```

   c) Optional: Specify an alternate temporary-file directory for RocksDB.

   This step is only required if you have mounted `/tmp` with the `noexec` option. In this case you have to specify an alternate `tmp` directory for RocksDB. You can achieve this by adding the following environment variable to `srm-env.sh`:

   ```
   export ROCKSDB_SHAREDLIB_DIR=/root/tmp/srmrocksdb
   ```

   > **Note:** Verify that the specified directory exists and that the users running SRM have read, write and execute permissions. If the directory does not exist, create it and assign the correct permissions.

5. Optional: Add the SRM `bin` directory to your `PATH` environment variable. For example:

   ```
   export PATH=/opt/streams-replication-manager/[ARCHIVE_NAME]/bin:$PATH
   ```

Results

SRM is installed on the host.

What to do next

Use the command line tools provided with SRM to start the driver and service.

Related Information

SRM Command Line Tools