Exercise 12

Study Experiment

Steps for Installing YARN

Steps to install YARN in a Big Data environment, based on typical procedures. Detailed instructions, we should refer to the specific guide on JavaTpoint or other authoritative sources.

**Summary of YARN Installation Steps:**

1. **Prerequisites**:
   * Ensure Java is installed and configured.
   * Hadoop must be installed and configured.
2. **Download Hadoop**:
   * Download the latest stable version of Hadoop from the official Apache Hadoop website.
3. **Extract Hadoop**:
   * Extract the downloaded Hadoop tarball to a preferred directory.
   * tar -xzvf hadoop-x.y.z.tar.gz
4. **Configure Hadoop Environment Variables**:
   * Set Hadoop environment variables in .bashrc or .profile.
   * export HADOOP\_HOME=/path/to/hadoop
   * export PATH=$PATH:$HADOOP\_HOME/bin
5. **Configure YARN**:
   * Edit yarn-site.xml located in the Hadoop configuration directory ($HADOOP\_HOME/etc/hadoop).
   * <configuration>
   * <property>
   * <name>yarn.resourcemanager.hostname</name>
   * <value>localhost</value>
   * </property>
   * <property>
   * <name>yarn.nodemanager.aux-services</name>
   * <value>mapreduce\_shuffle</value>
   * </property>
   * </configuration>
6. **Configure MapReduce**:
   * Edit mapred-site.xml to configure MapReduce to use YARN.
   * <configuration>
   * <property>
   * <name>mapreduce.framework.name</name>
   * <value>yarn</value>
   * </property>
   * </configuration>
7. **Format the Hadoop Filesystem**:
   * Format the Hadoop filesystem using the following command:
   * hdfs namenode -format
8. **Start Hadoop and YARN**:
   * Start the Hadoop daemons (NameNode, DataNode) and YARN daemons (ResourceManager, NodeManager).
   * start-dfs.sh
   * start-yarn.sh
9. **Verify Installation**:
   * Check the status of the Hadoop and YARN daemons to ensure they are running correctly.
   * jps
10. **Access YARN ResourceManager**:
    * Open a web browser and navigate to http://localhost:8088 to access the YARN ResourceManager web UI.

These steps provide a high-level overview of installing YARN in a Big Data environment.