Configuring and Deploying Hadoop Cluster Deployment Templates

This chapter contains the following sections:

• Hadoop Cluster Profile Templates, page 1
• Creating a Hadoop Cluster Profile Template, page 3
• Cloning a Hadoop Cluster Profile Template, page 16
• Creating a Cluster Deployment Template, page 16

Hadoop Cluster Profile Templates

The Hadoop cluster profile template specifies the number of nodes in the cluster. The template also takes care of provisioning and configuring the Hadoop cluster services. Apache Software Foundation projects around the world develop services for Hadoop deployment and integration. Some Hadoop distributions support only a subset of these services, or have their own distribution-specific services.

Each of the following supplies a dedicated function:

Note
You cannot uncheck some of the services because they are necessary to create a Hadoop cluster. All mandatory services are checked by default.

<table>
<thead>
<tr>
<th>Hadoop Services</th>
<th>Cloudera</th>
<th>MapR</th>
<th>Hortonworks</th>
<th>BigInsights</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDFS</td>
<td>Yes</td>
<td>—</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>CLDB</td>
<td>—</td>
<td>Yes</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>YARN/MapReduce</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>ZooKeeper</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>HBase</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Hadoop Services</td>
<td>Cloudera</td>
<td>MapR</td>
<td>Hortonworks</td>
<td>BigInsights</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------</td>
<td>------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Hive</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Oozie</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Hue</td>
<td>Yes</td>
<td>—</td>
<td>—</td>
<td>Yes</td>
</tr>
<tr>
<td>Spark</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>—</td>
</tr>
<tr>
<td>Key-Value Store</td>
<td>Yes</td>
<td>—</td>
<td>—</td>
<td>Yes</td>
</tr>
<tr>
<td>Indexer</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Solr</td>
<td>Yes</td>
<td>—</td>
<td>—</td>
<td>Yes</td>
</tr>
<tr>
<td>Sqoop</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Impala</td>
<td>Yes</td>
<td>—</td>
<td>—</td>
<td>Yes</td>
</tr>
<tr>
<td>Flume</td>
<td>Yes</td>
<td>Yes</td>
<td>—</td>
<td>Yes</td>
</tr>
<tr>
<td>PIG</td>
<td>—</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>MAHOUT</td>
<td>—</td>
<td>Yes</td>
<td>—</td>
<td>Yes</td>
</tr>
<tr>
<td>Falcon</td>
<td>—</td>
<td>—</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Tez</td>
<td>—</td>
<td>—</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Storm</td>
<td>—</td>
<td>—</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ganglia/Ambari</td>
<td>—</td>
<td>—</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Metrics</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Drill</td>
<td>—</td>
<td>Yes</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Kafka</td>
<td>Yes</td>
<td>—</td>
<td>Yes</td>
<td>—</td>
</tr>
</tbody>
</table>
Creating a Hadoop Cluster Profile Template

Before You Begin
Create a Hadoop cluster Configuration Template.

Step 1
On the menu bar, choose Solutions > Big Data > Containers.

Step 2
On the Containers page, click Hadoop Cluster Profile Templates.

Step 3
Click Add (+).

Step 4
On the Hadoop Cluster Profile Template page of the Create Hadoop Cluster Profile Template wizard, complete the following fields:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Template Name field</td>
<td>A unique name for the template.</td>
</tr>
<tr>
<td>Template Description field</td>
<td>A short description for the template.</td>
</tr>
<tr>
<td>Node Count field</td>
<td>The number of nodes in the cluster. The default is four nodes.</td>
</tr>
<tr>
<td>Hadoop Distribution drop-down list</td>
<td>The type of Hadoop distribution. The Hadoop cluster services are displayed based on the selected Hadoop distribution.</td>
</tr>
<tr>
<td>Hadoop Distribution Version</td>
<td>Choose the Hadoop distribution version.</td>
</tr>
<tr>
<td>Hadoop Cluster Configuration Parameters Template drop-down list</td>
<td>Choose the cluster configuration parameters template.</td>
</tr>
<tr>
<td>Secure check box</td>
<td>Check this check box if you want to enable security for the cluster. This option is applicable only for MapR cluster.</td>
</tr>
<tr>
<td>Storage Pool Disk Grouping Configuration</td>
<td></td>
</tr>
<tr>
<td>No.of disks per pool for the servers with disks 1-12 field</td>
<td>The number of disks per pool for the servers with disks ranging from 1 to 12. This field is displayed only for MapR cluster. You need to enter the value before creating a new node in the MapR cluster.</td>
</tr>
<tr>
<td>No.of disks per pool for the servers with disks 13-24 field</td>
<td>The number of disks per pool for the servers with disks ranging from 13 to 24. This field is displayed only for MapR cluster. You need to enter the value before creating a new node in the MapR cluster.</td>
</tr>
</tbody>
</table>
No.of disks per pool for the servers with disks >24 field

The number of disks per pool for the servers with disks ranging from 24 to 96. This field is displayed only for MapR cluster. You need to enter the value before creating a new node in the MapR cluster.

Step 5

Click Next.

What to Do Next

Create a Services Selection policy.

Creating a Services Selection Policy

The cluster policy contains the Hadoop cluster services that you want to enable in the Hadoop cluster.

Note

The Service Selection Page displays the Hadoop cluster services, depending on the Hadoop distribution already selected on the Hadoop Cluster Profile Template page.

Step 1
On the Services Selection Policy page of the Create Hadoop Cluster Profile Template wizard, do the following:

Step 2
Check the check box for the optional Hadoop cluster services that you want to enable in your cluster.

Some Hadoop cluster services are required for the distribution and cannot be disabled. The available Hadoop cluster services include the following:

- **HDFS**—A file system that spans all nodes in a Hadoop cluster for data storage. This service replicates data across multiple nodes to avoid data loss.
- **YARN**—A resource-management platform responsible for managing compute resources in clusters and using them for scheduling your applications.
- **HBase**—A high-speed read and write column-oriented database.
- **Hive**—The query engine framework for Hadoop that facilitates easy data summarization, ad-hoc queries, and the analysis of large data sets stored in HDFS and HBase. With SQL-like semantics, Hive makes it easy for RDBMS users to transition into querying unstructured data in Hadoop.
- **Oozie**—A workflow environment for coordinating complex data processing operations.
- **ZooKeeper**—An infrastructure for cross-node synchronization. The applications ensure that tasks across the cluster are serialized or synchronized.
- **Hue**—An interface that aggregates the most common Hadoop components to improve user experience. This allows you to avoid the underlying complexity of the system, and bypasses the command-line interface.
- **Spark**—An open-source data analytics engine.
• **Key-Value Store Indexer**—A method for indexing data across the cluster.
• **SOLR**—A method for searching data across the cluster.
• **Sqoop**—A client-server tool that transfers bulk data between Hadoop and structured data stores, such as relational databases.
• **Impala**—A massively parallel processing (MPP) SQL query engine that runs natively in Apache Hadoop.
• **Flume**—A distributed, reliable, and available service for efficiently collecting, aggregating, and moving large amounts of streaming data into the Hadoop Distributed File System (HDFS).
• **Kafka**—A fast, scalable, durable, and fault-tolerant publish-subscribe messaging system.

---

**Step 3**

Click Next.

---

**What to Do Next**

Configure the Rack Assignment policy.

---

**Configuring the Rack Assignment Policy**

---

**Step 1**

On the **Rack Assignment Policy** page of the **Create Hadoop Cluster Profile Template** wizard, you can:

- Create one or more Hadoop node configuration policies. Click **Add (+)**, and continue with Step 2.
- Modify the default node configuration policy. Choose the default policy in the table. Click **Edit**, and continue with Step 2.

**Step 2**

On the **Add Entry to Hadoop Node Configuration Policy** screen, do the following:

a) In the **Rack Name** field, enter the name of the rack server.

b) In the **DataNodes** field, click **Select** and check the check box for each node that you want to configure on that server. **Note** Some Hadoop cluster services require a minimum number of nodes. For example, ZooKeeper requires a minimum of three nodes.

c) Click **Submit**.

**Step 3**

Click Next.

---

**What to Do Next**

Configure the HDFS policy.
Configuring the HDFS Policy

**Step 1** On the **HDFS Policy** page of the Create Hadoop Cluster Profile Template wizard, do the following:

**Step 2** Click the row in the table with the node for which you want to change the HDFS policy configuration, and click **Edit**.

**Step 3** On the **Edit HDFS Policy Entry** screen, review and, if necessary, change the following fields:

1. Choose **Yes** from the **DataNode** drop-down list if you want the node to act as the DataNode for HDFS. The data nodes store and retrieve data on request by the name node or by the client.
   
   **Note** — The node that act as a DataNode for HDFS is not allocated to Node1, Node2, and Node3 when
   
   - node count is greater than 5 for Cloudera
   - node count is greater than 3 for Hortonworks.

2. Choose **Yes** from the **Primary NameNode** drop-down list if you want the node to act as the primary name node for HDFS. The primary name node maintains all the operations of the HDFS cluster. There can be only one primary name node for the HDFS cluster.

3. Choose **Yes** from the **Secondary NameNode** drop-down list if you want the node to act as a secondary name node for HDFS. The secondary name node is not a direct replacement for the primary name node. The main role of a secondary name node is to periodically merge the FSImage and edit log, to prevent the edit log from becoming too large. A secondary name node runs on a separate physical system because it requires more memory to merge two files. It keeps a copy of the merged file in its local file system so that it is available for use if the primary name node fails.

4. Choose **Yes** from the **Balancer** drop-down list if you want the node to act as a balancer for HDFS.

5. Choose **Yes** from the **HTTPFS** drop-down list if you want the node to act as HTTPFS for HDFS. This service provides HTTP access to HDFS.

6. Choose **Yes** from the **Fail Over Controller** drop-down list if you want the node to act as Fail Over Controller for HDFS.

7. Choose **Yes** from the **Gateway** drop-down list if you want the node to act as Gateway for HDFS.

**Step 4** Click **Submit**.

**Step 5** Repeat Steps 1 and 2 to configure the other nodes for HDFS.

**Step 6** Click **Next**.

---

**What to Do Next**

Configure the CLDB policy.
Configuring the CLDB Policy

Step 1
On the CLDB Policy page of the Create Hadoop Cluster Profile Template wizard, do the following:

Step 2
Click the row in the table with the node for which you want to change the CLDB policy configuration, and click Edit.

Step 3
On the Edit CLDB Policy Entry screen, choose Yes if you want the node to act as a CLDB agent.

Step 4
Click Submit.

Step 5
Repeat Steps 1 and 2 to configure the other nodes for CLDB.

Step 6
Click Next.

What to Do Next
Configure the YARN policy.

Configuring the YARN Policy

Step 1
On the YARN Policy page of the Create Hadoop Cluster Profile Template wizard, do the following:

Step 2
Click the row in the table with the node for which you want to change the YARN policy configuration, and click Edit.

Step 3
On the Edit YARN Policy Entry screen, review and, if necessary, change the following fields:

a) Choose Yes from the Resource Manager drop-down list if you want the node to act as a Resource Manager. The Resource Manager is the ultimate authority that allocates resources among all the applications in the system.

b) Choose Yes from the Node Manager drop-down list if you want the node to act as a task Node Manager. The Node Manager is responsible for launching the applications’ containers, monitoring their resource usage (CPU, memory, disk, network), and reporting to the Resource Manager.

Note
The node that act as a DataNode for HDFS is not allocated to Node1, Node2, and Node3 when
the
• node count is greater than 5 for Cloudera
• node count is greater than 3 for Hortonworks.

c) Choose Yes from the Gateway drop-down list if you want the node to act as a Gateway.
d) Choose Yes from the JobHistory drop-down list if you want the node to preserve the Job History.
e) Click Submit.

Step 4
Click Submit.

Step 5
Repeat Steps 1 and 2 to configure the other nodes for Yarn.

Step 6
Click Next.

What to Do Next
Configure the ZooKeeper policy.
Configuring the ZooKeeper Policy

Note: Configure a minimum of three nodes for ZooKeeper.

**Step 1** On the **ZooKeeper Policy** page of the **Create Hadoop Cluster Profile Template** wizard, do the following:

**Step 2** Click the row in the table with the node for which you want to change the ZooKeeper policy configuration, and click **Edit**.

**Step 3** On the **Edit ZooKeeper Policy Entry** screen, choose **Yes** to make the node to act as a ZooKeeper.

**Step 4** Click **Submit**.

**Step 5** Repeat Steps 1 and 2 to configure the other nodes for ZooKeeper.

**Step 6** Click **Next**.

**What to Do Next**

Configure the HBase policy.

Configuring the Kafka Policy

**Step 1** On the **Kafka Policy** page of the **Create Hadoop Cluster Profile Template** wizard, do the following:

**Step 2** Click the row in the table with the node for which you want to change the Kafka policy configuration, and click **Edit**.

**Step 3** On the **Edit Kafka Policy Entry** screen, choose **Yes** from the **Kafka Broker** drop-down list if you want the node to act as a Kafka broker.

**Note**: All nodes are Kafka nodes, only if **Kafka** and **ZooKeeper** check boxes are selected in the **Services Selection Policy** page while creating Cloudera or HorntJonworks clusters. If it is a HDFS and Kafka cluster, then last two nodes of the template are selected for kafka by default.

**Note**: Addition of Kafka role is not supported in Cloudera and HorntJonworks clusters.

**Step 4** Click **Submit**.

**Step 5** Repeat Steps 1 and 2 to configure the other nodes for Kafka.

**Step 6** Click **Next**.
Configuring the HBase Policy

**Step 1**
On the **HBase Policy** page of the **Create Hadoop Cluster Profile Template** wizard, do the following:

**Step 2**
Click the row in the table with the node for which you want to change the HBase policy configuration, and click **Edit**.

**Step 3**
On the **Edit HBase Policy Entry** screen, review and, if necessary, change the following fields:

- Choose **Yes** from the **HBase Master** drop-down list if you want the node to act as a HBase master.
- Choose **Yes** from the **Region Server** drop-down list if you want the node to act as a region server.

  **Note**
  - The node that acts as a DataNode for HDFS is not allocated to Node1, Node2, and Node3 when the node count is greater than 5 for Cloudera.
  - The node count is greater than 3 for Hortonworks.

- Choose **Yes** from the **HBase Thrift Server** drop down-list if you want the node to act as a HBase Thrift.

**Step 4**
Click **Submit**.

**Step 5**
Repeat Steps 1 and 2 to configure the other nodes for HBase.

**Step 6**
Click **Next**.

---

**What to Do Next**
Configure the Hive policy.

---

Configuring the Hive Policy

**Step 1**
On the **Hive Policy** page of the **Create Hadoop Cluster Profile Template** wizard, do the following:

**Step 2**
Click the row in the table with the node for which you want to change the Hive policy configuration, and click **Edit**.

**Step 3**
On the **Edit Hive Policy Entry** screen, review and, if necessary, change the following fields:

- Choose **Yes** from the **HiveServer2** drop-down list if you want the node to act as a HiveServer2.
- Choose **Yes** from the **Hive Metastore Server** drop-down list if you want the node to act as a Hive metastore.
- Choose **Yes** from the **WebHCat** drop-down list if you want the node to act as a WebHCat. WebHCat is the REST API for HCatalog, a table and storage management layer for Hadoop.
- Choose **Yes** from the **Gateway** drop-down list if you want the node to act as a Gateway for Hive.

**Step 4**
Click **Submit**.

**Step 5**
Repeat Steps 1 and 2 to configure the other nodes for Hive.

**Step 6**
Click **Next**.
What to Do Next
Configure the Oozie policy.

Configuring the Oozie Policy

**Step 1** On the **Oozie Policy** page of the **Create Hadoop Cluster Profile Template** wizard, do the following:

**Step 2** Click the row in the table with the node for which you want to change the Oozie policy configuration, and click **Edit**.

**Step 3** On the **Edit Oozie Policy Entry** screen, choose **Yes** to make the node to act as an Oozie server.

**Step 4** Repeat Steps 1 and 2 to configure the other nodes for Oozie.

**Step 5** Click **Next**.

What to Do Next
Configure the Hue policy.

Configuring the Hue Policy

**Step 1** On the **Hue Policy** page of the **Create Hadoop Cluster Profile Template** wizard, do the following:

**Step 2** Click the row in the table with the node for which you want to change the Hue policy configuration, and click **Edit**.

**Step 3** On the **Edit Hue Policy Entry** screen, do the following:
- a) Choose **Yes** from the **Hue Server** drop-down list if you want the node to act as a Hue server.
- b) Choose **Yes** from the **BeesWax Server** drop-down list if you want the node to act as a BeesWax server.
- c) Choose **Yes** from the **Kt Renewer** drop-down list if you want the node to act as a Kt Renewer.
- d) Click **Submit**.

**Step 4** Repeat Steps 1 and 2 to configure the other nodes for Hue.

**Step 5** Click **Next**.

What to Do Next
Configure the Spark policy.
Configuring the Spark Policy

Step 1  On the Spark Policy page of the Create Hadoop Cluster Profile Template wizard, do the following:
Step 2  Click the row in the table with the node for which you want to change the Spark policy configuration, and click Edit.
Step 3  On the Edit Spark Policy Entry screen, review and, if necessary, change the following fields:
   a) Choose Yes from the History Server drop-down list if you want the node to act as a History Server.
   b) Choose Yes from the Gateway drop down-list if you want the node to act as a gateway.
Step 4  Click Submit.
Step 5  Repeat Steps 1 and 2 to configure the other nodes for Spark.
   Note: When Spark applications run on a YARN cluster manager, resource management, scheduling, and security are controlled by YARN. In Cloudera cluster, configuring the Spark on Yarn policy is supported.
Step 6  Click Next.

What to Do Next
Configure the Key-Value Store Indexer policy.

Configuring the Key-Value Store Indexer Policy

Step 1  On the Key-Value Store Indexer Policy page of the Create Hadoop Cluster Profile Template wizard, do the following:
Step 2  Click the row in the table with the node for which you want to change the Key-Value Store Indexer policy configuration, and click Edit.
Step 3  On the Edit KSIndexer Policy Entry screen, choose Yes if you want the node to act as a KSIndexer server.
Step 4  Click Submit.
Step 5  Repeat Steps 1 and 2 to configure the other nodes for KSIndexer.
Step 6  Click Next.

What to Do Next
Configure the Solr policy.
Configuring the Solr Policy

Step 1  On the Solr Policy page of the Create Hadoop Cluster Profile Template wizard, do the following:
Step 2  Click the row in the table with the node for which you want to change the Solr policy configuration, and click Edit.
Step 3  On the Edit Solr Policy Entry screen, choose Yes if you want the node to act as a Solr server.
Step 4  Click Submit.
Step 5  Repeat Steps 1 and 2 to configure the other nodes for Solr.
Step 6  Click Next.

What to Do Next
Configure the Sqoop policy.

Configuring the Sqoop Policy

Step 1  On the Sqoop Policy page of the Create Hadoop Cluster Profile Template wizard, do the following:
Step 2  Click the row in the table with the node for which you want to change the Sqoop policy configuration, and click Edit.
Step 3  On the Edit Sqoop Policy Entry screen, choose Yes if you want the node to act as a Sqoop server.
Step 4  Click Submit.
Step 5  Repeat Steps 1 and 2 to configure the other nodes for Sqoop.
Step 6  Click Next.

What to Do Next
Configure the Impala policy.

Configuring the Impala Policy

Step 1  On the Impala Policy page of the Create Hadoop Cluster Profile Template wizard, do the following:
Step 2  Click the row in the table with the node for which you want to change the Impala policy configuration, and click Edit.
Step 3  On the Edit Impala Policy Entry screen, do the following:
  a) Choose Yes from the Impala Daemon drop-down list if you want the node to act as an Impala daemon.
  b) Choose Yes from the Impala StateStore drop-down list if you want the node to act as an Impala Statestore.
  c) Choose Yes from the Impala Catalog Server drop-down list if you want the node to act as an Impala catalog server.
     The other fields in this dialog box are for your information only.
d) Click **Submit**.

**Step 4**
Repeat Steps 1 and 2 to configure the other nodes for Impala.

**Step 5**
Click **Submit**.

---

**What to Do Next**
Configure the Flume policy.

---

### Configuring the Flume Policy

**Step 1**
On the **Flume Policy** page of the **Create Hadoop Cluster Profile Template** wizard do the following:

**Step 2**
Click the row in the table with the node for which you want to change the Flume policy configuration, and click **Edit**.

**Step 3**
On the **Edit Flume Policy Entry** screen, choose **Yes** if you want the node to act as a Flume agent.

**Step 4**
Click **Submit**.

**Step 5**
Repeat Steps 1 and 2 to configure the other nodes for Flume.

**Step 6**
Click **Next**.

---

**What to Do Next**
Configure the PIG Policy.

---

### Configuring the PIG Policy

**Step 1**
On the **Pig Policy** page of the **Create Hadoop Cluster Profile Template** wizard, do the following:

**Step 2**
Click the row in the table with the node for which you want to change the Pig policy configuration, and click **Edit**.

**Step 3**
On the **Edit Pig Policy Entry** screen, choose **Yes** if you want the node to act as a Pig agent.

**Step 4**
Click **Submit**.

**Step 5**
Repeat Steps 1 and 2 to configure the other nodes for Pig.

**Step 6**
Click **Next**.

---

**What to Do Next**
Configure the MAHOUT Policy.
Configuring the MAHOUT Policy

Step 1  On the MAHOUT Policy page of the Create Hadoop Cluster Profile Template wizard, do the following:
Step 2  Click the row in the table with the node for which you want to change the MAHOUT policy configuration, and click Edit.
Step 3  On the Edit MAHOUT Policy Entry screen, choose Yes if you want the node to act as a MAHOUT agent.
Step 4  Click Submit.
Step 5  Repeat Steps 1 and 2 to configure the other nodes for MAHOUT.
Step 6  Click Submit.

What to Do Next
Configure a Falcon Policy.

Configuring the Falcon Policy

Step 1  On the Falcon Policy page of the Create Hadoop Cluster Profile Template wizard, do the following:
Step 2  Click the row in the table with the node for which you want to change the Falcon policy configuration, and click Edit.
Step 3  On the Edit Falcon Policy Entry dialog box, choose Yes. You can make the node act as a Falcon server from the Falcon Server and the Falcon client from Falcon Client drop-down lists.
Step 4  Click Submit.
Step 5  Repeat Steps 1 and 2 to configure the other nodes for Falcon.
Step 6  Click Submit.

What to Do Next
Configure the Tez Policy.
Configuring the Tez Policy

Step 1  On the Tez Policy page of the Create Hadoop Cluster Profile Template wizard, do the following:
Step 2  Click the row in the table with the node for which you want to change the Tez policy configuration, and click Edit.
Step 3  On the Edit Tez Policy Entry screen, choose Yes if you want the node to act as a Tez agent.
Step 4  Click Submit.
Step 5  Repeat Steps 1 and 2 to configure the other nodes for Tez.
Step 6  Click Submit.

What to Do Next
Configure the Storm Policy.

Configuring the Storm Policy

Step 1  On the Storm Policy page of the Create Hadoop Cluster Profile Template wizard, do the following:
Step 2  Click the row in the table with the node for which you want to change the Storm policy configuration, and click Edit.
Step 3  On the Edit Storm Policy Entry screen, do the following:
   a) Choose Yes in the DRPC Server drop-down list if you want the node to act as a DRPC server.
   b) Choose Yes in the Nimbus drop-down list if you want the node to act as a Nimbus server.
   c) Choose Yes in the Storm REST API Server drop-down list if you want the node to act as a Storm REST API server.
   d) Choose Yes in the Storm UI Server drop-down list if you want the node to act as a Storm UI server.
   e) Choose Yes in the Supervisor drop-down list if you want the node to act as a supervisor.
Step 4  Click Submit.
Step 5  Repeat Steps 1 and 2 to configure the other nodes for Storm.
Step 6  Click Submit.

What to Do Next
Configure the Ganglia Policy.
Configuring the Ganglia Policy

Step 1  On the Ganglia Policy page of the Create Hadoop Cluster Profile Template wizard, do the following:
Step 2  Click the row in the table with the node for which you want to change the Ganglia policy configuration, and click Edit.
Step 3  On the Edit Ganglia Policy Entry screen, choose Yes. You can make the node to act as a Ganglia server from the Ganglia Server and the Ganglia monitor from the Ganglia Monitor drop-down lists.
Step 4  Click Submit.
Step 5  Repeat Steps 1 and 2 to configure the other nodes for Ganglia.
Step 6  Click Submit.

Cloning a Hadoop Cluster Profile Template

Step 1  On the menu bar, choose Solutions > Big Data > Containers.
Step 2  On the Containers page, click the Hadoop Cluster Profile Templates.
Step 3  Click the row for the template that you want to clone.
Step 4  Click Clone.
Step 5  On the Clone Hadoop Cluster Profile Template screen, do the following:
   a) Enter a unique name and description for the new Hadoop cluster profile template.
   b) Click Next, review the information on each page, and modify, if necessary.
   c) Click Submit.

Creating a Cluster Deployment Template

Before You Begin

• Create a Cisco UCS Service Profile Template for Big Data
Create a Hadoop Cluster Profile Template

**Step 1** Choose **Solutions > Big Data > Containers**.

**Step 2** Click **Cluster Deploy Templates**.

**Step 3** Click **Add (+)**.

**Step 4** On the **Add Cluster Deploy Template** screen, complete the following fields:

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Template Name field</td>
<td>Enter a unique name for the Hadoop cluster deployment template.</td>
</tr>
<tr>
<td>Description field</td>
<td>Enter a short description of the template.</td>
</tr>
<tr>
<td>Container Type drop-down list</td>
<td>Choose the type of container for the cluster.</td>
</tr>
<tr>
<td>Select UCS Template drop-down list</td>
<td>Choose the UCS service profile template for Big Data that you want to use in the Hadoop cluster.</td>
</tr>
<tr>
<td><strong>Note</strong></td>
<td>If you choose Splunk as the container type, choose the UCS service profile template for Big Data with Splunk software to create a Splunk cluster.</td>
</tr>
<tr>
<td>Hadoop Cluster Profile Template drop-down list</td>
<td>Choose the Hadoop cluster profile template that you want to use. This option is displayed when you choose the container type as Hadoop.</td>
</tr>
</tbody>
</table>

**Step 5** Click **Add**.