

# CLI MiniCluster

## Table of contents

1 Purpose.....	2
2 Hadoop Tarball.....	2
3 Running the MiniCluster.....	2

## 1 Purpose

Using the CLI MiniCluster, users can simply start and stop a single-node Hadoop cluster with a single command, and without the need to set any environment variables or manage configuration files. The CLI MiniCluster starts both a MapReduce and HDFS clusters. This is useful for cases where users want to quickly experiment with a real Hadoop cluster or test non-Java programs that rely on significant Hadoop functionality.

## 2 Hadoop Tarball

To get a Hadoop distribution, download a recent [stable release](#) from one of the Apache Download Mirrors. Unpack the downloaded Hadoop distribution. In the distribution, edit the file `conf/hadoop-env.sh` to define at least `JAVA_HOME` to be the root of your Java installation.

## 3 Running the MiniCluster

From inside the root directory of the extracted tarball, you can start the CLI MiniCluster using the following command:

```
$ bin/hadoop jar hadoop-test-*.jar minicluster -jtport JT_PORT
-nnport NN_PORT
```

In the example command above, `JT_PORT` and `NN_PORT` should be replaced by the user's choice of these port numbers. If not specified, random free ports will be used.

There are a number of command line arguments that the users can use to control which services to start, and to pass other configuration properties. The available command line arguments:

Argument	Description
<code>-D &lt;property=value&gt;</code>	Options to pass into configuration object
<code>-datanodes &lt;arg&gt;</code>	How many datanodes to start (default 1)
<code>-format</code>	Format the DFS (default false)
<code>-help</code>	Prints option help.
<code>-jhsport &lt;arg&gt;</code>	JobHistoryServer port (default 0--we choose)
<code>-namenode &lt;arg&gt;</code>	URL of the namenode (default is either the DFS cluster or a temporary dir)
<code>-nnport &lt;arg&gt;</code>	NameNode port (default 0--we choose)
<code>-nodemanagers &lt;arg&gt;</code>	How many nodemanagers to start (default 1)

Argument	Description
<code>-nodfs</code>	Don't start a mini DFS cluster
<code>-nomr</code>	Don't start a mini MR cluster
<code>-rmport &lt;arg&gt;</code>	ResourceManager port (default 0--we choose)
<code>-writeConfig &lt;path&gt;</code>	Save configuration to this XML file.
<code>-writeDetails &lt;path&gt;</code>	Write basic information to this JSON file.

To display this full list of available arguments, the user can pass the `-help` argument to the above command.