**Instructions**

This package setup the **NEW** full cluster environment, not only work for Hadoop, it also can easy adapt to other cluster software installation if you make the configuration as this instruction.

The script only run in the **Master Node**, the **Data Node** will setup by master ssh remote installation.

**Environment**

The enviroment required can execute the bash command, and had been test in those linux systems as below.

* Ubuntu
* Centos

**Pre-installation**

**SSH (Secure Shell)**

You will be root user in the system, and setup the SSH(Secure Shell) protocol, enable the root SSH access in the **all cluster servers**.

vi /etc/ssh/sshd\_config

Comment out the following line and add the new line

#PermitRootLogin without-password PermitRootLogin yes

Restart SSH

service ssh reload

**Expect**

You need install the **Expect** software in the **Master Node**, the script work on ubuntu system as the root user.

apt-get update apt-get install expect

**Configuration**

Propose current path is script path, edit the files under conf folder depend on your cluster environment.

**1. Parameters**

Edit the file: conf\parameters

vi conf\parameters

username=hadoop password=pass usergroup=hadoop install\_path=/tmp/shell2/ install\_components=jvm,hadoop jvm\_user=root jvm\_folder=java-8-oracle jvm\_install=/usr/lib/jvm jvm\_home=/usr/lib/jvm/java hadoop\_user=hadoop hadoop\_folder=hadoop-2.8.3 hadoop\_home=/node/hadoop hadoop\_install=/node

Usually the component (ex: Hadoop) require the normal use to isolate the root user.

**user**

Script can create a new user for components, you need set the **username,passord,usergroup**username=hadoop password=pass usergroup=hadoop

**install\_path**

These scripts copy to different servers, the path decide which path will be saved in the servers.install\_path=/tmp/shell2/

**install\_components**

This parameter indicate which component will be installed in the server, seperate by comma.install\_components=jvm,hadoop

**component\_conf**

You need set the parameters as below description.

| **Name** | **Common** |
| --- | --- |
| component#\_user | The component's user(install,run) |
| component#\_folder | The component's name in the folder package |
| component#\_home | The component's home folder(It is link to assign the setup folder) |
| component#\_install | The component's setup folder, make sure user has read/write privilege in this install path |

Example as blow:

hadoop\_user=hadoop hadoop\_folder=hadoop-2.8.3 hadoop\_home=/node/hadoop hadoop\_install=/node

**2. env**

Edit the file: vi conf\env

export XXX=/usr/lib/hive

Sometime you need define some specified enviroment parameters. This env file update the file ~/.bashrc

**3. ${componet}.properties**

Every component can supply the specified properties, #key# #value# pair define replacement template parameter and value

The *template* can reference into template part.

If you have hadoop component, the template file hadoop.xml in the hadoop template folder template/hadoop/hadoop.xml examples:

<name>fs.defaultFS</name> <value>${fs.defaultFS}<value>

You can add the new line fs.defaultFS=\node\ in the hdfs.properties (hdfs is component name)

At the last, the hadoop.xml file will change as below.

<name>fs.defaultFS</name> <value>\node\<value>

**4. Datanode**

Edit the file: conf\datanode

vi conf\datanode

Add the data nodes except the master node server **hostname**,**ip address**,**root**,**password**, split by space for each elements.

Some operators need logon the system as root user, you need configuration the root user(or root privilege user) and password.

Example as below:

datanode1 192.168.121.145 root pass datanode2 192.168.121.146 root pass

**5. Namenode**

Edit the file: conf\namenode

vi conf\namenode

Add the master node server(this server) **hostname**,**ip address**,**root**,**password**, split by space for each elements.

Also this require the root user

Example as below:

namenode 192.168.121.147 root pass

**Package**

Script doesn't support yum or apt-get install the component. Need put original installation package in the folder package. If you want to modify the configuration file, go to part template

For examples:

package/java-8-oracle

Of cause you also set conf\parameters, assign the value to component\_folder EX: jvm\_folder=java-8-oracle

**Template**

If the component has speicial configuration for package, you can customeize the files in the folder template. Put the modification files into package in the correspond package path. The script will overwrite the files in the installation folder.

Some replacement words can define format as ${key}, the exchange value be set in the file component.properties as above.

**bin**

All bash scripts exist in bin folder, simple prompt as below.

install\_component.sh install component script

config\_#component#.sh config component script if you want

**How to install**

./install.sh in the root path