

## Usage / Deployment Instructions

**Note:** Please open the following Security Ports in the instance:

5601, 9200, 54323, 9093, 2181, 9092, 5902, 5901, 3000, 8091, 54321, 4040, 8787, 8080, 8088

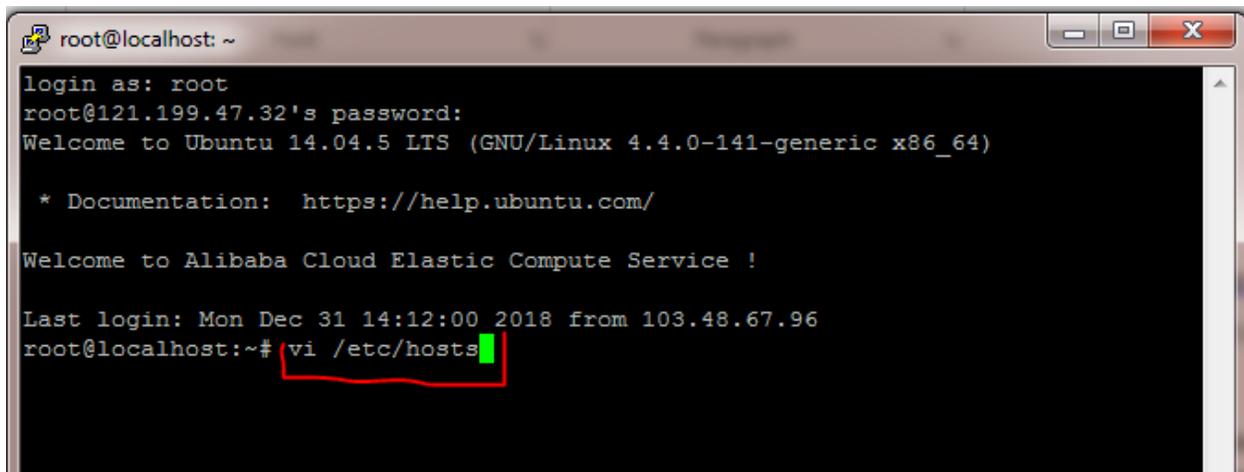
For detailed procedure to add ports: [click here](#)

**Step 1:** Open Putty for SSH

**Step 2:** Open Putty and Type <instance public IP> at "Host Name"

Type "root" as user name and "miri@123" as Password.

**Note:** Type the following command on the instance and press enter: **vi /etc/hosts**



```
root@localhost: ~
login as: root
root@121.199.47.32's password:
Welcome to Ubuntu 14.04.5 LTS (GNU/Linux 4.4.0-141-generic x86_64)

 * Documentation:  https://help.ubuntu.com/

Welcome to Alibaba Cloud Elastic Compute Service !

Last login: Mon Dec 31 14:12:00 2018 from 103.48.67.96
root@localhost:~# vi /etc/hosts
```





**Note:** Please run the following command: `echo "127.0.0.1 `hostname`" >> /etc/hosts`

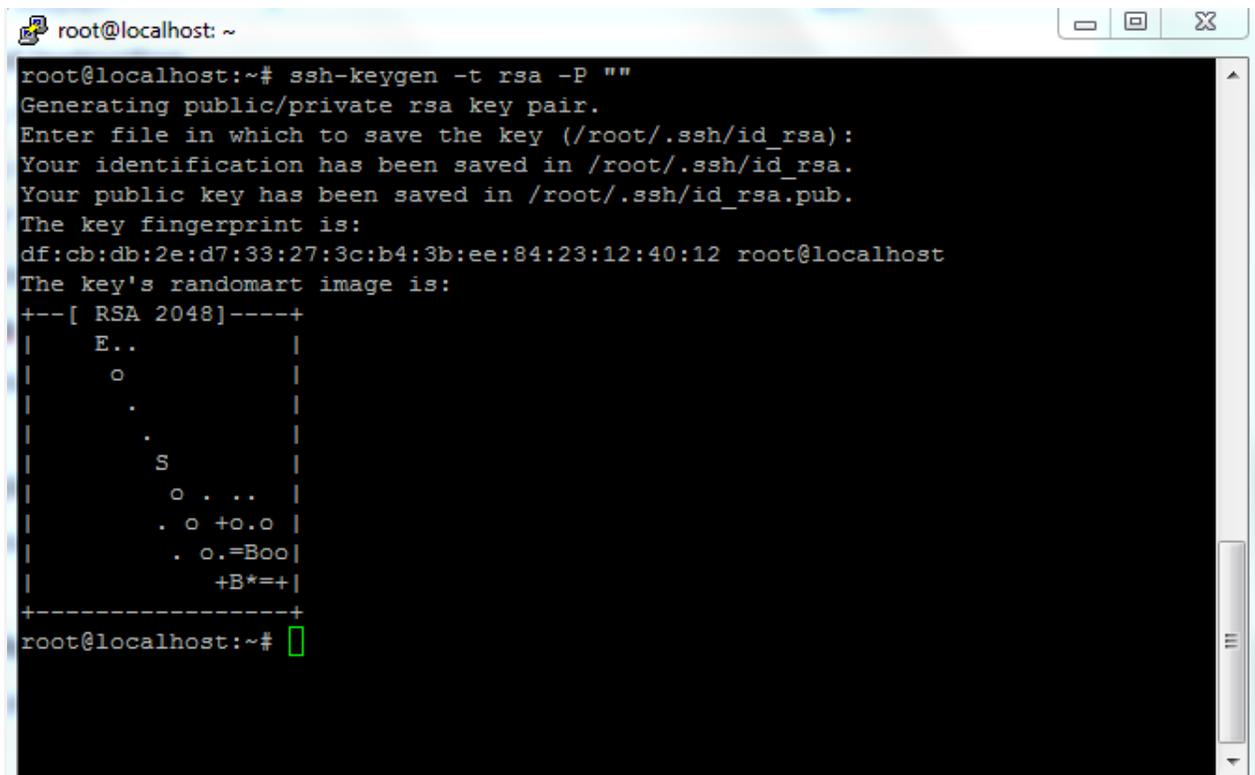
Then run the command `vi /etc/hosts` and exit the file by pressing the button **Esc** and then enter `:wq` then press **enter**.

```
root@aastha:~# echo "127.0.0.1 `hostname`" >> /etc/hosts
root@aastha:~# vi /etc/hosts
root@aastha:~#
```

**Step 3:** type the following commands to start hadoop:

**Command-** `ssh-keygen -t rsa -P ""`

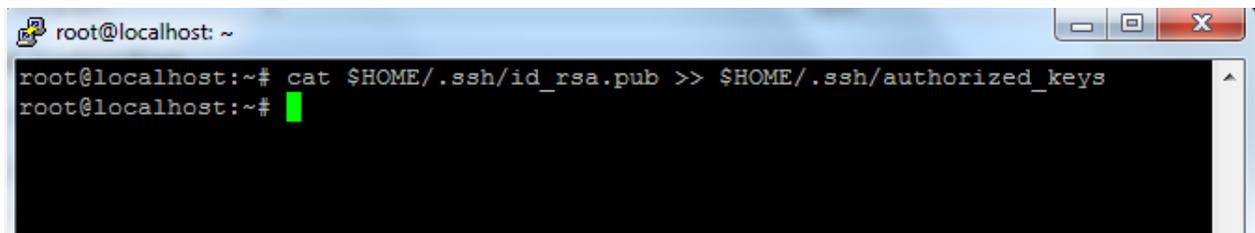
This command is used to generate the ssh key. You just have to press **Enter** button where it asks you in which file to save the key.



```
root@localhost: ~
root@localhost:~# ssh-keygen -t rsa -P ""
Generating public/private rsa key pair.
Enter file in which to save the key (/root/.ssh/id_rsa):
Your identification has been saved in /root/.ssh/id_rsa.
Your public key has been saved in /root/.ssh/id_rsa.pub.
The key fingerprint is:
df:cb:db:2e:d7:33:27:3c:b4:3b:ee:84:23:12:40:12 root@localhost
The key's randomart image is:
+--[ RSA 2048 ]-----+
|      E..          |
|      o           |
|      .           |
|      S           |
|     o . . .      |
|    . o +o.o     |
|   . o.=Boo     |
|    +B*=+       |
+-----+
root@localhost:~#
```

**Command-** `cat $HOME/.ssh/id_rsa.pub >> $HOME/.ssh/authorized_keys`

This command is used to move the generated ssh key to the desired location



```
root@localhost: ~
root@localhost:~# cat $HOME/.ssh/id_rsa.pub >> $HOME/.ssh/authorized_keys
root@localhost:~#
```

**Command-** `hdfs namenode -format`

```
root@localhost: ~
root@localhost:~# hdfs namenode -format
18/12/15 15:06:34 INFO namenode.NameNode: STARTUP_MSG:
/*****
STARTUP_MSG: Starting NameNode
STARTUP_MSG: host = localhost/127.0.0.1
STARTUP_MSG: args = [-format]
STARTUP_MSG: version = 2.9.0
STARTUP_MSG: classpath = /home/hadoop/etc/hadoop:/home/hadoop/share/hadoop/com
mon/lib/zookeeper-3.4.6.jar:/home/hadoop/share/hadoop/common/lib/jcip-annotation
s-1.0.jar:/home/hadoop/share/hadoop/common/lib/commons-beanutils-1.7.0.jar:/home
/hadoop/share/hadoop/common/lib/curator-framework-2.7.1.jar:/home/hadoop/share/h
adoop/common/lib/gson-2.2.4.jar:/home/hadoop/share/hadoop/common/lib/commons-mat
h3-3.1.1.jar:/home/hadoop/share/hadoop/common/lib/jaxb-impl-2.2.3-1.jar:/home/h
adoop/share/hadoop/common/lib/commons-compress-1.4.1.jar:/home/hadoop/share/had
oop/common/lib/jackson-mapper-asl-1.9.13.jar:/home/hadoop/share/hadoop/common/lib
/avro-1.7.7.jar:/home/hadoop/share/hadoop/common/lib/jackson-core-asl-1.9.13.jar:
/home/hadoop/share/hadoop/common/lib/apacheds-i18n-2.0.0-M15.jar:/home/hadoop/sh
are/hadoop/common/lib/api-asn1-api-1.0.0-M20.jar:/home/hadoop/share/hadoop/commo
n/lib/hamcrest-core-1.3.jar:/home/hadoop/share/hadoop/common/lib/mockito-all-1.8
.5.jar:/home/hadoop/share/hadoop/common/lib/jsr305-3.0.0.jar:/home/hadoop/share
/hadoop/common/lib/commons-lang3-3.4.jar:/home/hadoop/share/hadoop/common/lib/jet
ty-util-6.1.26.jar:/home/hadoop/share/hadoop/common/lib/jsch-0.1.54.jar:/home/h
```

**Command-** start-all.sh

You have to write “yes” when it prompts you – Are you sure you want to continue?

```
root@localhost: ~
root@localhost:~# start-all.sh
This script is Deprecated. Instead use start-dfs.sh and start-yarn.sh
18/12/15 15:07:17 WARN util.NativeCodeLoader: Unable to load native-hadoop libra
ry for your platform... using builtin-java classes where applicable
Starting namenodes on [localhost]
localhost: starting namenode, logging to /home/hadoop/logs/hadoop-root-namenode-
localhost.out
localhost: starting datanode, logging to /home/hadoop/logs/hadoop-root-datanode-
localhost.out
Starting secondary namenodes [0.0.0.0]
The authenticity of host '0.0.0.0 (0.0.0.0)' can't be established.
ECDSA key fingerprint is 90:8a:e1:57:38:66:81:65:99:95:9f:b5:cd:b3:b3:a2.
Are you sure you want to continue connecting (yes/no)? yes
0.0.0.0: Warning: Permanently added '0.0.0.0' (ECDSA) to the list of known hosts.
0.0.0.0: starting secondarynamenode, logging to /home/hadoop/logs/hadoop-root-secondarynamenode-localhost.out
18/12/15 15:07:37 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your platform... using built
starting yarn daemons
starting resourcemanager, logging to /home/hadoop/logs/yarn-root-resourcemanager-localhost.out
localhost: starting nodemanager, logging to /home/hadoop/logs/yarn-root-nodemanager-localhost.out
root@localhost:~#
```

**Step 4:** After the above command executes successfully, you should check the below url in the browser -

<http://<instance-public-ip>:8088>

The screenshot shows the Hadoop web interface for 'All Applications'. The browser address bar shows '47.96.4.246:8088/cluster'. The Hadoop logo is in the top left. A navigation menu on the left includes 'Cluster', 'About Nodes', 'Node Labels', 'Applications', and 'Scheduler'. The main content area displays several metrics tables:

Apps Submitted	Apps Pending	Apps Running	Apps Completed	Containers Running	Memory Used	Memory Total	Memory Re
0	0	0	0	0	0 B	8 GB	0 B

Active Nodes	Decommissioning Nodes	Decommissioned Nodes	Lost Nodes	Unhealthy Nodes
1	0	0	0	0

Scheduler Type	Scheduling Resource Type	Minimum Allocation	Maximum Allocation
Capacity Scheduler	[MEMORY]	<memory:1024, vCores:1>	<memory:8192, vCores:4>

ID	User	Name	Application Type	Queue	Application Priority	StartTime	FinishTime	State	FinalStatus	Running Containers	Allocated CPU VCores	Allocated Memory MB	Reserved CPU VCores
No data available in table													

Showing 0 to 0 of 0 entries

**Step 5:** Use following Linux command to start h2o

**Command-** `cd /home/h2o-3.22.0.2`

```

root@localhost: /home/h2o-3.22.0.2
root@localhost:~# cd /home/h2o-3.22.0.2
root@localhost:~/h2o-3.22.0.2#
  
```

**Command-** `java -jar h2o.jar`

```
root@localhost: /home/h2o-3.22.0.2
root@localhost: /home/h2o-3.22.0.2# java -jar h2o.jar
Cannot load library from path lib/linux_64/libxgboost4j_gpu.so
Cannot load library from path lib/libxgboost4j_gpu.so
Failed to load library from both native path and jar!
12-15 18:22:13.581 172.16.3.188:54321 6605 main INFO: Found XGBoost ba
ckend with library: xgboost4j_omp
12-15 18:22:13.601 172.16.3.188:54321 6605 main INFO: XGBoost supporte
d backends: [WITH_OMP]
12-15 18:22:13.603 172.16.3.188:54321 6605 main INFO: ----- H2O starte
d -----
12-15 18:22:13.603 172.16.3.188:54321 6605 main INFO: Build git branch
: rel-xia
12-15 18:22:13.604 172.16.3.188:54321 6605 main INFO: Build git hash:
bcd0be7d9719a4af5dd93171389c5ebbef9cae9b
12-15 18:22:13.604 172.16.3.188:54321 6605 main INFO: Build git descri
be: jenkins-3.22.0.1-77-gbcd0be7
12-15 18:22:13.604 172.16.3.188:54321 6605 main INFO: Build project ve
rsion: 3.22.0.2
12-15 18:22:13.605 172.16.3.188:54321 6605 main INFO: Build age: 23 da
ys
12-15 18:22:13.605 172.16.3.188:54321 6605 main INFO: Built by: 'jenki
ns'
12-15 18:22:13.606 172.16.3.188:54321 6605 main INFO: Built on: '2018-
11-22 07:06:04'
12-15 18:22:13.606 172.16.3.188:54321 6605 main INFO: Watchdog Build g
it branch: (unknown)
12-15 18:22:13.606 172.16.3.188:54321 6605 main INFO: Watchdog Build g
it hash: (unknown)
12-15 18:22:13.607 172.16.3.188:54321 6605 main INFO: Watchdog Build g
it describe: (unknown)
12-15 18:22:13.607 172.16.3.188:54321 6605 main INFO: Watchdog Build p
roject version: (unknown)
12-15 18:22:13.607 172.16.3.188:54321 6605 main INFO: Watchdog Built b
y: (unknown)
12-15 18:22:13.607 172.16.3.188:54321 6605 main INFO: Watchdog Built o
n: (unknown)
12-15 18:22:13.607 172.16.3.188:54321 6605 main INFO: XGBoost Build gi
t branch: (unknown)
12-15 18:22:13.608 172.16.3.188:54321 6605 main INFO: XGBoost Build gi
t hash: (unknown)
12-15 18:22:13.608 172.16.3.188:54321 6605 main INFO: XGBoost Build gi
```

**Step 6:** Open your browser and hit <http://<instance-ip>:54321> and enjoy h2o.

Untitled Flow



assist 57ms

### Assistance

Routine	Description
<a href="#">importFiles</a>	Import file(s) into H <sub>2</sub> O
<a href="#">importSqlTable</a>	Import SQL table into H <sub>2</sub> O
<a href="#">getFrames</a>	Get a list of frames in H <sub>2</sub> O
<a href="#">splitFrame</a>	Split a frame into two or more frames
<a href="#">mergeFrames</a>	Merge two frames into one
<a href="#">getModels</a>	Get a list of models in H <sub>2</sub> O
<a href="#">getGrids</a>	Get a list of grid search results in H <sub>2</sub> O
<a href="#">getPredictions</a>	Get a list of predictions in H <sub>2</sub> O
<a href="#">getJobs</a>	Get a list of jobs running in H <sub>2</sub> O
<a href="#">runAutoML</a>	Automatically train and tune many models
<a href="#">buildModel</a>	Build a model
<a href="#">importModel</a>	Import a saved model
<a href="#">predict</a>	Make a prediction

### Help

Using Flow for the first time?

[Quickstart Videos](#)

Or, view [example Flows](#) to explore and learn H<sub>2</sub>O.

STAR H2O ON GITHUB!

[Star](#) 3,654

#### GENERAL

- [Flow Web UI ...](#)
- [... Importing Data](#)
- [... Building Models](#)
- [... Making Predictions](#)
- [... Using Flows](#)
- [... Troubleshooting Flow](#)