Resume Summary (Cloud Project)
Team ID - 19

The document provides details on how to setup Hadoop and web2py which is required to run our project successfully.

Hadoop Installation

Hadoop is supported by GNU/Linux platform and its flavors. Therefore, we need a Linux operating system for setting up Hadoop environment.

- **Pre-Installation step**
  - Creating User: It is recommended to create a separate user for Hadoop to isolate Hadoop file system from Unix file system.
  - Follow the steps given below to create a user. Login as root
    - ```
      # useradd hadoop
      # passwd hadoop
         New passwd:
         Retype new passwd
      ```

- **Installing SSH server: Hadoop uses SSH to login to localhost**
  - Hadoop uses SSH to login to localhost
    - ```
      sudo apt-get install openssh-server
      ```
  - It is required to provide public/private key pair for a Hadoop user and share it with different users. The following commands are used for generating a key value pair using SSH.
    - ```
      $ ssh-keygen -t rsa -P ""
      ```
    - ```
      $ cat ~/.ssh/id_rsa.pub >> ~/.ssh/authorized_keys
      ```

- **Installing Java**

  - Java is the main prerequisite for Hadoop. First step is verify java version
    - ```
      $ java -version
      ```

  - If everything is in order, it will give you the following output.
      ```

```
java version "1.7.0_71"
Java(TM) SE Runtime Environment (build 1.7.0_71-b13)
Java HotSpot(TM) Client VM (build 25.0-b02, mixed mode)
```

If java not installed follow given steps:

- Download Java and extract the tar using following commands
  - ```
    $ cd Downloads/
    $ ls
    jdk-7u71-linux-x64.gz
    $ tar zxf jdk-7u71-linux-x64.gz
    $ ls
    jdk1.7.0_71   jdk-7u71-linux-x64.gz
    ```
- Make java available to all users
  - ```
    mv jdk1.7.0_71 /usr/local/
    ```
- Set up the PATH and JAVA_HOME variables by adding following commands in ~/.bashrc file
  - ```
    export JAVA_HOME=/usr/local/jdk1.7.0_71
    export PATH=$PATH:$JAVA_HOME/bin
    ```
- Apply changes in the current running system
  - ```
    $ source ~/.bashrc
    ```
- Configure java alternatives
  - ```
    # alternatives --install /usr/bin/java java usr/local/java/bin/java 2
    # alternatives --install /usr/bin/javac javac usr/local/java/bin/javac 2
    # alternatives --install /usr/bin/jar jar usr/local/java/bin/jar 2
    # alternatives --set java usr/local/java/bin/java
    # alternatives --set javac usr/local/java/bin/javac
    # alternatives --set jar usr/local/java/bin/jar
    ```

Verify the java -version command from terminal as explained above

Installing Hadoop

➢ Downloading Hadoop
    ```

- wget
  http://apache.claz.org/hadoop/common/hadoop-2.4.1/hadoop-2.4.1.tar.gz
- tar xzf hadoop-2.4.1.tar.gz
- mv hadoop-2.4.1/* to hadoop/

➢ Setting up Hadoop

- ```
  export HADOOP_HOME=/usr/local/hadoop
  export HADOOP_MAPRED_HOME=$HADOOP_HOME
  export HADOOP_COMMON_HOME=$HADOOP_HOME
  export HADOOP_HDFS_HOME=$HADOOP_HOME
  export YARN_HOME=$HADOOP_HOME
  export HADOOP_COMMON_LIB_NATIVE_DIR=$HADOOP_HOME/lib/native
  export PATH=$PATH:$HADOOP_HOME/sbin:$HADOOP_HOME/bin
  export HADOOP_INSTALL=$HADOOP_HOME
  source ~/.bashrc
  ```

➢ Hadoop Configuration

- ```
  $ cd $HADOOP_HOME/etc/hadoop
  export JAVA_HOME=/usr/local/jdk1.7.0_71
  ```

- Updating core-site.xml
  - ```
    <configuration>
       <property>
          <name>fs.default.name </name>
          <value> hdfs://localhost:9000 </value>
       </property>
    ```

- Updating mapred-site.xml. This file is used to specify which MapReduce framework we are using
  - ```
    <configuration>
       <property>
         <name>mapreduce.framework.name</name>
         <value>yarn</value>
       </property>
    </configuration>
    ```

- Updating mapred-site.xml. The hdfs-site.xml file contains information such as the value of replication data, namenode path, and datanode paths of your local file systems. Let us assume following data
  - ```
    <configuration>
       <property>
         <name>dfs.replication</name>
         <value>1</value>
         <description>
           Default block replication. The actual number of
    ```
    ```

```
            replications can be specified when the file is created.
            the default is used if replication is not specified in
            create time.
        </description>
    </property>
</configuration>
```

- Formatting namenode and start hadoop
  - `hadoop namenode -format`
  - `start-dfs.sh`
  - `start-mapred.sh`

- Check if hadoop is successfully installed by running sample example
  - `hadoop jar hadoop-examples-1.1.2.jar pi 3 10`

➢ Verifying whether hadoop is working fine

- `$ hadoop version`

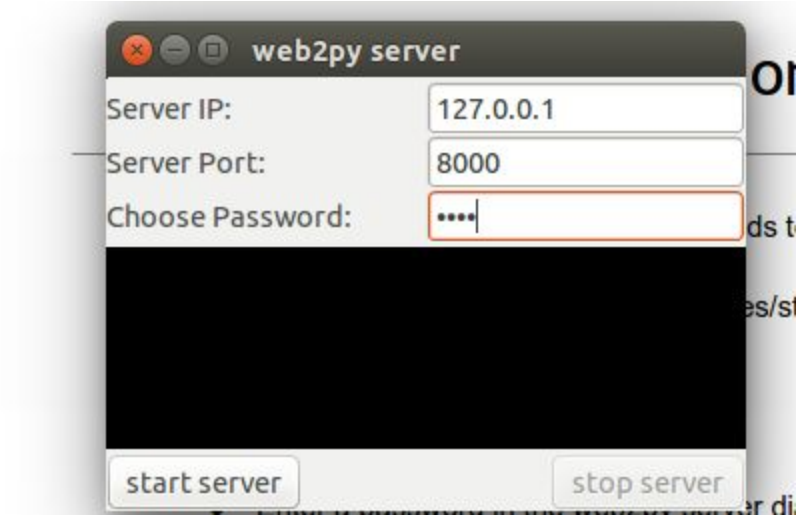
Web2py Installation and Setup

➢ Installing web2py: Run the following commands to install web2py on your local machine.

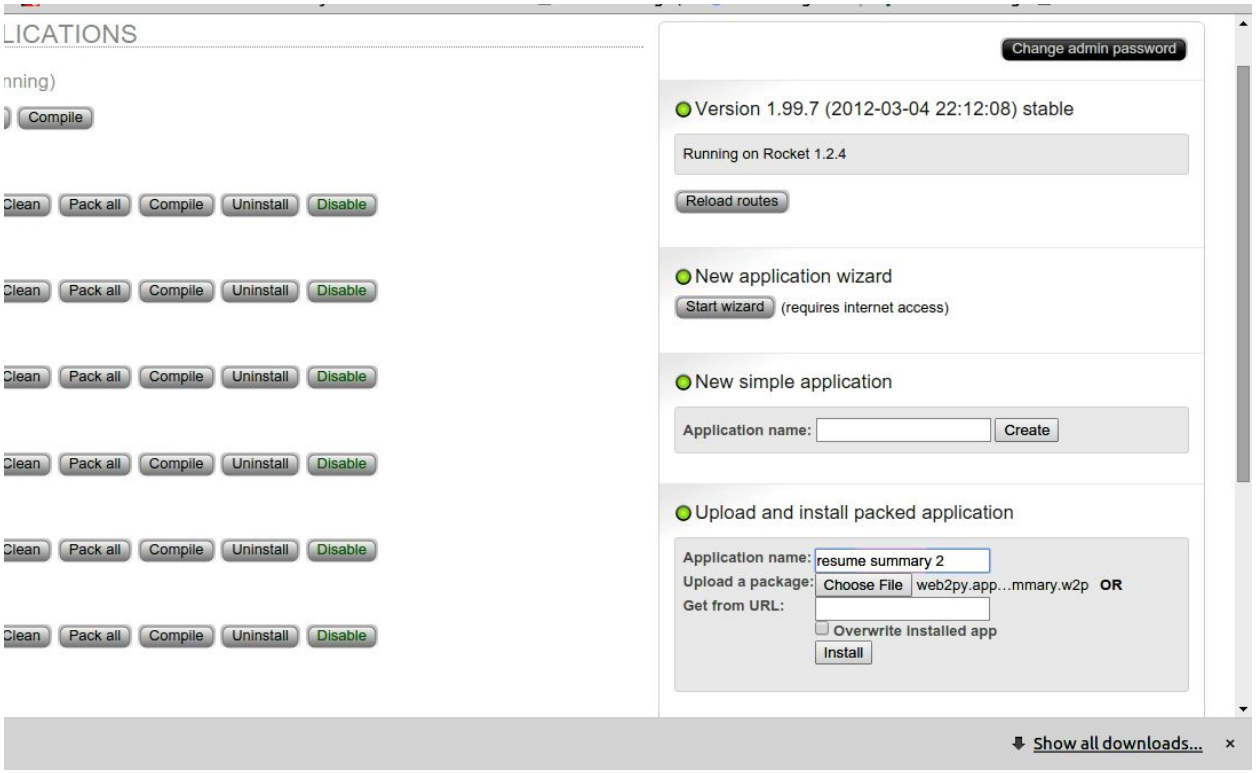
- wget http://www.web2py.com/examples/static/web2py_src.zip
- unzip web2py_src.zip
- cd web2py
- python web2py.py

➢ Deploying on the server:

- Enter a password in the web2py server dialog box.



- Upload the web package(web2py.app.resume_summary.w2p) and provide a suitable name for the application. Click on install button. Your application will be installed and will be ready to use.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Clean Pack all Compile Uninstall Disable
Change admin password
Version 1.99.7 (2012-03-04 22:12:08) stable
Running on Rocket 1.2.4
Reload routes
New application wizard
Start wizard (requires internet access)
New simple application
Application name: Create
Upload and install packed application
Application name: resume summary 2
Upload a package: Choose File web2py.app…mmary.w2p OR
Get from URL:
Overwrite installed app
Install
Show all downloads...
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