Bilateral Calculator
Installation instructions

Introduction

This document explains how Bilateral Calculator is set up. The instructions are aimed at any competent Linux system administrator.

Server

The application is hosted at Flipperhostin their USA data centre. It runs on a virtual server (plan VPS-HDD-2B). The server configuration is summarised below:

CPU	Intel(R) Xeon(R) CPU E5620 @ 2.40GHz
RAM	2GB
Disk	80 GB HDD
OS	CentOS release 6.8 (Final)
IP	104.223.37.218
Traffic	1000GB/month

Domain
The wind3.50hertz.in domain is registered through Net4India.

SSL Certificate

The application uses a RapidSSL SSL certificate for the *.**50hertz.in** domain.
This must be renewed periodically.
The private key and CSR (Certificate Signing Request) are generated using the following OpenSSL command:

openssl req -newkey rsa:2048 -nodes -keyout 50hertz_in.key -out 50hertz.csr
it will prompt for company information, provide all the details step by step.

send the .csr to provider, in return they will send the .cer file. Put the .cer and .key file in the below location.

SSL Certificate store on

/root/certificate/2017-18/50hertz_in.crt
/root/certificate/2017-18/50hertz_in.key

Installation

Application dependencies

1. Setup JAVA Environment

Download Java Archive:

mkdir -p /var/java/
cd /var/java/
wget --no-cookies --no-check-certificate --header "Cookie: gpw_e24=http%3A%2F%2Fwww.oracle.com%2F; oraclelicense=accept-securebackup-cookie" "http://download.oracle.com/otn-pub/java/jdk/7u79-b15/jdk-7u79-linux-x64.tar.gz"

```
# tar xzf jdk-7u79-linux-x64.tar.gz
```

Install Java & Make link

cd /var/java/jdk1.7.0_79/

ln -s /var/java/jdk1.7.0_79/bin/java /usr/bin/java

ln -s /var/java/jdk1.7.0_79/bin/java /etc/alternative/java

Configuring Environment Variables

Append below given contents in /etc/profile

export JAVA_HOME=/var/java/jdk1.7.0_79/

export PATH=$PATH:/var/java/jdk1.7.0_79/bin

Check Installed Java Version
java -version
```
  java version "1.7.0_79"
```

2. Installing & Configuring Tomcat

Download and Unpack Tomcat 7.0.40

cd /usr/share/

wget https://archive.apache.org/dist/tomcat/tomcat-7/v7.0.40/bin/apache-tomcat-7.0.40.tar.gz

tar -xvf apache-tomcat-7.0.40.tar.gz

mv apache-tomcat-7.0.40 apache-tomcat-solar

Configure Tomcat to Run as a Service.

cd /etc/init.d

vim tomcat

And here is the script we will use to run tomcat as daemon.

```
#!/bin/bash
# description: Tomcat Start Stop Restart
# processname: tomcat
# chkconfig: 234 20 80
JAVA_HOME=/var/java/jdk1.7.0_79
export JAVA_HOME
servicename=tomcat
pidfile=/var/run/$servicename
PATH=$JAVA_HOME/bin:$PATH
export PATH
CATALINA_HOME=/usr/share/apache-tomcat-7.0.40
case $1 in
start)
sh $CATALINA_HOME/bin/startup.sh
;;
stop)
sh $CATALINA_HOME/bin/shutdown.sh
;;
restart)
sh $CATALINA_HOME/bin/shutdown.sh
sh $CATALINA_HOME/bin/startup.sh
```

;;

#tomcat_pid() { echo "ps -aux | grep $CATALINA_BASE | grep -v grep | tr -s " "|cut -d" " -f2"}

#status)

pid=$(tomcat_pid)

if [-n "$pid"]

then

echo "Tomcat is running with pid: $pid"

else

echo "Tomcat is not running"

fi

esac

exit 0

Change Permission on service script.

chmod 755 tomcat

Deploye war file, taken from Developers/Test Machine

blcc.war

Just need to copy the file from Developer machine/ Test Machine to **,** before that ensure all property files are updated , if not, copy all the property files from production running war, and paste the property files into the apropriate location.

/usr/share/apache-tomcat-7.0.40/webapps/

Common property files that needs to be checked are.

database.property

invoice.property

mail.property

log4j.property

Adding the service to start on machine startup--

chkconfig tomcat on

Change Port number in **/usr/share/apache-tomcat-7.0.40/conf/server.xml.**

Server port="8080"

SSL port="8443"

Connector port="8080" protocol="AJP/1.3" redirectPort="8443"

Allow port from IPTABLES--

iptables -A INPUT -p tcp –dport 8443 -j ACCEPT

/etc/init.d/iptables save
/etc/init.d/iptables restart
/etc/inid.d/tomcat start

Now, Go to web browser and type `https://50hertz.in`:8443/blcc **in the URL bar**

Note : The registered ID for payment gateway is corporateaffairs@50hertz.in.

You will be able to see login page

Deployement of blcc_batch.jar

Just need to copy the file from Developer machine/ Test Machine to **,** before that ensure all property files are updated , if not, copy all the property files from production running jar, and paste the property files into the apropriate location.

Copy this jar into the location : /home/blcc-batch

start the batch by issuing the following command : -

nohup java -jar blcc_batch.jar &

Function of this jar is to check the subscription date of each user, and change the subscription of the user to expire if the user has finished the subscription period.