C2SIM Server Build Process

Operating System

Create VMWare Image for Centos version 7

Create Accounts

Root Account
    Password   gmul2e4s

Create bmluser account
    Password: c2sim67890

Set bmluser for automatic logon

Create bmluser/bin directory

Locate the following line in /etc/sudoers

    root   ALL=(ALL)   ALL

Add the following to give bmluser full sudo rights

    bmluser ALL=(ALL)   ALL

Install Java

Remove Open Java (Non Sun/Oracle)
sudo yum -y remove java*

Download latest jdk

Install java
    rpm –ivh jdk-8u65-linux-x64.rpm
    Java is installed in /usr/java with various soft links

    Set JAVA_HOME in .bash_profile

```
JAVA_HOME="/usr/java/jdk1.8.0_65"
export JAVA_HOME
```

Install NetBeans
Download and install netbeans in /opt/netbeans

Create symbolic link to netbeans in ~/bin
   ln –s /opt/netbeans/netbeans-8.1 netbeans

Install SubVersion (If necessary)

As root:
   yum install subversion

Install Maven (If doing development on server)

As root:

   yum install maven

Other Utilities may also be installed

Oxygen
jEdit

Install Tomcat

Download and install tomcat in /opt/tomcat
   Download latest tomcat e.g. apache-tomcat-8.0.30
   Create /opt/tomcat
      sudo mkdir /opt/tomcat
      cd /opt/tomcat
      sudo chmod /opt/tomcat 755

   Install

Create symbolic links in ~/bin to start and stop tomcat

   ln -s /opt/tomcat/apache-tomcat-8.0.30/bin/startup.sh tomcat_start
   ln -s /opt/tomcat/apache-tomcat-8.0.30/bin/shutdown.sh tomcat_stop

Set $CATALINA_HOME in ~/.bash_profile

```
   CATALINA_HOME="/opt/tomcat/apache-tomcat-8.0.30"
export CATALINA_HOME
```

Set up tomcat admin user.
Adding the following to /conf/tomcat-users.xml

```
<xml version="1.0" encoding="UTF-8">
  <tomcat-users>
    <role rolename="tomcat"/>
    <user username="tomcat" password="tomcat" roles="manager-
      script,manager-gui"/>
  </tomcat-users>
```

Add tomcat support to NetBeans

Bring up NetBeans
On start page press Install Plugins
Add J2EE Support
On menu bar select Window / Services
On Services / Servers select Add Server and choose Apache Tomcat
Add path to Tomcat $CATALINA_HOME
Add tomcat user

Install Apache Apollo (Messaging Broker)

Download apache-apollo-1.7.1-unix-distro.tar.gz from:
    http://activemq.apache.org/apollo/download.html

Create /opt/lib/apollo and unpack the distribution there.
Be sure that bmluser is the owner of /opt and /opt/lib/apollo and has RWX permissions.

Navigate to /opt/lib/apollo/apache-apollo-1.7.1/bin create a broker instance:

        apollo create /opt/apollo/bmlStomp

The main configuration file for this instance is:
        /opt/Apollo/bmlStomp/etc/apollo.xml

URL'S for BML SERVER

BML (And MSDL) Submission

//hostname:8080/BMLServer/bml;submitterID=*submitter*;domain=*domain;*
        forwarders=" *firstForwarder"*

Other Transactions

Non defined yet

Runtime Instructions

Start server

Accounts and passwords:

    bmluser / c2sim67890

    root / gmul2e4s

Start two server components

Tomcat:
    /opt/tomcat/apache-tomcat-8.0.30/bin/startup.sh

Apollo Message Broker:
    /opt/apollo/bmlStomp/bin/apollo-broker-service start

Ports Used:
    Tomcat 8080
    Apollo   61613
    The firewall is set up to pass these ports

To shutdown both services gracefully:
    /opt/tomcat/apache-tomcat-8.0.30/bin/shutdown.sh
    /opt/apollo/bmlStomp/bin/apollo-broker-service stop

There are web based management applications for both services. These are on the Firefox toolbar.

    Logins:

    Tomcat: User: tomcat Password: tomcat
    Apache Apollo: User: admin   Password: password

Client Applications

See the current C2SIM Server Reference Implementation Guide