C2SIM Server Environment Configuration for STP

A single localhost installations is described here. The same procedure could be employed to setup different servers, provided that firewalls are properly configured (not shown here):

1. Tomcat v8.5 and ActiveMQ (STOMP) - running the C2SIM Server
2. VR-Forces 4.9 – machine with NVidea is required and the VR-Forces C2SIM Interface
3. Clients running STP and the C2SIM GUI Editor

1. Download and install Tomcat for Windows v8.5 (**not the latest!**)

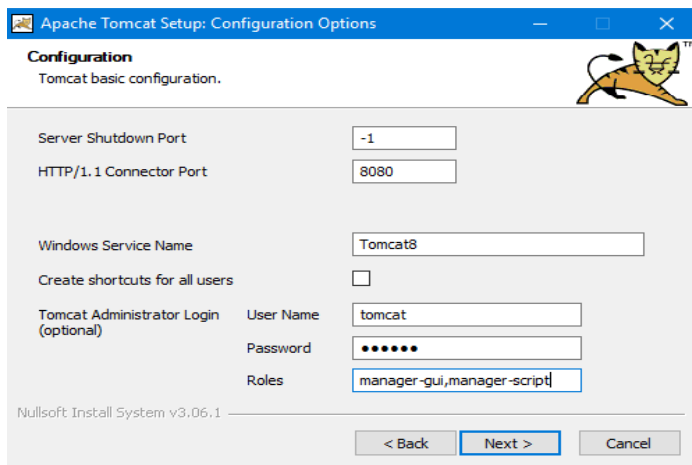1.1 Download and install Java 8 or more recent if not yet installed

1.2 Download the **32-bit/64-bit Windows Service Installer** from https://tomcat.apache.org/download-80.cgi

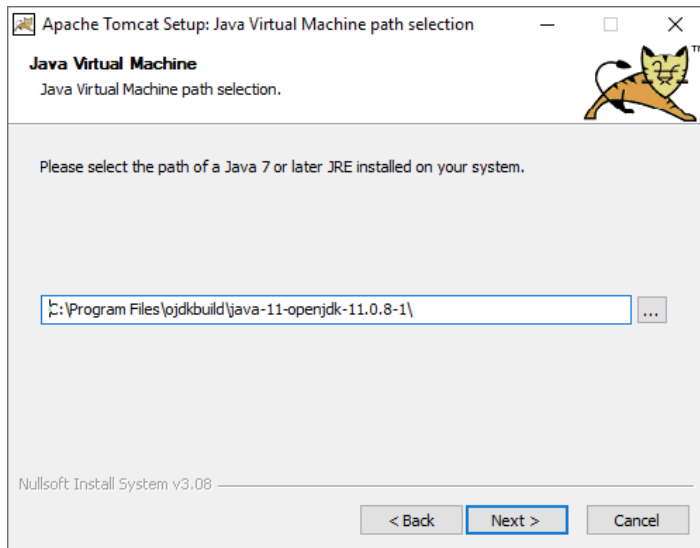https://dlcdn.apache.org/tomcat/tomcat-8/v8.5.72/bin/apache-tomcat-8.5.72.exe

1.3 Run the exe to install

Set User name/Password to tomcat/tomcat

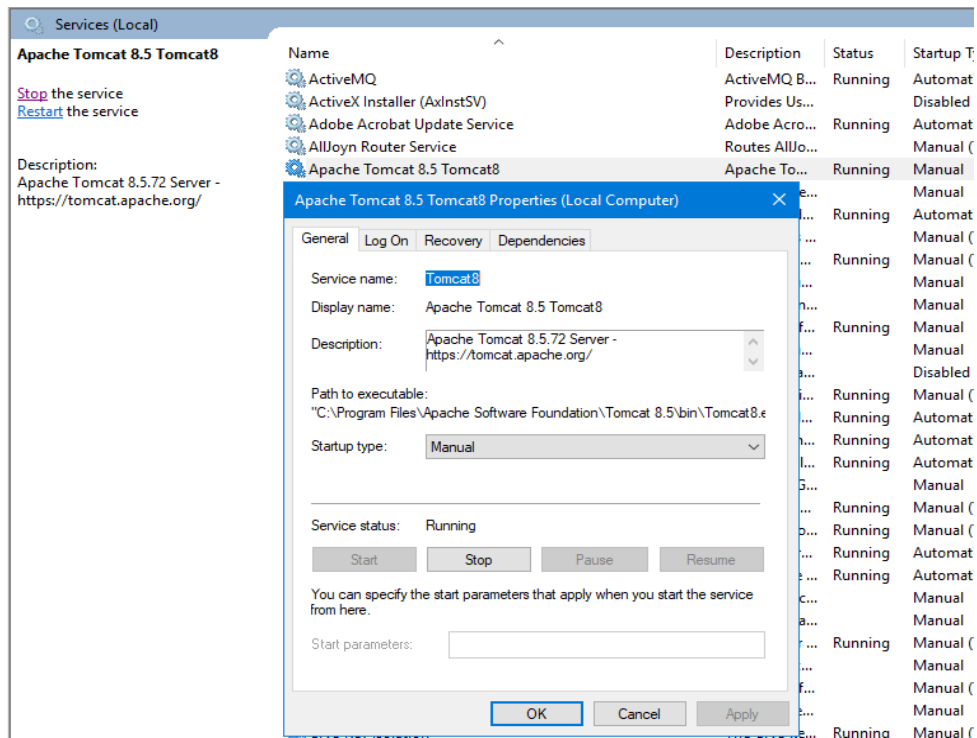Add "manager-script" to list of Roles

Confirm that it is pointing to the right Java version – note the path and version – it will be needed when setting up ActiveMQ further down

Complete the wizard and chose to run

1.4 Start > search for Services > Set the Tomcat service to start automatically

2 Download and install the C2SIM Server

2.1 Download the latest – look for the item with the highest version number – at the time of writing, that's 4.8.2.3:
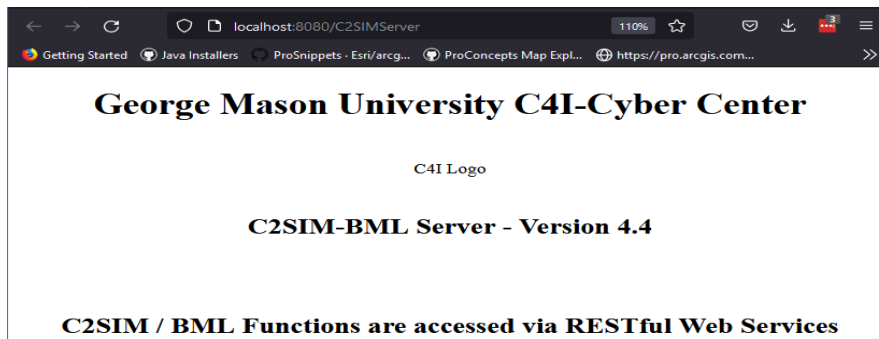https://github.com/OpenC2SIM/OpenC2SIM.github.io/blob/master/C2SIMServer%23%234.8.2.3.war

2.2 Drop the war file into Tomcat's webapps folder: C:\Program Files\Apache Software Foundation\Tomcat 8.5\webapps

The war is auto-expanded into a folder of the same name

2.3 Test the installation

Navigate to http://localhost:8080/C2SIMServer on a browser

A splash screen should be displayed

3. Download and install Apache ActiveMQ – Tested with version 5.16.x

3.1 Download the apache-activemq-5 Windows binaries from
https://activemq.apache.org/components/classic/download/
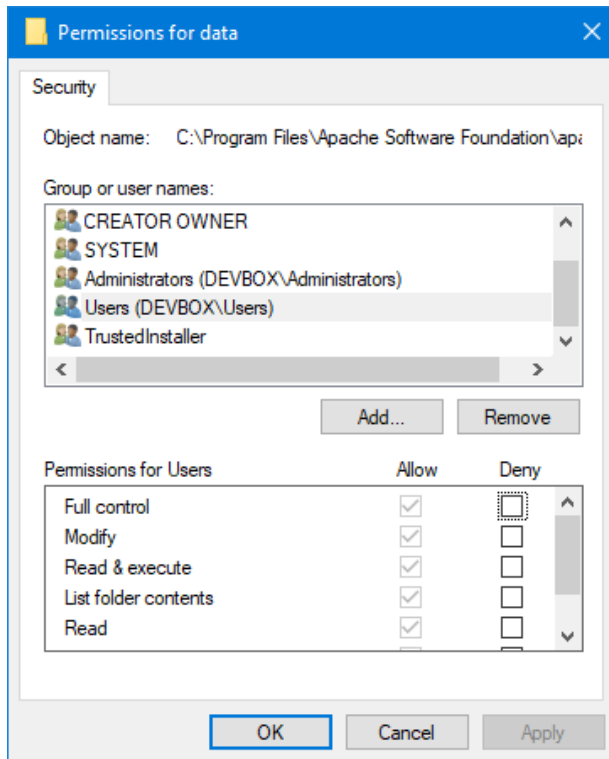
3.2 Unzip contents next to Tomcat, under C:\Program Files\Apache Software Foundation

3.3 Grant users write access to the data folder

In File Explorer, right click the C:\Program Files\Apache Software Foundation\apache-activemq-5.16.3**data** > Properties
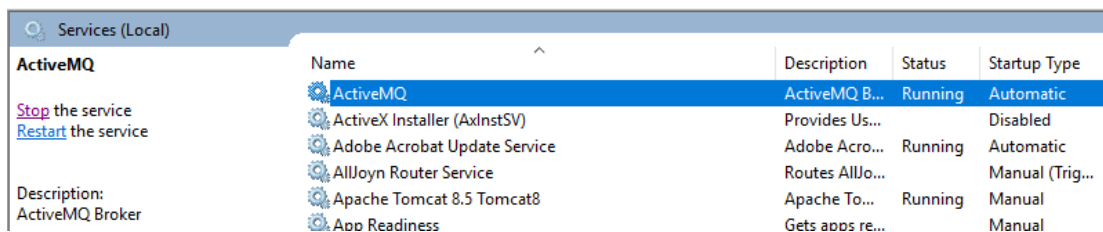
Select the Security tab > select Users, check the box to Allow Full Control

3.4 Install the service

Run (as Administrator) InstallService.bat under C:\Program Files\Apache Software Foundation\apache-activemq-X.X.X.X\bin\win64 - where X.X.X.X is the version that was installed

Start > search for Services > Start the ActiveMQ service if needed. Then set it to Automatic Startup

NOTE: If the service fails to start and the logs () show "Unable to execute Java command. The system cannot find the file specified. (0x2)":

- Make sure that JAVA_HOME is set and points to the default java version
- Edit wrapper.conf (under the same folder as InstallService.bat), and change:

    wrapper.java.command=java to wrapper.java.command=%JAVA_HOME%/bin/java

3.5 Verify install

Open a console window (Start > search for cmd) and enter netstat -an|find "61616". Check that the port is being listened

3.6 Create the C2SIM topic

Navigate to http://localhost:8161/admin on a browser. Use **admin/admin** as the credentials to log into ActiveMQ's administration screen

Switch to the Topics tab, enter C2SIM as the topic name and select the Create button
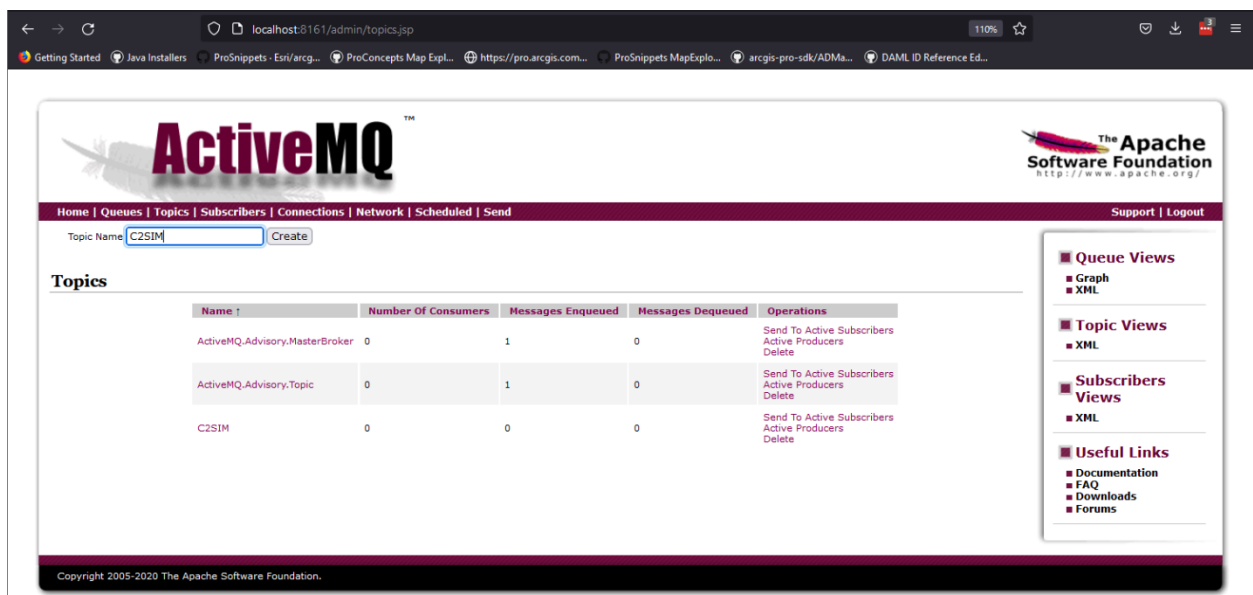
4. Configure clients to use the local install

4.1 Download and Install the latest C2SIM GUI Editor – look for the item with the highest version number – at the time of writing, that's 2.11.1:

https://github.com/OpenC2SIM/OpenC2SIM.github.io/blob/master/C2SIMGUIv2.11.1.zip
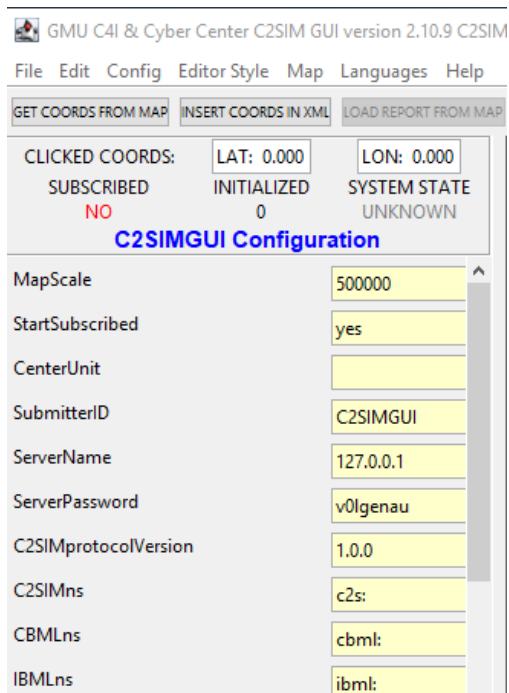
Unzip in some location – there is no actual install

4.2 Configure to point to the local server

Start the Editor via \runC2SIMGUI.bat

Select Config > Load

Change ServerName to 127.0.0.1 to make it use the localhost install. If the server was installed in another machine, use that machine's IP instead.
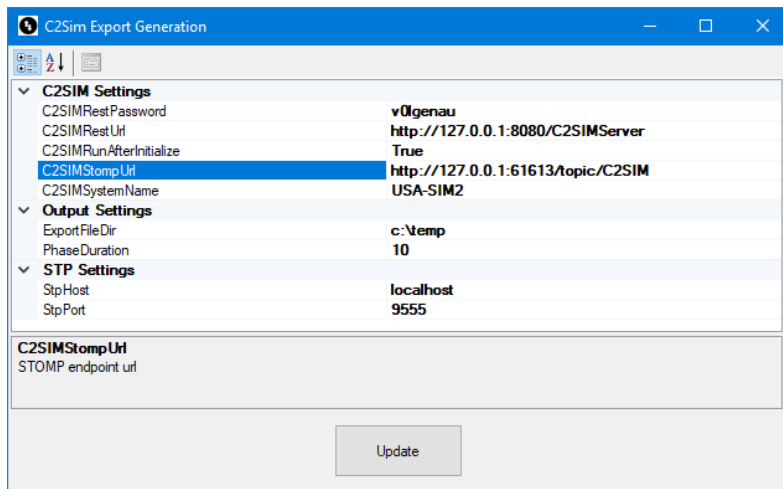
Select Config > Save and restart the Editor

4.3 Point STP's C2SIM Export component to the local server

Start STP

Open the C2SIM Export component by selecting its icon on the taskbar

Set the C2SIMRestUrl and C2SIMStompUrl servers to **127.0.0.1.** If the server was installed in another machine, use that machine's IP instead.

4.4 Test

Load a project with a COA in Pro, select the Sketch-Thru-Plan tab > Push C2SIM Initialization button to send the symbols' definitions

The GUI Editor should switch to Running

Send the Order by selecting the Push C2SIM Order button

The GUI Editor should display the COA with the routes

5. Next steps

Install a simulator and corresponding C2SIM connector/interface. Instructions are provided in specific documents.