DVK_Sydney_CUBE Image

Document Version	1.3
Software Release	1.0
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1 Overview of Revisions

VERSION	DATE	AUTOR	CHANGING
0.1	16.05.2013	MKRUEGER	Creation
1.0	20.06.2013	SBAILEY	Released
1.1	21.06.2013	MFAISAL	Eclipse Section Added
1.2	25.06.2013	MFAISAL	Eclipse Section Updated
1.3	27.06.2013	MKRUEGER	Server, JBoss, and MySQL Updated

Table: Overview of revisions

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2.1 Download of Image from FTP Server

As the image is currently too large to be archived under the normal SVN Server it has been archived locally at one of the Altran Germany offices and the head of release image has been stored on an FTP Server.

Web - https://www.hidrive.strato.com
User – sydney0
Password- Vjc1ZHP6

Please click on "*Zum Dateimanager*" to access the file server. The image can be found under "**Strato HiDrive → users → sydney0 → dev-image**"

The use of any standard FTP Client can be used to download this image to a local machine, or windows explorer can be directly used by entering the address: ftp.hidrive.strato.com.

Another way to download the file is through a web interface by clicking on:
http://webdav.hidrive.strato.com/users/sydney0/dev-image/

The directory contains the following files:

1. **Centos 6.4 64 Bit Heine Image.rar**
2. Centos 6.4 64 Bit Heine Image-old.rar
3. DVK_SYDNEY_CUBE-Development-Image-Installation.doc
4. **PUTTY.EXE**
5. **UltraVNC_1_1_9_X64_Setup.exe**
6. UltraVNC_1_1_9_X86_Setup.exe
7. **VirtualBox-4.2.12-84980-Win.exe**

The file no. 2 (Centos 6.4 64 Bit Heine Image-old.rar) can be ignored, since we will be used file no. 1 (Centos 6.4 64 Bit Heine Image.rar). However, since the image is close to 3 GB, downloading the image might take some time (several minutes).

2.2 Installation of Virtual Box

In the meantime, we can start the installation of Oracle VM which will be loaded on a Windows based machine and will emulate that Linux environment of the CUBE HW.

On the FTP / File Server, you will find the file "**VirtualBox-4.2.12-84980-Win.exe**". Please download this.

Double click on the icon to execute this file and install it with the default options. Note that there will appear various popups to add extra tools. Always click Yes/OK. Be sure to click to enable the checkbox to install the Desktop Icon.

This may take several minutes.

After the installation, and after the download of the image file is complete, you must **restart** your Windows System.

2.3 Setting Up the Virtual Machine

Before we start setting up the Virtual Machine, please create a folder in C drive called Virtual_Box_Image (**C:\Virtual_Box_Image**).

Paste the image you downloaded earlier (**Centos 6.4 64 Bit Heine Image(2).rar**). Extract or "unrar" this image into the folder. You will get a file of format ".vdi".

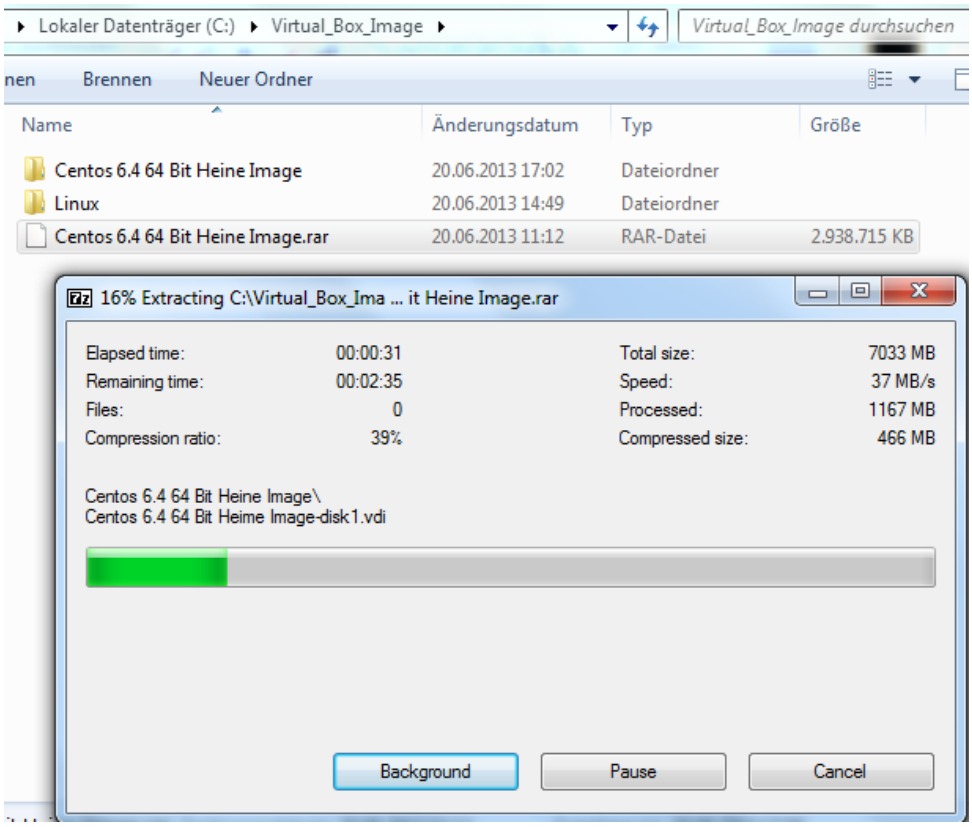

Figure 1 Decompressing

After the installation of the "*Oracle VirtualBox*" you can start the "*VirtualBox*" by clicking the "*Oracle VirtualBox*" icon on your Desktop.

Now, you should create a Virtual Folder on your system as shown below. Note that the Virtual Folder, by default, would be in your "*Documents*" directory.

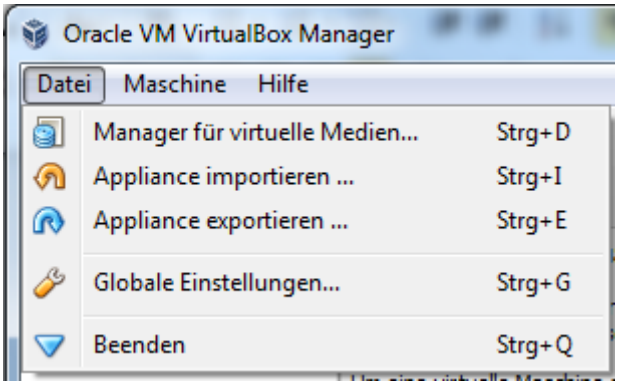

Figure 2: VM Settings

Using the "Datei → Globale Einstellungen" you will then create the directory structure/location for your virtual machine. This is also where you can change the language of the virtual machine "Datei → Sprache".

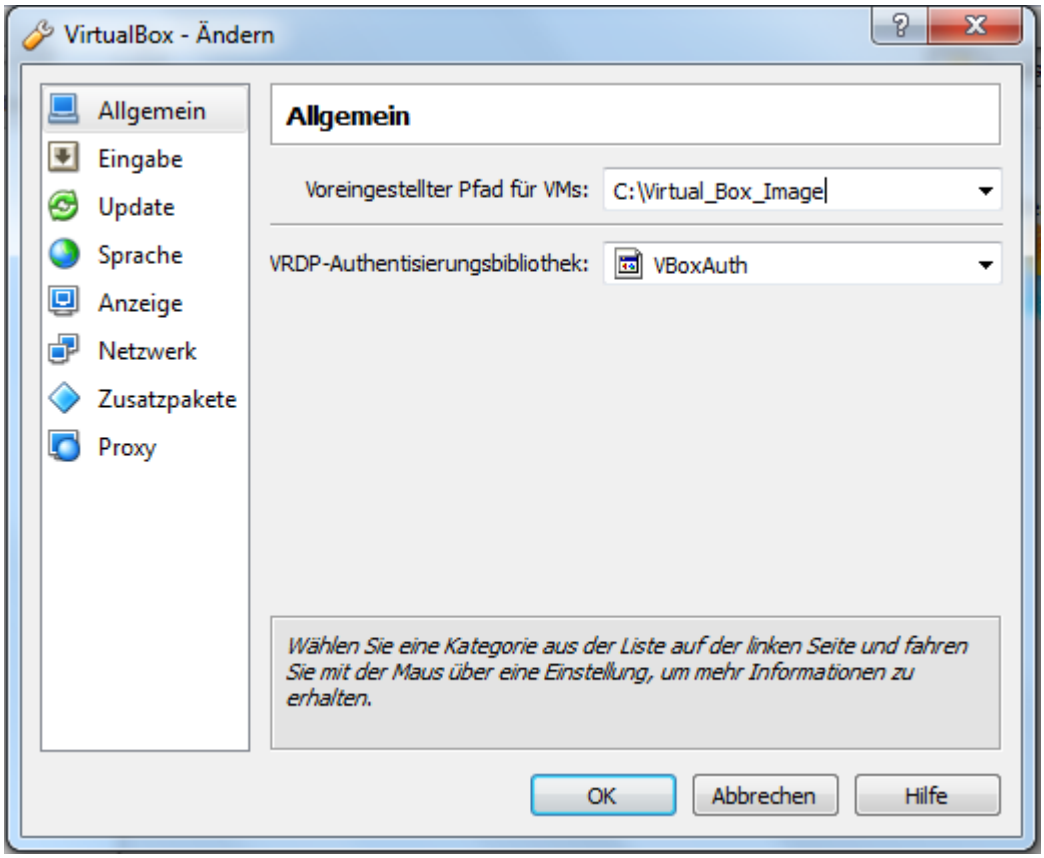

Figure 3: VM Directory

Click OK.

2.4 Installation of the Image

In Oracle VirtualBox, click to "**Maschine → Hinzufügen**" (**Machine → Add**)

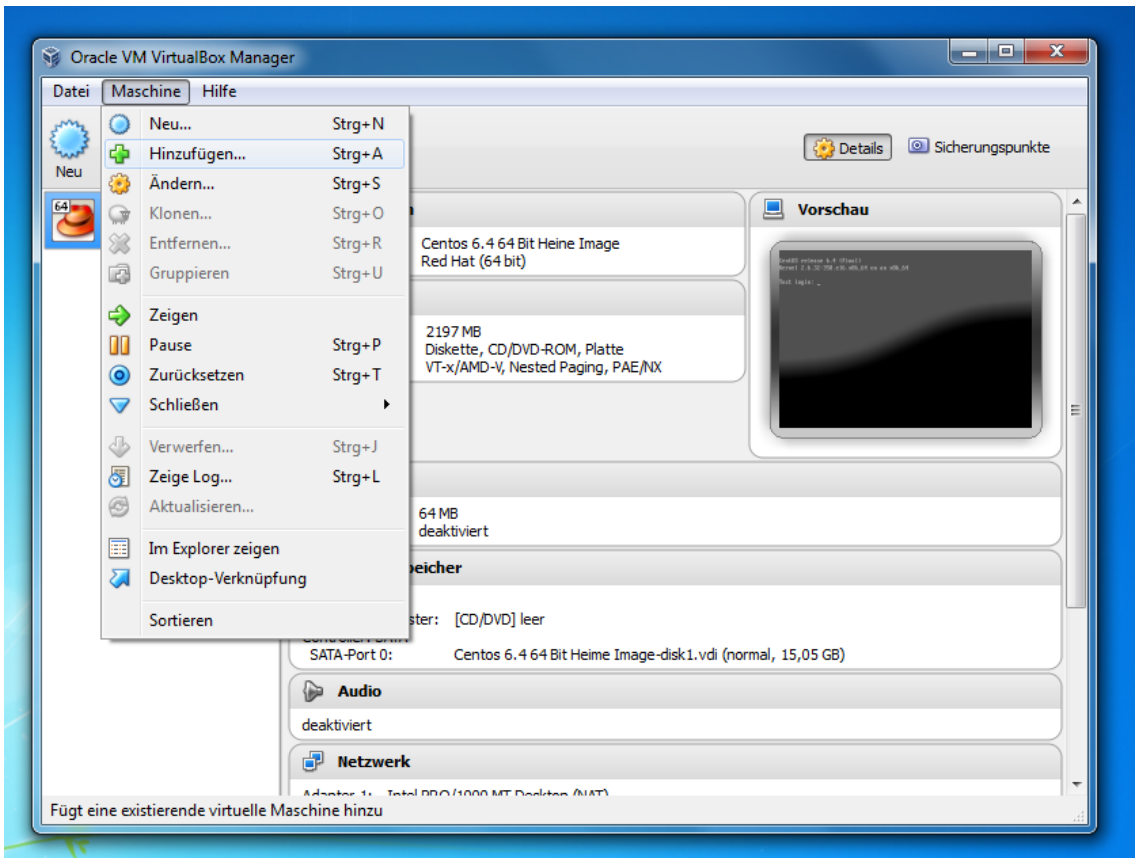

Figure 4: Attaching image to the Virtual Box

You should locate the folder and file
C:\Virtual_Box_Image\Centos 6.4 64 Bit Heine Image\Centos 6.4 64 Bit Heine Image

After that you have inserted the Image onto your system.

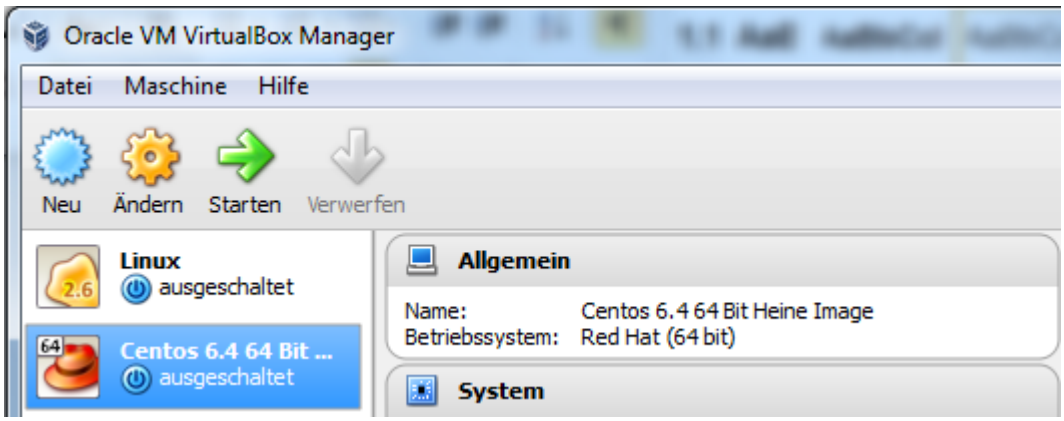

Figure 5: VM / Image Quick Start link

You can start this image by double clicking on the “Centos 6.4 64 Bit Heine Image” in the “Oracle VirtualBox” application. You can also start it by clicking on the green “*Starten*” button in the menu.

NOTE: Various Machines have various hardware settings. If this is the case then a warning message will appear. You will then have to either disable the non-relevant hardware in the Virtual Machine or will have to patch the Virtual Machine. An example is as follows.

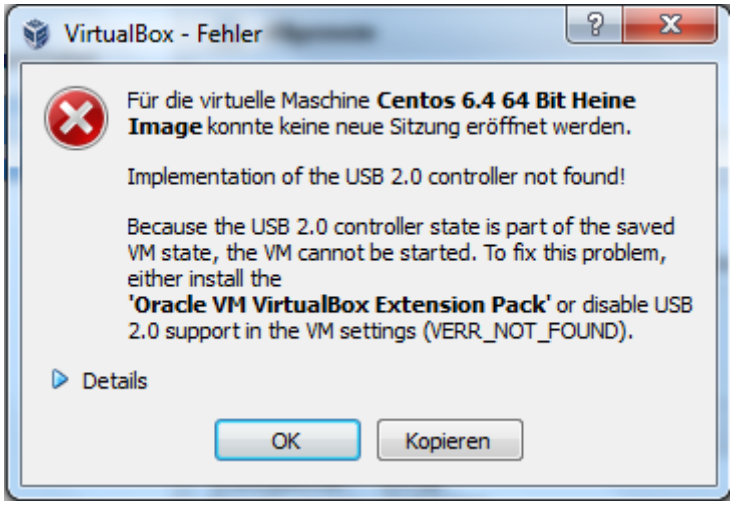

Figure 6: Sample hardware error 1

By this example the USB was turned off as it was not needed. This can be done by clicking on “*Andern*” from the menu, then scrolling down to the USB Control Setting and simply deactivating.

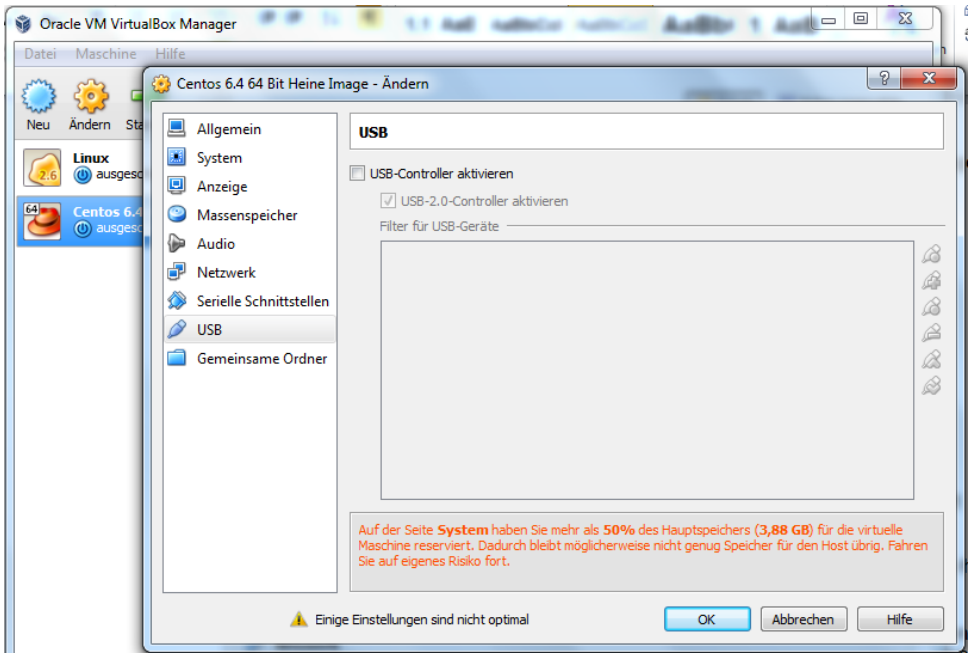

Figure 7: Sample hardware error 2

If the setting is one that is needed then contact the Altran Project Team for technical support in patching the Virtual Machine.

2.5 Starting the Image

The started image takes about 30 seconds to load. Notice that the right "**Strg**" key will be needed to switch modal focus of the mouse to and from the Virtual Machine.

Once the image has started, you will see the following image on screen:

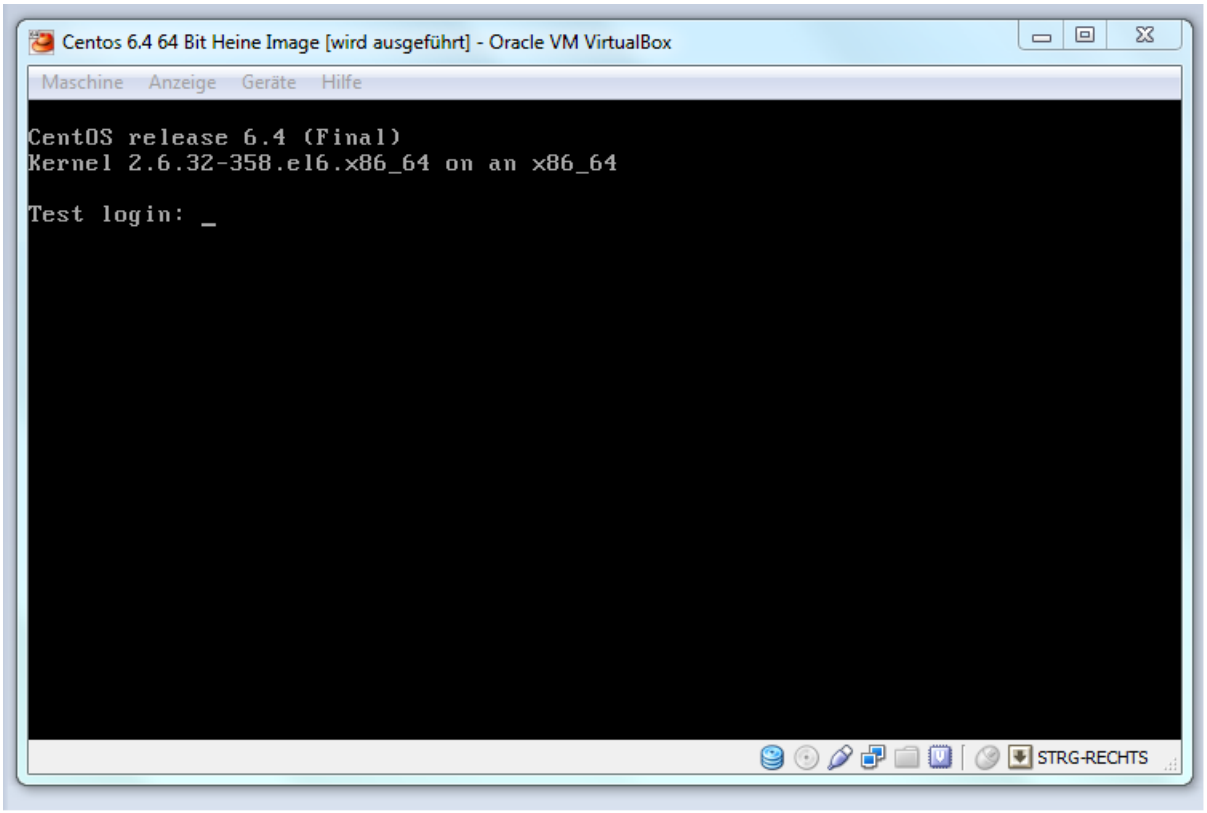

Figure 8: Login Screen

Type **user** = "root" and **password** = "start01" to log in.

You can access the machine via command line at this point. However, to get a graphical user interface, we still have some steps to go.

3 Installation of VNC viewer and putty

From the locally downloaded copy (or directly from the FTP/File Server) you will find the files **UltraVNC_1_1_9_X*_Setup.exe** and **putty.exe**, where X* refers to the OS type (32 bit or 64 bit).

Execute UltraVNC_1_1_9_X*_Setup.exe and install it with default settings.

Putty can be started directly without having to install it by double clicking the Putty icon.

3.1 Connect to the Image

To get the Graphical User Interface, we will follow the following steps:

1. Start the Virtual Machine first and log in
2. Start putty and log in
3. Start UltraVNC Viewer and connect

3.1.1 Connect to the Virtual Machine

So open the Virtual Machine as described in Section 2.5 and log in. Leave the Window open and change focus with the "*Strg*" key to get access to the Windows System.

3.1.2 Connect to Putty

Putty connect per ssh

- Start putty
- Insert in Host Name (or IP address) **10.0.3.11**
- Port is **22**
- Saved Sessions should be "Heine_Image"
- Click "save"
- Now you can click "Open"
- You should Agree the next question

Note: A network connection is required so complete offline work is not possible.

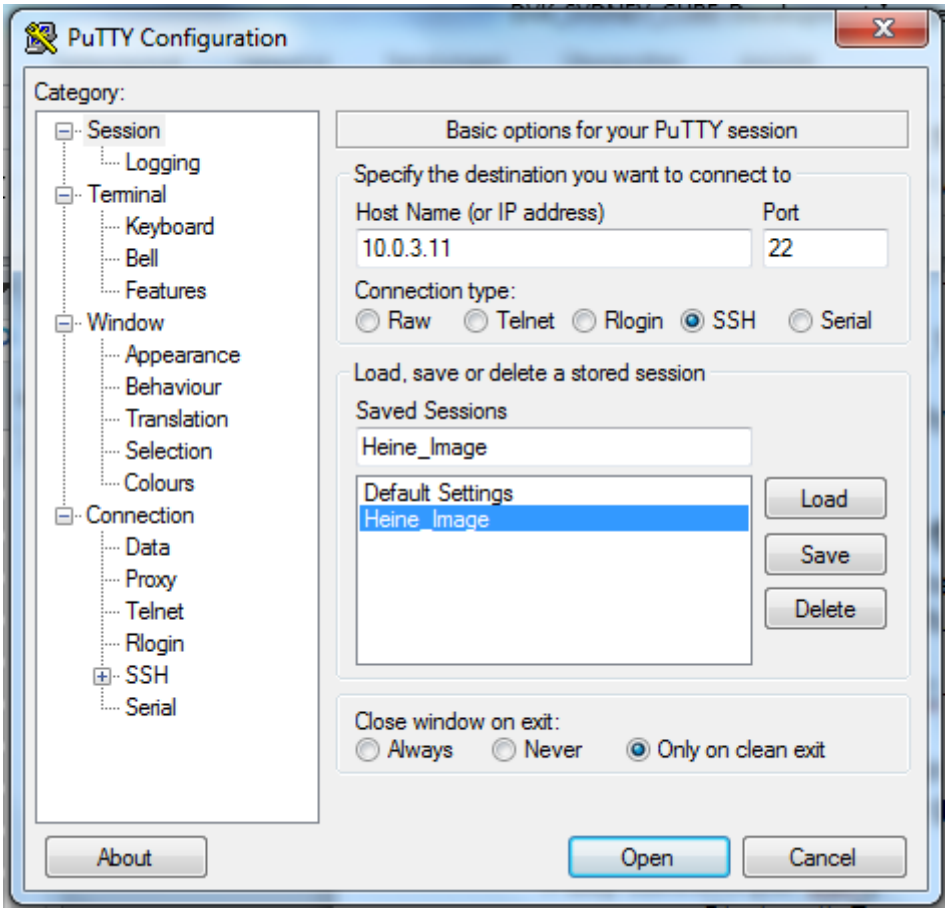

Figure 9: Configure Putty

Next time you run Putty, you can select *Heine_Image* from the Saved Sessions, and click "*Load*" to load the values.

Should the connection fail, restart *Putty* as **root** (as **administrator**).

If the connection fails again, open "*Network and Sharing Center*" from control panel. Alternatively, this can be done by right clicking and selecting the required option from the network notification icon on lower right side of the window.

On the left side menu, select "*Change Adapter Settings*" to go to the overview of all your network connections. Find "*VirtualBox Host Only Ethernet Adapter*" and go to the IPV4 properties. This is done by right clicking on the adapter and clicking on Properties; selecting "IPV4" and clicking on "Properties". Click on "Use the following IP" and add:

IP Address: 10. 0. 3. 1
Subnet mask: 255. 255. 255. 0

Click "*OK*" and then again "*OK*".

Try connecting again as root. If the problem still persists, contact Altran Project team.

3.1.3 Connect to UltraVNC Viewer

Start the application “UltraVNC Viewer”

- **VNC Server** 10.0.3.11:5901
- Quick Options **AUTO**
- 1280x1024
- Save connection settings as default

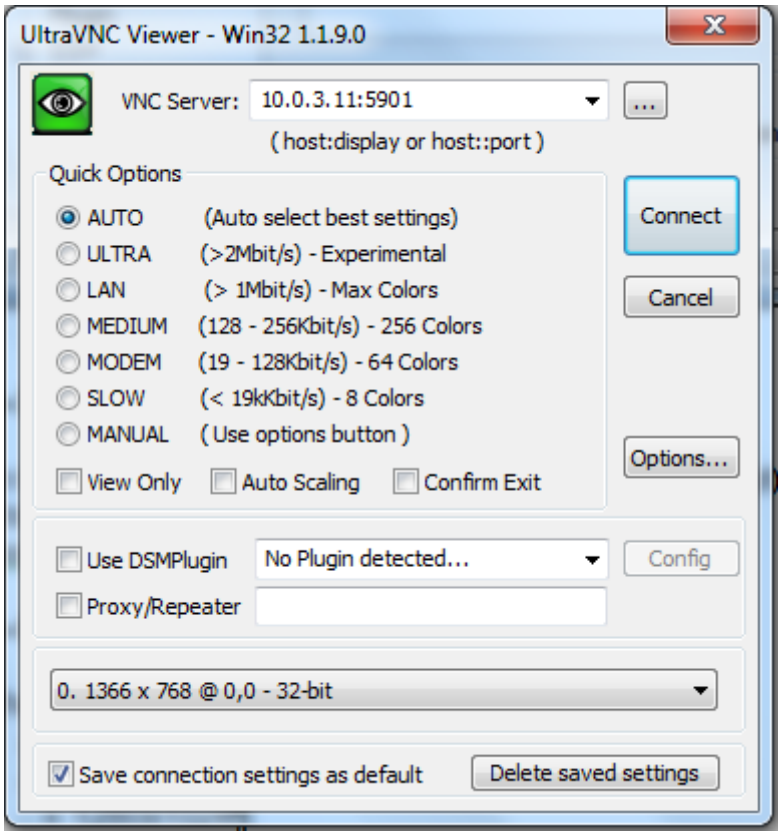

Figure 10: Configure UltraVNC Viewer

Click “**Connect**”
Password is “**start01**”

3.2 VNC start problem

If you got display problems you should login via putty as user root (as administrator).

Then you execute the following:

“service vncserver restart”

4 Starting Eclipse

Once you are logged in, you will see a desktop. One of the four icons you can see will be "**eclipse**". Click on it to start it. (In the OS being used, CentOS 6.4, a single left click opens are file)

Figure 11: Virtual Machine Desktop

This might take a couple of minutes to load.

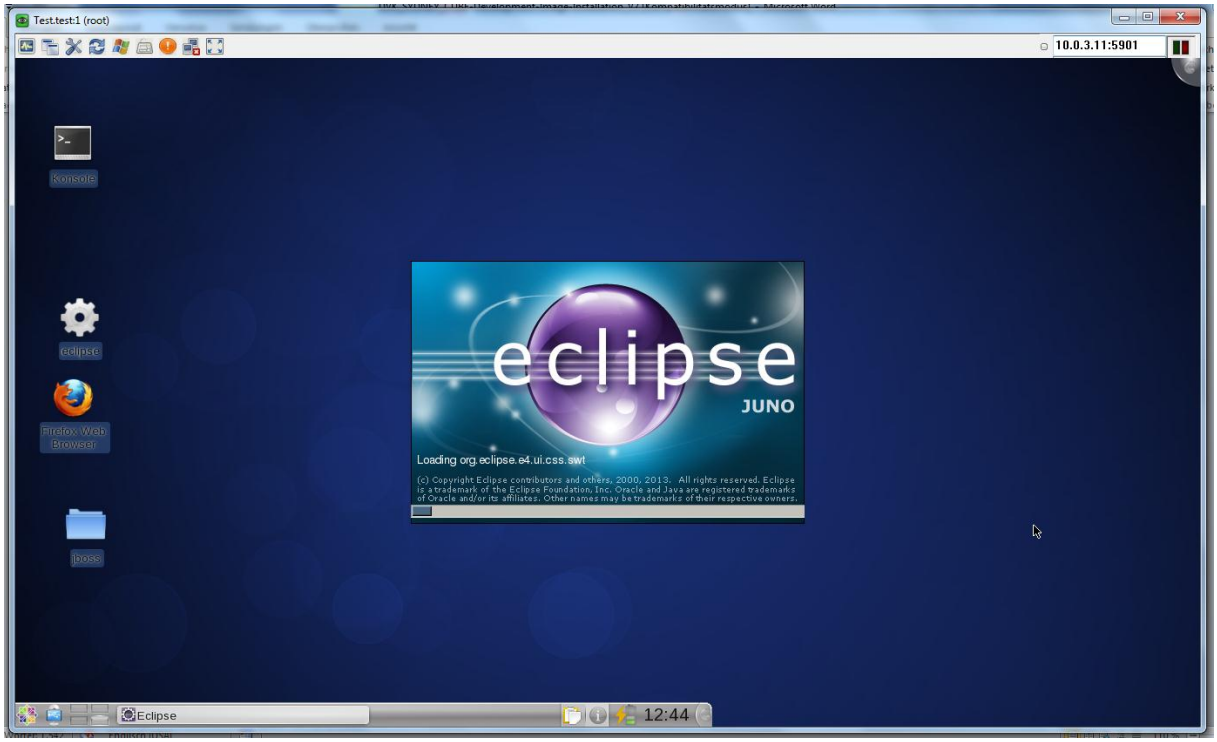

Figure 12: Eclipse loading

Once eclipse has loaded, we get the following display:

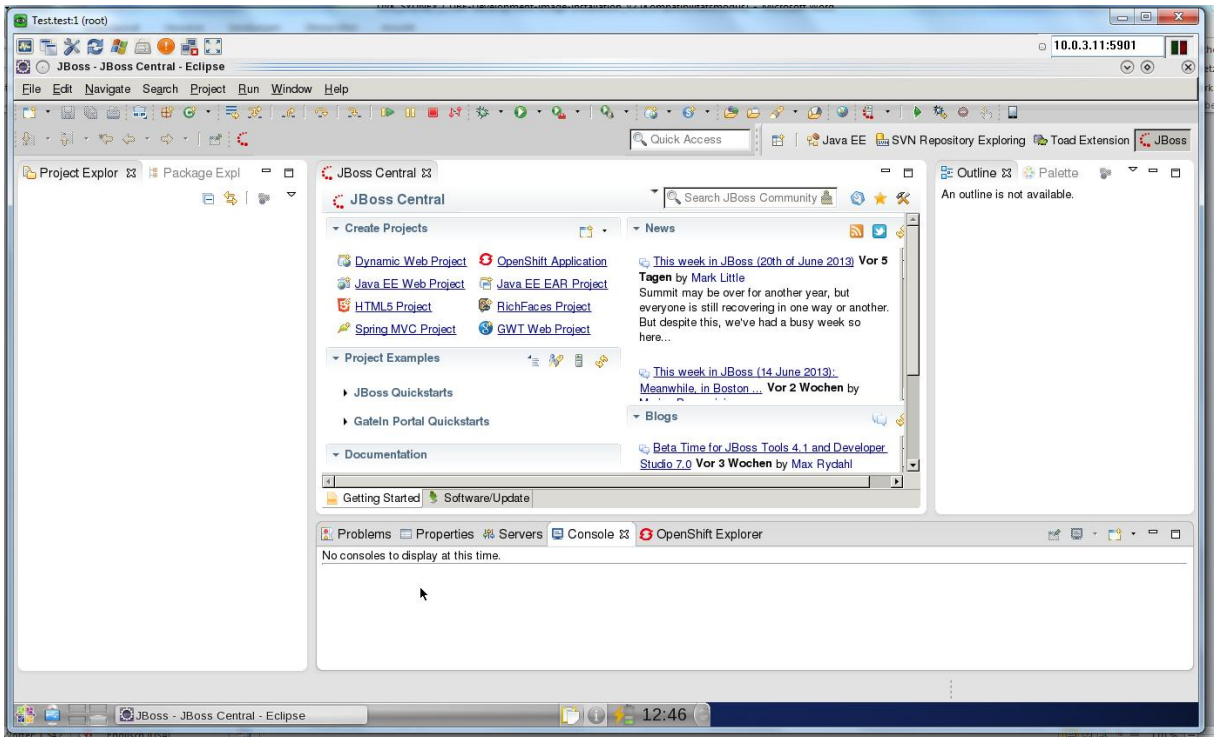

Figure 13: Eclipse environment

5 Importing a Module

Now that we have eclipse running, the next step is to import the code. This will be done through an SVN plugin of Eclipse. From "*File*" menu, select "*Import*".

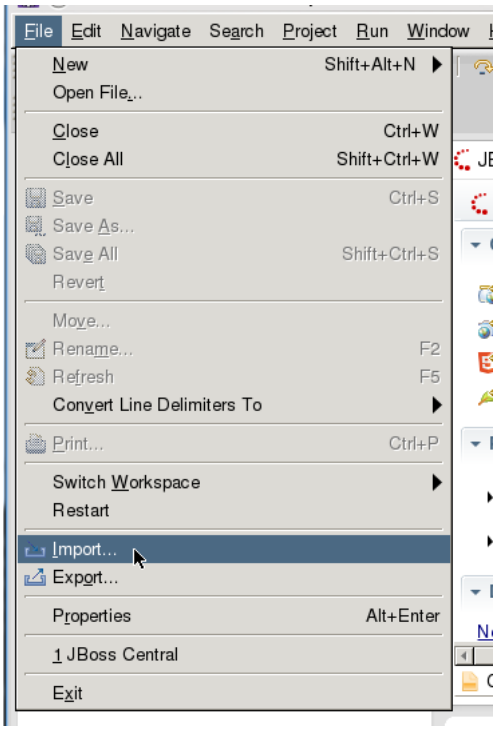

Figure 14: Import Menu

From the list of import options, expand "**SVN**" and select "*Checkout Projects from SVN*".

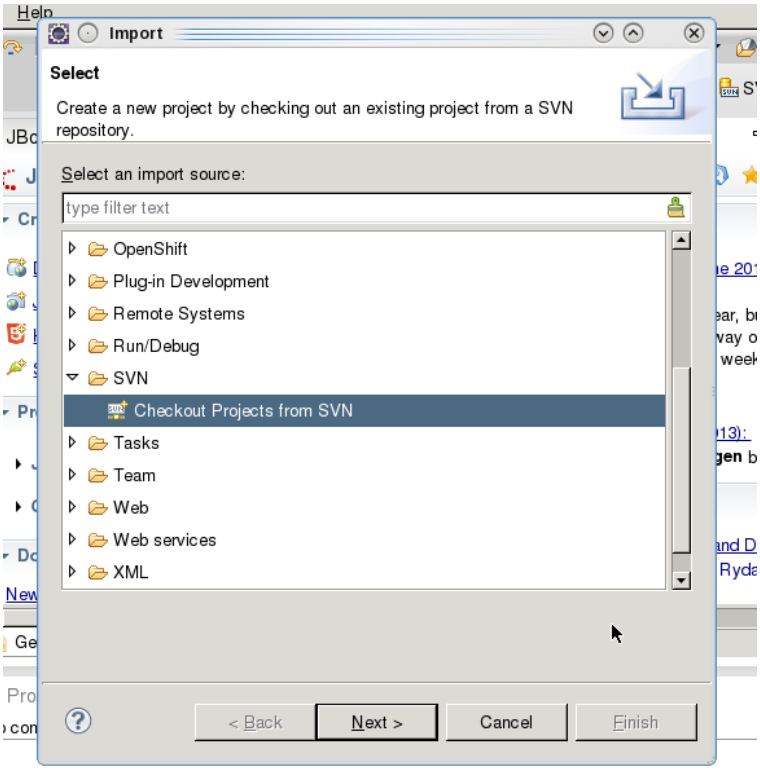

Figure 15: Import Options

Since our repository is not in the existing repositories in the first go, select "***Create a new repository location***" and click "*Next*":

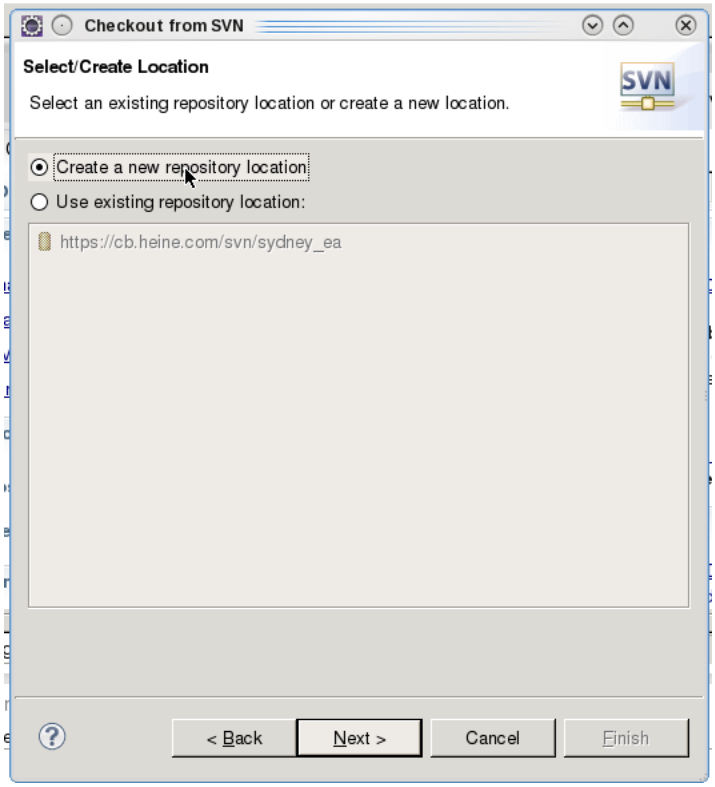

Figure 16: Create new repository

Enter **https://cb.heine.com/svn/sydney_devenv** and click "*Next*". Alternatively, if our repository (https://cb.heine.com/svn/sydney_devenv) is in existing repositories then select it and click "*Next*".

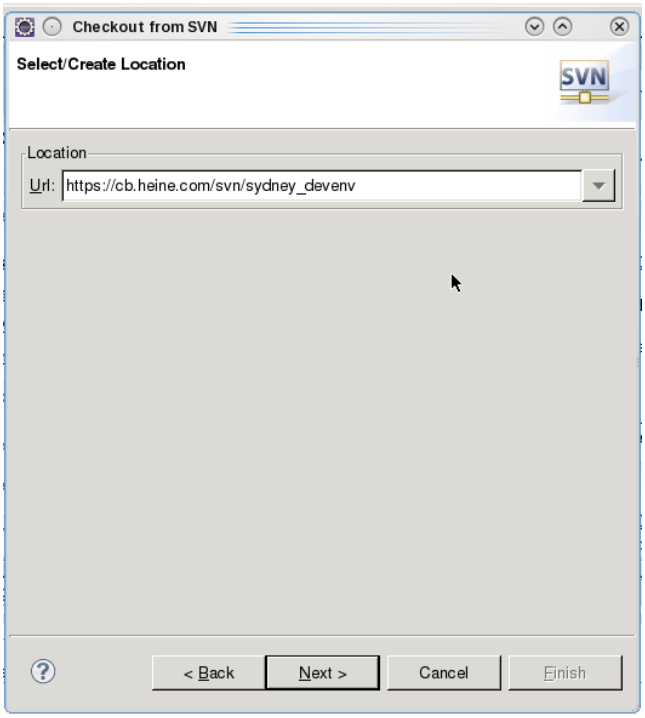

Figure 17: New repository URL

You might get the following error. Click "**OK**" to ignore it.

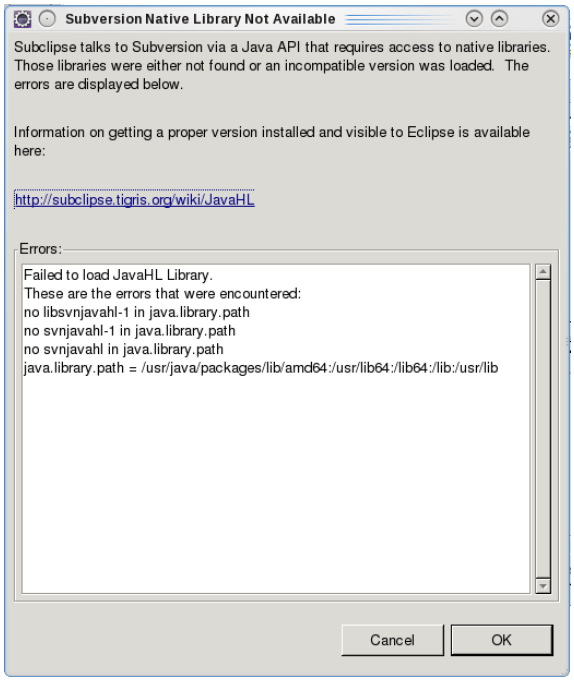

Figure 18: SVN Error

Add this time, a prompt will ask for your **username** and **password**. This is your login information for the SVN repository. Please enter this correctly. If you are unsure of your login details, please contact the Altran Project team. If you enter the wrong username and password, the prompt will appear again until you press "*Cancel*".

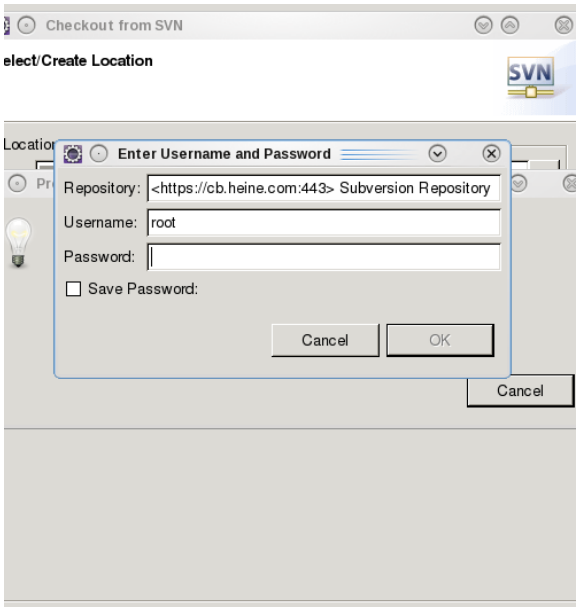

Figure 19: SVN Login

Enter your username and password and click "*OK*".

You can now see the structure of the repository.

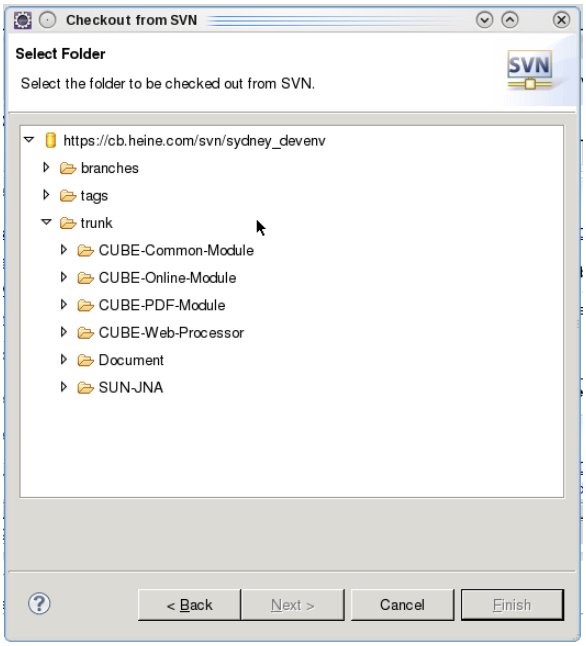

Figure 20: Repository Structure

Click on the arrow before "**trunk**" to expand it. You will see the structure above. Select "**CUBE-Common-Module**" and click "*Next*".

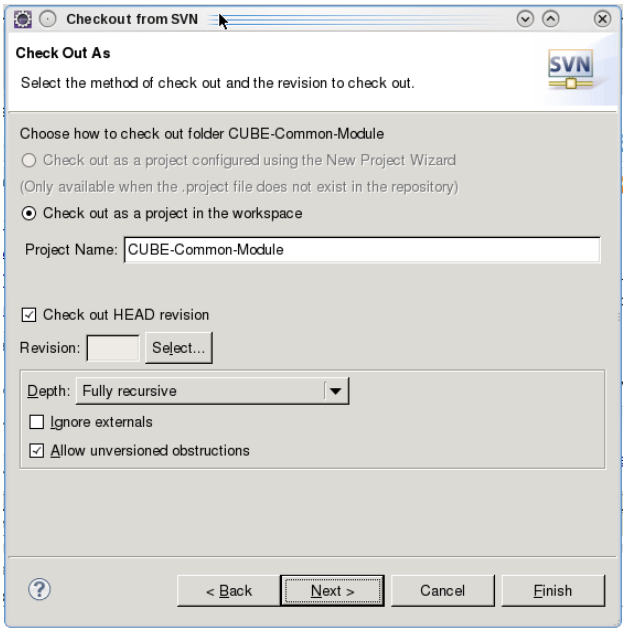

Figure 21: Checkout options

Click next again and then click "*Finish*". It will take a couple of minutes to download the module.

6 Importing entire code

Now that we have imported the “CUBE-Common-Module”, **repeat** the process from section 5, selecting each of the following modules in turns:

- CUBE-Online-Module
- CUBE-PDF-Module
- CUBE-Web-Processor
- Document
- SUN-JNA

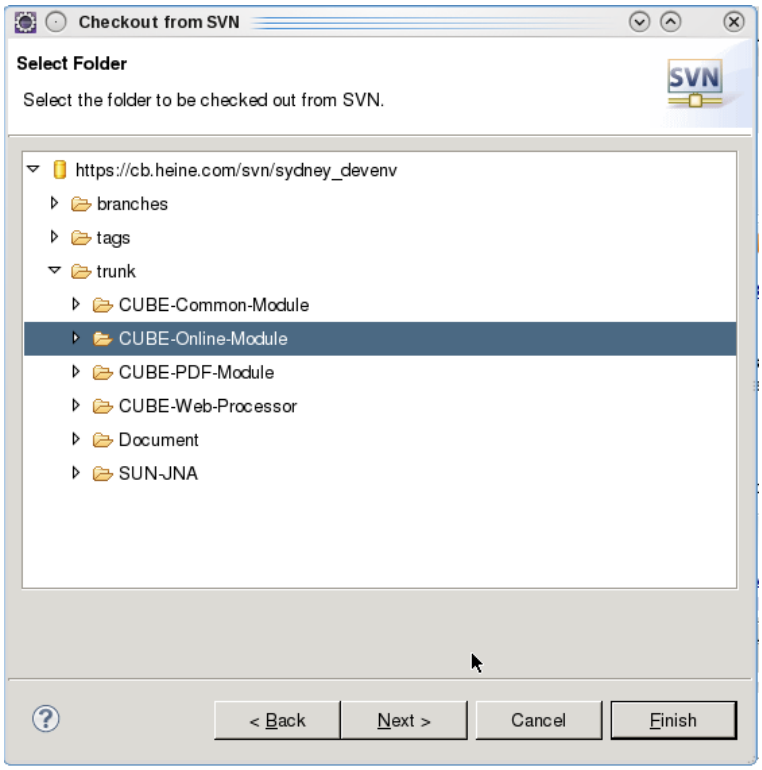

Figure 22: Module Selection

Once you are done, the structure of the code seen in the Project Explorer would be similar to one below:

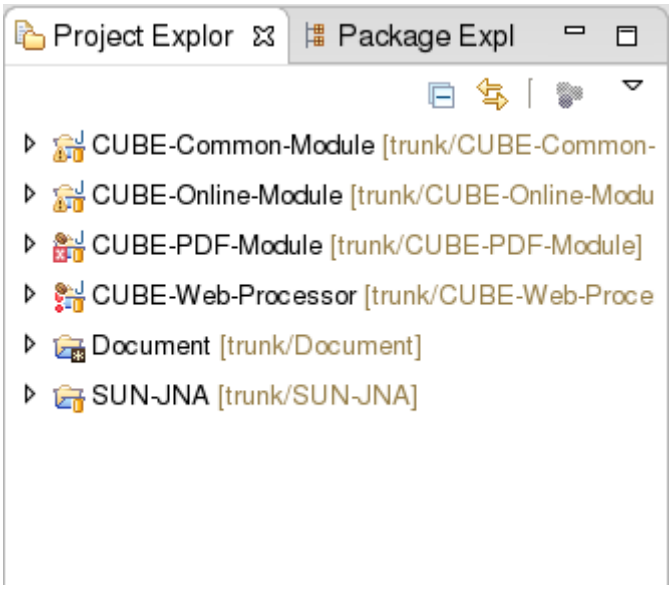

Figure 23: Project Explorer structure

7 Compiling and running

You might see that there are some errors in the projects. This can be removed by right clicking on the "*CUBE-Web-Processor → Build Path → Configure Build Path*", and adding the missing libraries. The libraries needed for a project are stored under "**lib**" folder in their respective project. If you cannot find the path of a particular library, please contact the Altran Project team.

Note: Since the code is still developmental, there might be errors in the code form time to time. If this is the case, wait a couple of hours, or contact Altran Project team for assistance.

Once the code is compiled, and no errors are observed, the server can be started. Click on the "**Servers**" tab in the bottom menu as shown below, or select it from top menu at "**Windows → Show Views → Servers**".

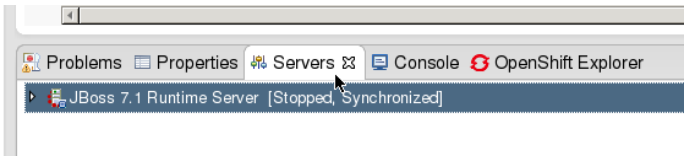

Figure 24: Servers Tab

Now right click the server located here, and click on "**Start**".

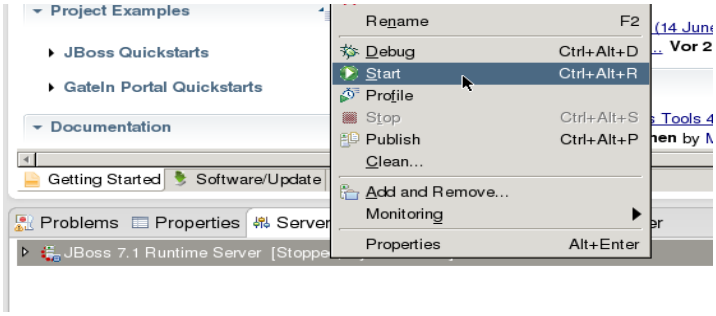

Figure 25: Starting the server

The server is now running:

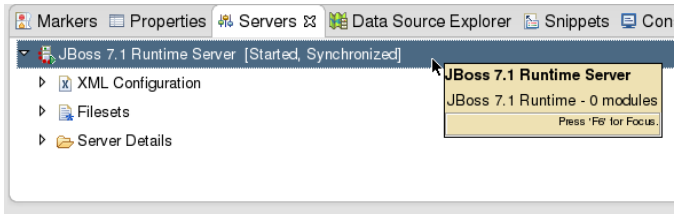

Figure 26: Running Server

The PDF module can then be "deployed" by right clicking on the project, "**Run As → Run on Server**". Similarly CUBE-Web-Processor module can be deployed.

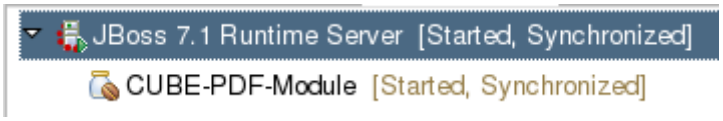

Figure 27: Deployed Modules

However, currently, we do not have a client to test the functionality of the deployed modules running on the server.