Practical 01 - Build Development Environment

Objectives:

Programs Required for Practical Exercises on this course:
- A Java JDK v1.8 (aka Java 8) - as appropriate for your environment – obtain from java.com or openJDK.org if required, this is already installed in the VM supplied.
- Eclipse JEE Kepler - www.eclipse.org - currently using eclipse-jee-kepler-SR2-linux-gtk-x86_64.tar.gz within the VM.
- Apache Tomcat - tomcat.apache.org - currently using apache-tomcat-7.0.81 within the VM.
- SoapUI - http://soapui.org - Free Open Source edition (not Pro!), currently using version 5.3.0 within the VM.

Instructions:

Part 1: Select and build your development environment

- **Pick path 1, 2 or 3.**
- These notes assume that you are using the supplied VM Disk file (path 1 or 2) rather than path 3 (which is essentially "roll your own").
  - There will be limited support available during the practicals if you choose path 3.
- Paths 1 & 2 are probably easier:
  - The VM disk image is set up and ready to go.
  - A suitable Java JDK has already been installed inside the VM
  - All programs have been downloaded, and are ready to unpack and use.
  - NB: If you try to run a VM with the VM Disk file located on a USB key or similar, performance will be very poor, even with USB3.
  - NB: Username and password for the supplied VM are "user" and "password".
- Path 3 requires more "figuring out" – you'll have to install your own JDK, figure out paths etc.

1. **Path 1: Run the supplied VM inside VMWare on the IPA workstation.**
   1.1. Sign on to the IPA Workstation
   1.2. Make a copy of the disk .vdi file
       1.2.1. Locate the file "WSinCC_001_GOLD.vdi"
       1.2.2. Copy this file to a location on your hard disk.
       1.2.3. Make a copy this file with a name like "WSinCC_001_working_copy.vdi"
       1.2.4. Keep the "GOLD" version as a backup in case a problem arises with the working copy.
   1.3. Create a new VM based on the disk file based on the "working_copy" file:
       1.3.1. Locate and launch "Oracle VM Virtual Box Manager"

      1.3.2.Click on "New" to create new virtual machine.

      1.3.3.At "Name and operating system",

          1.3.3.1.   Set name to "WSinCC_<username>"

          1.3.3.2.   Set "Operating System" to "Linux"

          1.3.3.3.   Set "Version" to "Ubuntu (64 bit)"

          1.3.3.4.   Click <Next>

      1.3.4.At "Memory Size":

          1.3.4.1.   Set "Base Memory Size" to 2048Mb (assuming your workstation has at least 4Gb of RAM - if not, set the base memory size no larger than 50% of physical RAM)

          1.3.4.2.   Click <Next>

      1.3.5.At "Hard Drive":

          1.3.5.1.   Select "Use an existing virtual hard drive file:" and click <Next>

          1.3.5.2.   Locate and select the working copy of the .vdi you created earlier.

          1.3.5.3.   Click <Create>

      1.3.6.At "Oracle VM Virtual Box Manager"

          1.3.6.1.   Select the VM you just created, then click on <Start> to power on the VM

          1.3.6.2.   Wait for the VM to power on and boot

   1.4. Login to the VM

      1.4.1.Select the user "user"

      1.4.2.Enter the password "password"

      1.4.3.Click "Login"

      1.4.4.Wait for login to complete, and the desktop to appear

2.   Path 2: Run the supplied VM inside Oracle Virtual Box on your own laptop

   2.1. Install a suitable VM environment onto your own laptop - Oracle VirtualBox is suitable, and is available from www.virtualbox.org

   2.2. Follow the steps in Path 1 above to create a VirtualBox VM based on the working copy .vdi file

3.   Path 3: Install Java, Eclipse etc. on your own laptop.

   3.1. Download the various programs in versions suitable for your laptop/workstation.

   3.2. Remember: you may have to install a suitable JDK (this is already installed for you in the VM)

   3.3. Install as appropriate.

Part 2: Unpack and Launch Eclipse

1. Sign on to the VM.
2. Start the file manager (second icon from the left on the start bar).
   2.1. In the file manager, locate the "/home/user/Downloads" folder, and open it.
   2.2. Note the packages in the folder: Apache Tomcat, Eclipse JEE and SoapUI
3. Create a folder to hold our development environment:
   3.1. In the file manager, locate the folder "/home/user"
   3.2. Right click in the blank area of "/home/user".
   3.3. Select "Create New", then "Folder"
   3.4. Name the folder "development"
   3.5. Double click on the "development" folder to open it.
4. Unpack Eclipse
   4.1. In the file manager, locate the "/home/user/Downloads" folder.
   4.2. Locate the Eclipse .tar.gz file.
   4.3. Double click on the Eclipse .tar.gz file.
   4.4. The archive manager will open, and read the contents of the .tar.gz file
   4.5. Locate and select the "eclipse" folder.
   4.6. Click on <Extract>
   4.7. In the "Extract" dialogue:
       4.7.1. Locate the folder "/home/user/development"
       4.7.2. Click on <Extract>
       4.7.3. Wait for the "Extracting file from archive..." process to complete
   4.8. When completed, press <Close>
5. Launch Eclipse
   5.1. In the file manager, locate the "/home/user/development/eclipse" folder
   5.2. In this folder, locate the "eclipse" file and double click it.
   5.3. In the "Execute File" dialogue, click on <Execute>
   5.4. Wait for Eclipse to launch.
   5.5. At "Workspace Launcher":
       5.5.1. Set the "Workspace:" path to "/home/user/development/workspace"
       5.5.2. Select "User this as the default and do not ask again".
       5.5.3. Click <OK>
6. Wait for the workspace to open, and the "Welcome" screen to be displayed.