PART 10 – LINUX INTEGRATION

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Linux Integration

ImproNet V7.6 (onwards) supports installation of ImproNet Engine on OpenSUSE V10.30 Linux.

Conversion of the USB Registration Interface for Linux

Install the USB Registration Interface and Device Drivers

*If there are old USB Drivers on the PC, delete them **before** installing the provided driver.*

1. Plug the **USB Registration Interface** into a USB port on the PC. The **Found New Hardware Wizard** displays.
2. Follow the onscreen instructions. In some cases, two drivers install; one for the **USB Registration Reader** and one for the **COM port to USB Bridge**. Therefore, the Wizard pops up twice.

Ensure that you only assign the Registration Interface to an unused Communications Port lower than 10.

*On some PC's, the **New Hardware Found** wizard is displayed every time a **USB Registration Reader Interface** with a new USB Serial Number (Fixed Address) is plugged in. If this happens, choose the option to automatically install the unit; The **New Hardware Found** wizard will not be displayed again.*

Changing the Product ID

Ensure that you use the Windows XP operating system when changing the Product ID.

1. Open the CP210x Set IDs Application, by running the **CP2101SetIDs.exe** file.

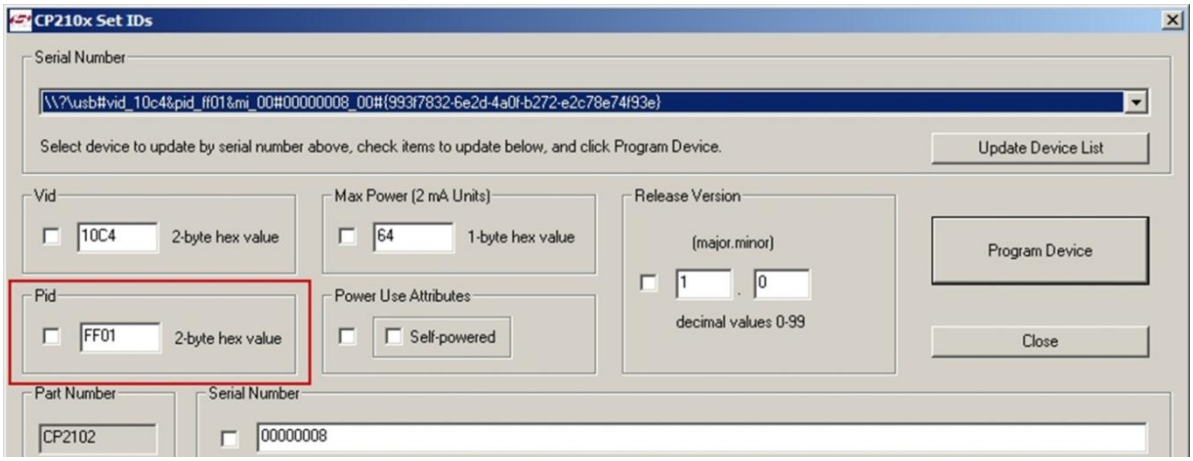

Figure 1 – CP210x Set IDs Dialog

If the textboxes displayed in the Figure 1 contain no values, then the USB Device Drivers installed incorrectly. Disconnect and then reconnect the USB Device.

2. In the **Pid** group, select the checkbox.
3. In the **Pid** group, in the textbox, enter the text **EA60** (replacing the existing text FF01 or FF02).
4. Click on the **Progam Device** button.
5. Disconnect the USB Registration Interface from the Windows PC.
6. Connect the USB Registration Interface to the Linux PC.
7. Install the necessary Drivers.
8. Click the **Computer** button.
9. Click the **More Applications** button.
10. Select the **System** menu option.
11. Select the **Terminal** icon.
12. View the number of USB Ports in use, by entering the following instruction:
    ls /dev/ttyUSB*

Usually a single USB Port is in use (ttyUSB0). In that case, link the USB Port to COM Port 2 for example. If the PC has more than 2 COM Ports alter the instruction accordingly. Suitable scenarios could include ttyS0 to COM Port 1, ttyS1 to COM Port 2, ttyS2 to COM Port 3, ttyS3 to COM Port 4, ttyS4 to COM Port 5 and ttyS5 to COM Port 6.

13. Press **Enter**.
14. For the sake of this example, we entered the following instruction:
    ls /dev/ttyUSB0 /dev/ttyS2
15. Press **Enter**.

Installing ImproNet on Linux OpenSUSE V10.30

Ensure that you log-in to the Linux PC as the root user, before proceeding further.

Copy the contents of your supplied ImproNet CD to your Linux Desktop, naming the folder **IMPRONET**.

Firebird Installation

1. Click the **Computer** button.
2. Click the **More Applications** button.
3. Select the **System** menu option.
4. Select the **Terminal** icon.
5. In the Terminal dialog, type in the following instruction:
   cd /root/Desktop/IMPRONET/database/firebird/linux
6. Press **Enter**.
7. Type in the following instruction:
   rpm -uhv firebird.rpm
8. Press **Enter**.

ImproNet Installation

Terminal Application

1. Type in the following instruction:
   cd /root/Desktop/IMPRONET
2. Press Enter.
3. Type in the following instruction:
   mv setup.bin setup.bak
4. Press Enter.
5. Type in the following:
   cat setup.bak | sed "s/export LD_ASSUME_KERNEL/#xport LD_ASSUME _KERNEL/" > setup.bin
6. Press Enter.

Browser

1. From the Desktop, select the **IMPRONET** installation directory.
2. Right-click the **setup.bin** file.
3. Choose the **Properties** menu option.

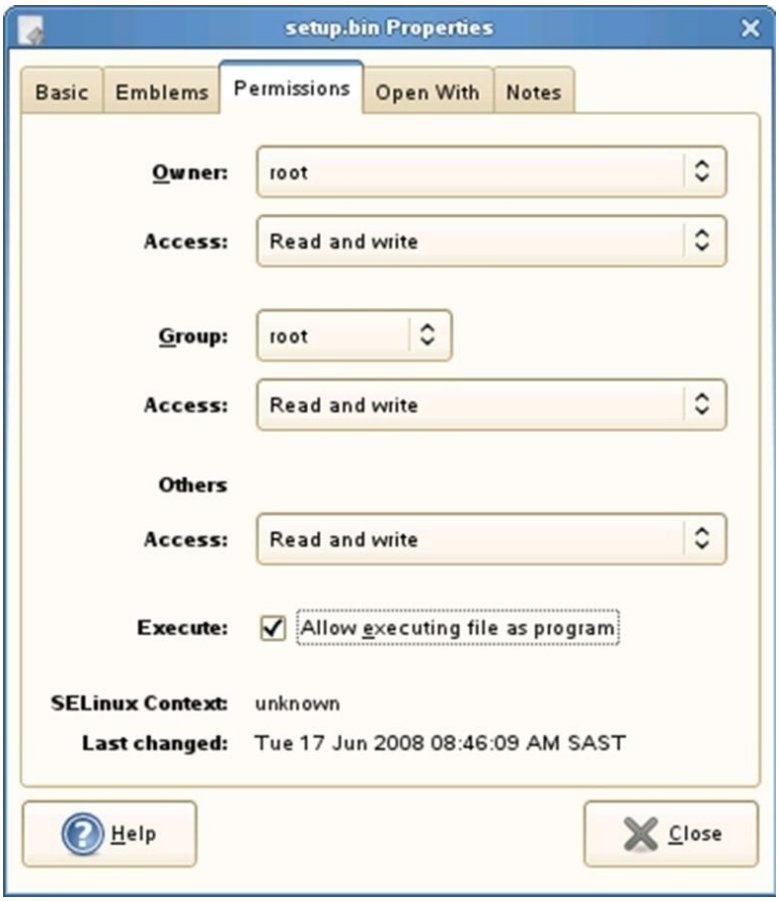

Figure 2 – Setup.bin Properties Dialog

4. Select the **Permissions** tab.
5. From each of the **Access** drop-down menus, select the **Read and Write** option.
6. Select the **Execute** checkbox.
7. Click the **Close** button.

Terminal Application

1. Type in the following instruction:
   export LIBXCB_ALLOW_SLOPPY_LOCK=1
2. Press **Enter**.
3. Type in the following instruction:
   ./setup.bin
4. Press **Enter**.

ImproNet Installer Application

1. Select **English** as the language option.
2. Click the **OK** button.
3. At the Introduction screen, click **Next**.
4. At the Licence Agreement screen, select the **I Accept the Terms of the Licence Agreement** radio button.
5. Click the **Next** button.
6. At the Choose Install Folder screen, click **Next**.

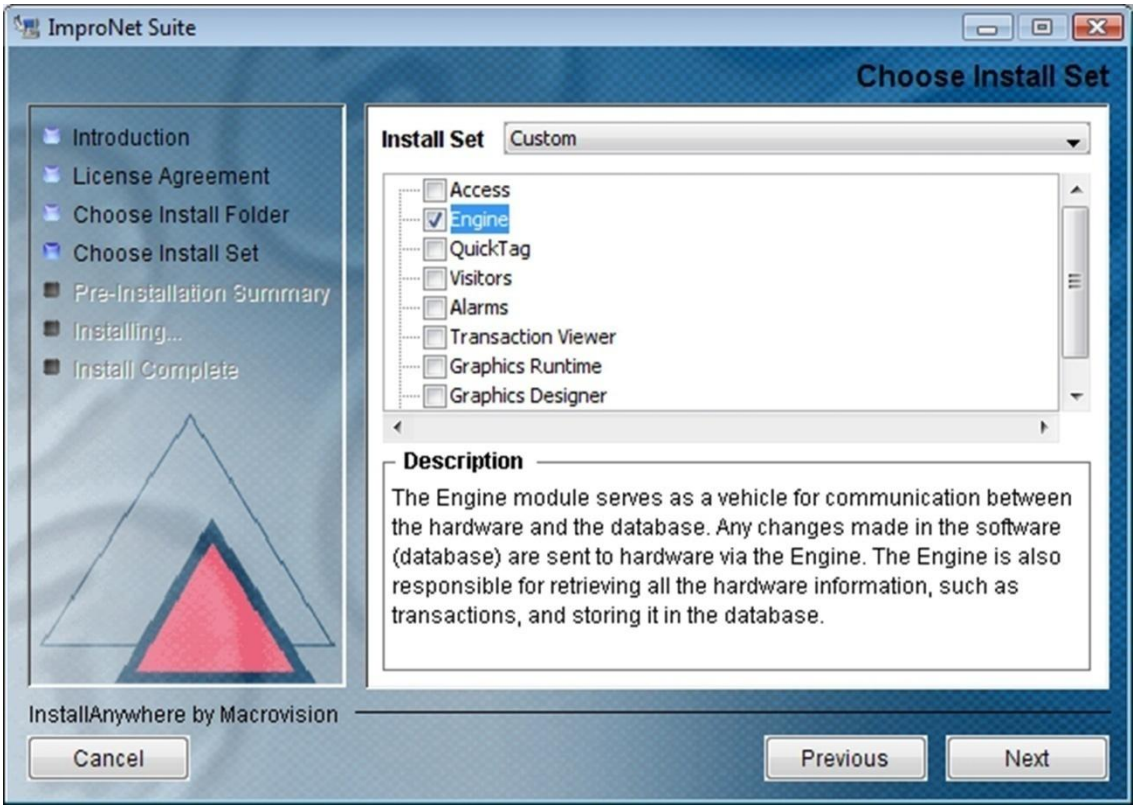

Figure 3 – Install Set Menu

7. At the Choose Install Set screen, from the **Install Set** drop-down list, select **Custom**.
8. Select the **Engine** checkbox.
9. Click the **Next** button.
10. Click the **Install** button.
11. At the Install Complete dialog, click the **Done** button.

Create Links for Properties Files

Terminal Application

1. Type in the following instruction:
   cd /opt/ImproNet
2. Press **Enter**.
3. Type in the following instruction:
   ln Engine.properties engine.properties
4. Press **Enter**.

Communication Port Setup

Terminal Application

1. Type in the following instruction:
   rm /dev/ttyS2
2. Press **Enter**.
3. Type in the following instruction:
   ln /dev/ttyUSB0 dev/ttyS2
4. Press **Enter**.

User Setup

Terminal Application

1. Type in the following instruction:
   cd /opt/firebird/
2. Press **Enter**.
3. Type in the following instruction:
   cat SYSDBA.password
4. Press **Enter**.

Linux displays two comments as follows:
ISC_USER=sysdba
ISC_PASSWD="a randomly generated password displays here"

5. Type in the following instruction:
   Usermod –g 0 firebird
6. Press **Enter**.
7. Type in the following instruction:
   ./bin/changeDBAPassword.sh
8. Press **Enter**.
9. At the **Please Enter Current Password** prompt, type in the randomly generated password displayed earlier.
10. Press **Enter**.
11. At the **Please Enter New Password for SYSDBA User** prompt, enter in a new password of up to 8 characters.
12. Press **Enter**.

ImproNet Properties Setup

1. From the Desktop, select the **IMPRONET** installation directory.
2. Right-click the **IMPRONET.FDB** file.
3. Choose the **Properties** menu option.

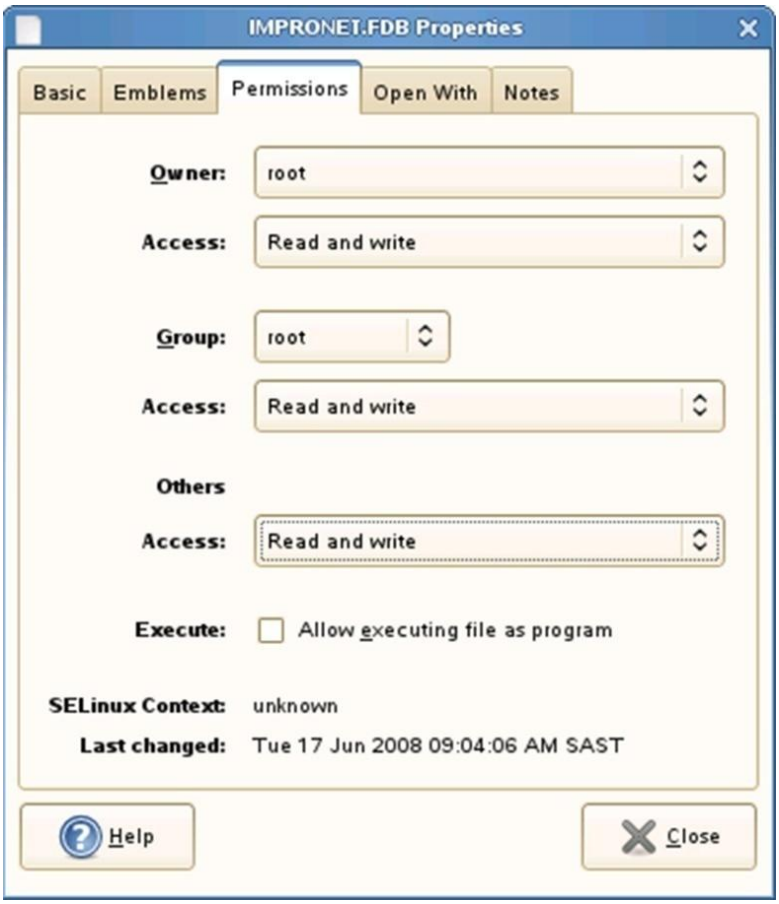

Figure 4 – ImproNet.fdb Properties Dialog

4. Select the **Permissions** tab.
5. From each of the **Access** drop-down menus, select the **Read and Write** option.
6. Click the **Close** button.

Engine Properties Setup

1. From the Desktop, select the **IMPRONET** installation directory.
2. Select the **Engine.properties** file.
3. From the displayed dialog, click the **Display** button.
4. Locate this entry:
   engine.database.Interbase.URL=jdbc:firebirdsql:localhost:/opt/ImproNet/Database/IMPRONET.FDB
5. Where you see reference to the term **localhost**, replace this term with the IP Address of the PC where you installed the Database.
6. Add the following entries at the end of the Engine.properties file:
   - **engine.comms.DetectedPort=2**
   - **engine.database.password = bWFzdGVya2V5**
   - **engine.database.user = sysdba**

- **engine.site.Site.startCommandServer=true**
- **device.comms.alternate=true**
- **device.comms.alternate.driver=net.impro.serialcomm.DeviceUDPMulti**
- **engine.comms.q.delete=true**

Running ImproNet Engine

Using the Terminal Application:

1. Type in the following instruction:
   cd /opt/ImproNet/bin
2. Press **Enter**.
3. Type in the following instruction:
   export LIBXCB_ALLOW_SLOPPY_LOCK=1
4. Press **Enter**.
5. Type in the following instruction:
   ./Engine
6. Press **Enter**.

Every time the PC restarts, ensure that you setup the Communications Port and Modules as indicated under Communications Port Setup and Running Modules below.

Communications Port Setup

Using the Terminal Application, continue as follows:

1. Type in the following instruction:
   rm /dev/ttyS2
2. Press **Enter**.
3. Type in the following instruction:
   ln /dev/ttyUSB0 /dev/ttyS2
4. Press **Enter**.

Running Modules

Each time before running a Module, using the Terminal Application, ensure that you run the following first:

1. Type in the following instruction:
   export LIBXCB_ALLOW_SLOPPY_LOCK=1
2. Press **Enter**.
3. Type in the following instruction:
   ./Engine
4. Press **Enter**.

USER NOTES