

Appendix 1: NOE Module Upgrade Procedure

Purpose

To outline the steps required to upgrade a NOE module using Unity Pro 2.2 or higher OS loader. Please note that prior version of the OS loader are not compatible with this revision of the firmware. You **MUST** be at the proper OS loader revision of 2.2 or higher.

Applicable Modules

140NOE77101 / 140NOE77111 Kernel 1.0 or higher with any version of Firmware.

Resulting Module after upgrade

140NOE77101 Kernel 2.0 or higher, Firmware V4.9.

Note: The 140NOE77101 reference is given as an example, but the same procedure with the same steps can be used for upgrading a 140NOE77111.

Overview

The upgrade of a NOE module requires multiple steps. Two components must be considered to be upgraded, the Kernel and the Firmware version. Not all steps listed below may be required depending on the version of the NOE module before this upgrade procedure is started.

Pre-conditions

The CPU module must be in STOP mode and the NOE must have NO TCP traffic.

A loss of power during the upgrade may cause the NOE module to be inoperable. Make sure the power supply on the NOE module rack will not be interrupted during the upgrade.

Step 1

Verify the Kernel and Firmware using Concept Exec Loader or Unity OS loader or NOE web page.

For modules that have Kernel V1.0 and Firmware Lower than V3.3, you must upgrade to Kernel V2.0 and Firmware V3.30 using the Concept Exec Loader. For modules that have Kernel V2.0 or higher and Firmware V3.3 or higher, you must upgrade to Firmware V4.4 using the Unity OS loader V2.2 or higher.

Step 2

Select the filename to download based on the Current Module Version in the following table.

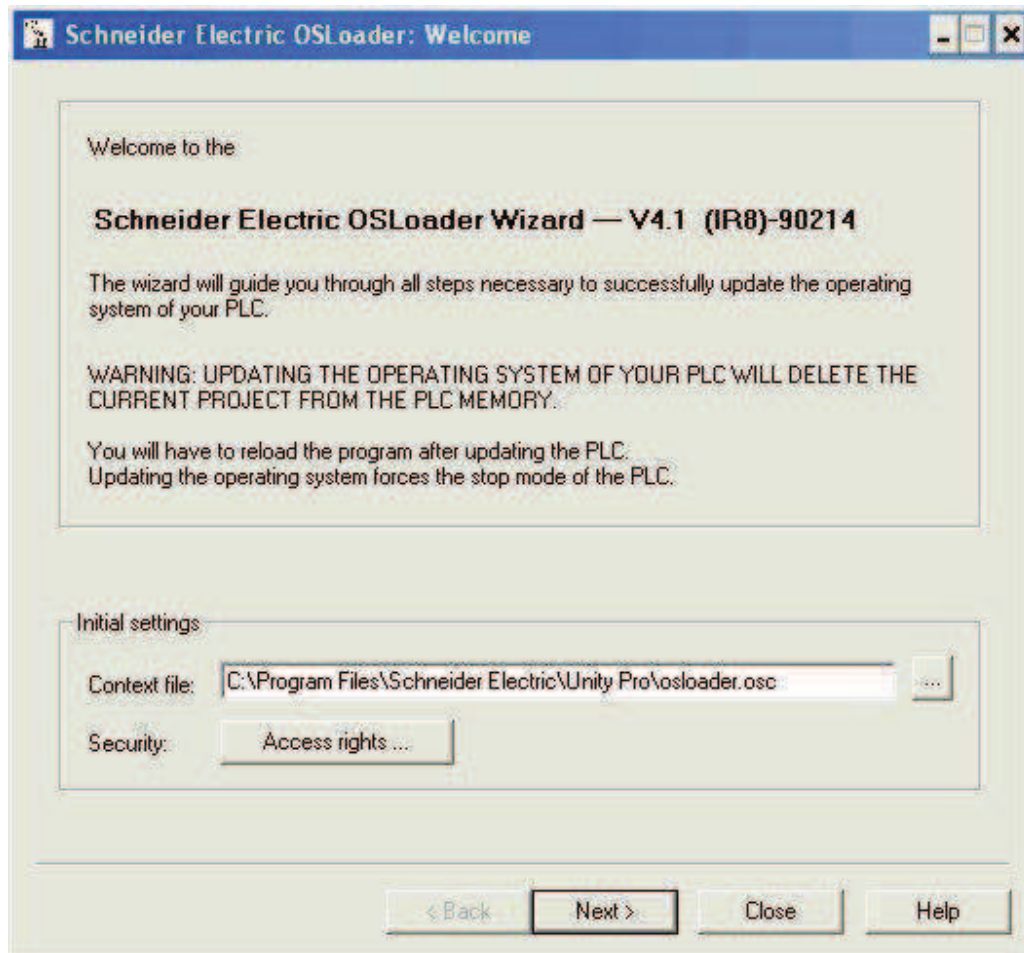
Current Module Version	File to Select	Resulting Module
140NOE77101 Kernel V1.0, Firmware – Any	Quantum\Ethernet_modules\Concept_to_Unity\140NOE77101\140NOE77101_V200_KER.bin	140NOE77101 Kernel V2.0
140NOE77101 Kernel V2.0, Firmware < V3.3	Quantum\Ethernet_modules\Concept_to_Unity\140NOE77101\140NOE77101_V330.bin	140NOE77101 Kernel V2.0, Firmware V3.3

If module not listed proceed to Step3.

If module is listed, use the Concept Exec loader download the kernel and executive firmware file. To upgrade module to Firmware V4.6, the Kernel must be upgraded to V2.0 first.

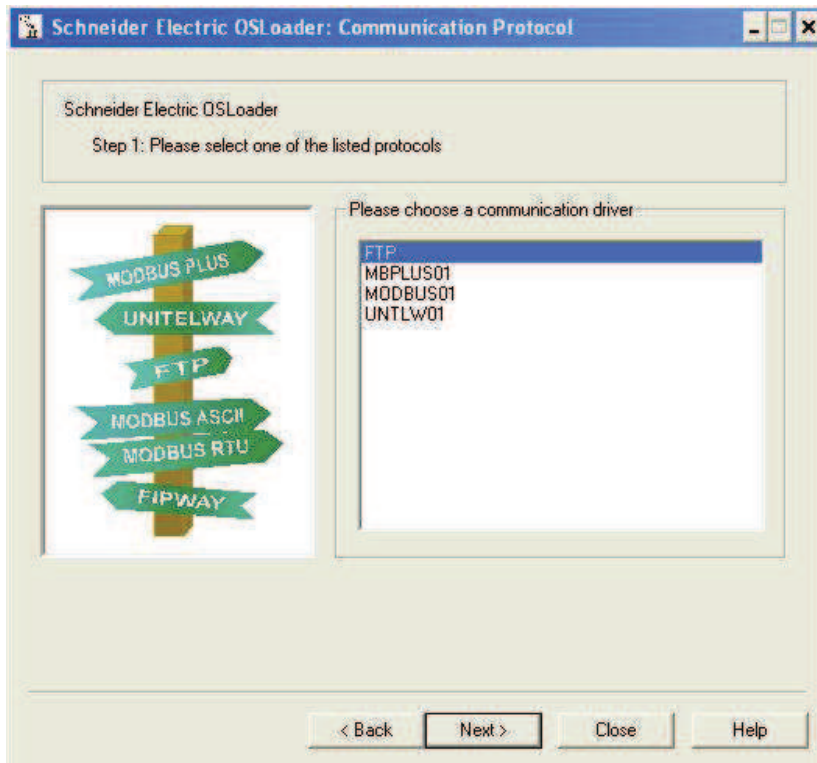
Step 3

Upgrade the Firmware and Web pages to the current V4.4 using the Unity V2.2 OS loader or higher.
Ethernet OS Files to Update: 140NOE771x1 Kernel V2.0 or higher, Firmware at least V3.3.



Step4

Select the FTP Driver.
Select 'Next'.

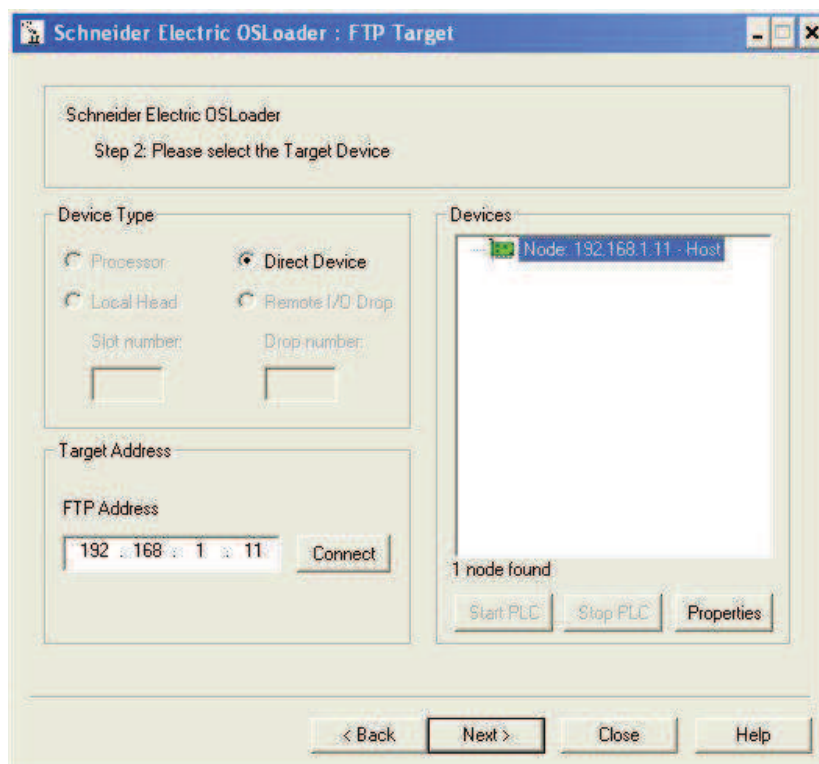


Step5

Select 'Direct Device' and enter the device IP address and select Connect. If requested enter the module's MAC address, the MAC address can be found on the front of the module.

Note: If your module is located remotely, you can get the MAC address by pinging the module's IP address, then using the arp-a command to display the module's physical MAC address.

Select 'Next'.



In this example, the IP address used is 192.168.1.11. Adapt this address for the one of your PLC.

Step6

Select Operation 'Download OS to Device'

Select the filename to download based on the Current Module Version in the following table.

Current Module Version	File to Select	Resulting Module
140NOE77101 Kernel V2.0 or higher, Firmware at least V3.3	Quantum\Ethernet_modules\Unity\140NOE77101\140NOE77101_Vxyz.bin xyz stand for the version of the OS that has to be downloaded for update. It can be for instance 440	140NOE77101 Kernel V2.0 or higher, Firmware Vx.yz (4.40 for instance)

Note: For NOE77101 with kernel V4.5 or higher, the compatible firmware is a V4.0 or higher.

Note: Please read file "Quantum Compatibility Rules" for more version compatibility information.

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If module is listed select the correct file and click 'Next'.

The following Screen will appear:

Schneider Electric OSLoader
Step 4: Final Comparison

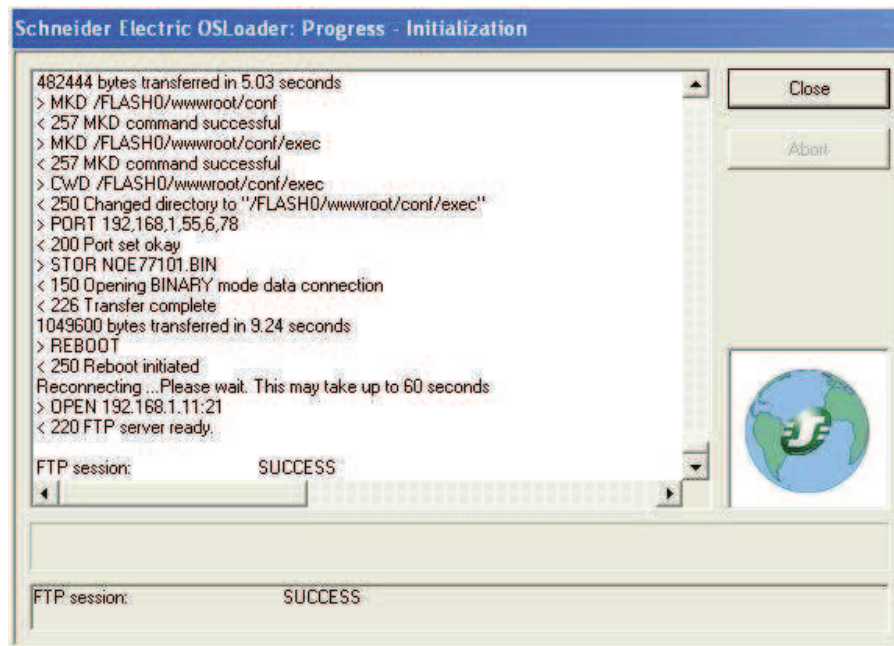
File	Device
Device Name: 140NOE77101	Device Name: 140NOE77101
Hardware ID : 0000 0422 ✓	Hardware ID : 0000 0422
OS Version : 4.40 ✓	OS Version : 4.20
Crash Code:	Crash Code: 0
Description: V4.40 IE36	Description: V4.20 IE33

< Back Next > Close Help

Both the Hardware ID and OS version must be followed by a green tick. Select 'Next' and then 'Download'.

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After the download is completed the following screen will appear.



If this screen does not appear recheck each step and contact your local Schneider office for assistance if required.
Select 'Close' and 'Back' in the OS loader.
Exit the OS loader.

Allow the module 60 seconds to complete any actions and power cycle the module to allow the new Firmware to be loaded.

Note: NOE modules should be upgraded to at least Kernel V2.0, Firmware V3.30 while installed in a PLC rack containing a CPU running a Concept Level Executive. Modules running Kernels and Firmwares without this upgrade may not complete their boot sequence in a PLC rack containing a Unity CPU.