

Instructions for DNP3 Over Serial

V1

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DNP 3.0 Over Serial

Aim: To demonstrate the use of a Remote Telemetry Unit (RTU) in the transfer of control messages over Serial using the DNP 3.0 protocol.

Equipment on Server

1x PC with 2 serial ports or USB to Serial converters
1x Remote Telemetry Unit (RTU) Simulator
1x Null Modem to interconnect the Serial ports

Control Microsystems E-Series Configurator (v1.29 or later)

Student Software Required:

Screen capture software such as ScreenHunter

Method:

Part 1 – Device Configuration and Data capture

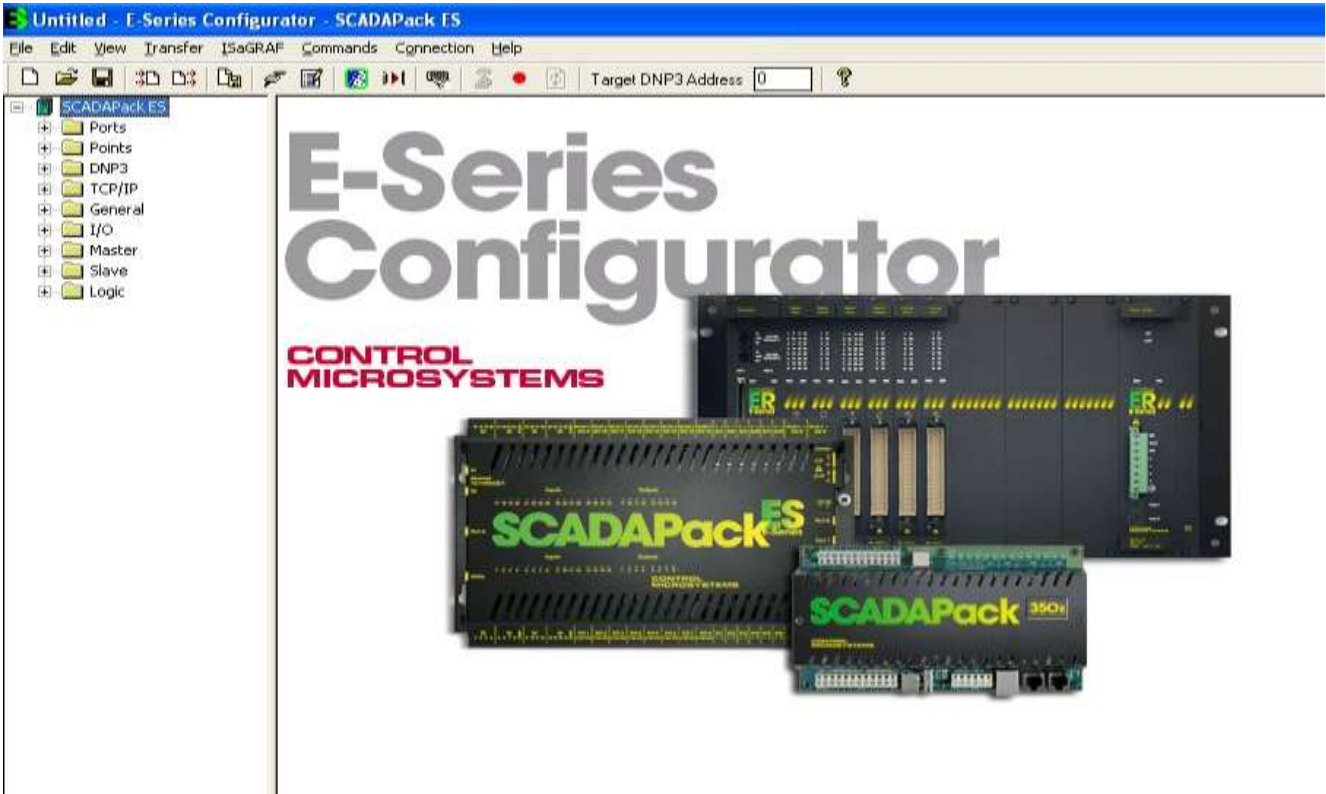
Log onto the Electromeet lab environment in the usual manner

Select “Remote Lab – DNP”

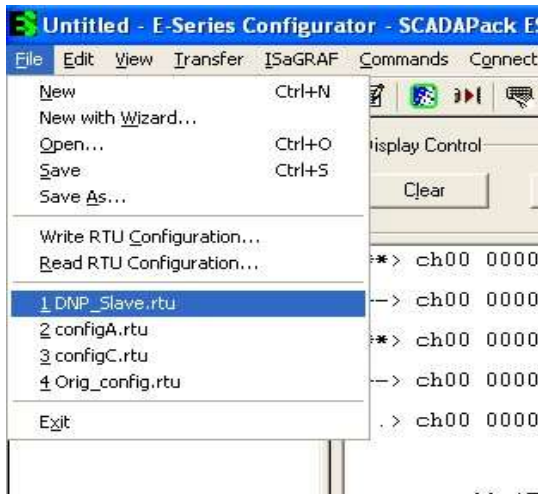
Launch the E-Series Configurator software by either selecting the menu item Start>All Programs->Control Microsystems->E-Series->Configurator, or by selecting the icon on the desktop as shown.



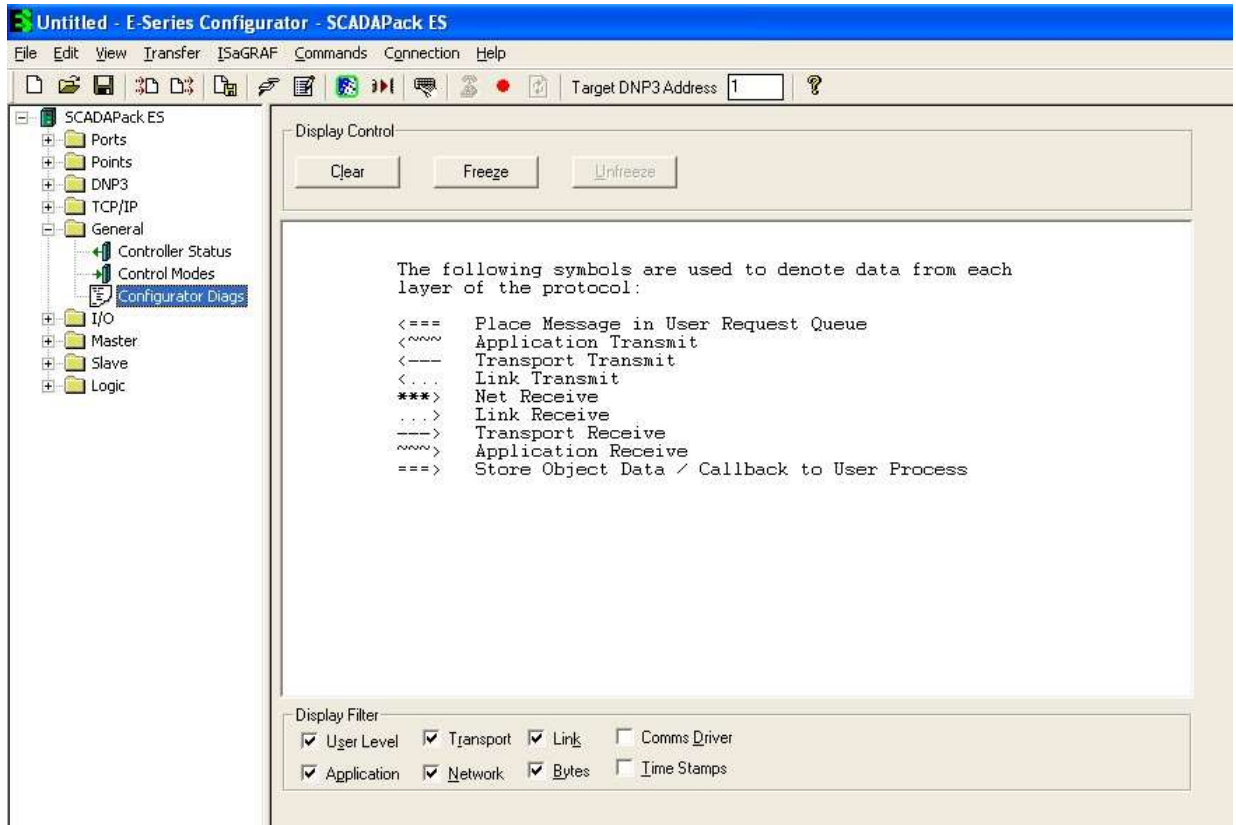
The initial startup screen will then be shown as follows –



Open the “File” menu and select the item “1 DNP_Slave.rtu” to open the configuration file as shown below . This sets the communications options for the E-Series Configurator. These include the serial port settings, DNP Addresses and communications options. You may explore these under the “Connection “ menu, but do not change the default settings.

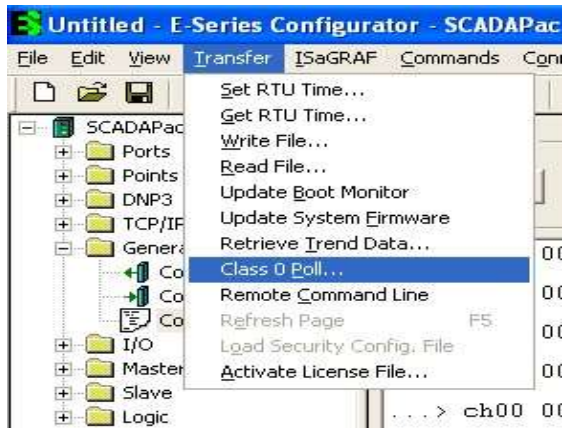


When the configuration file is installed you will see the “Target DNP3 Address” in the menu bar change from the default of 0 to 1 which is the address of our RTU .

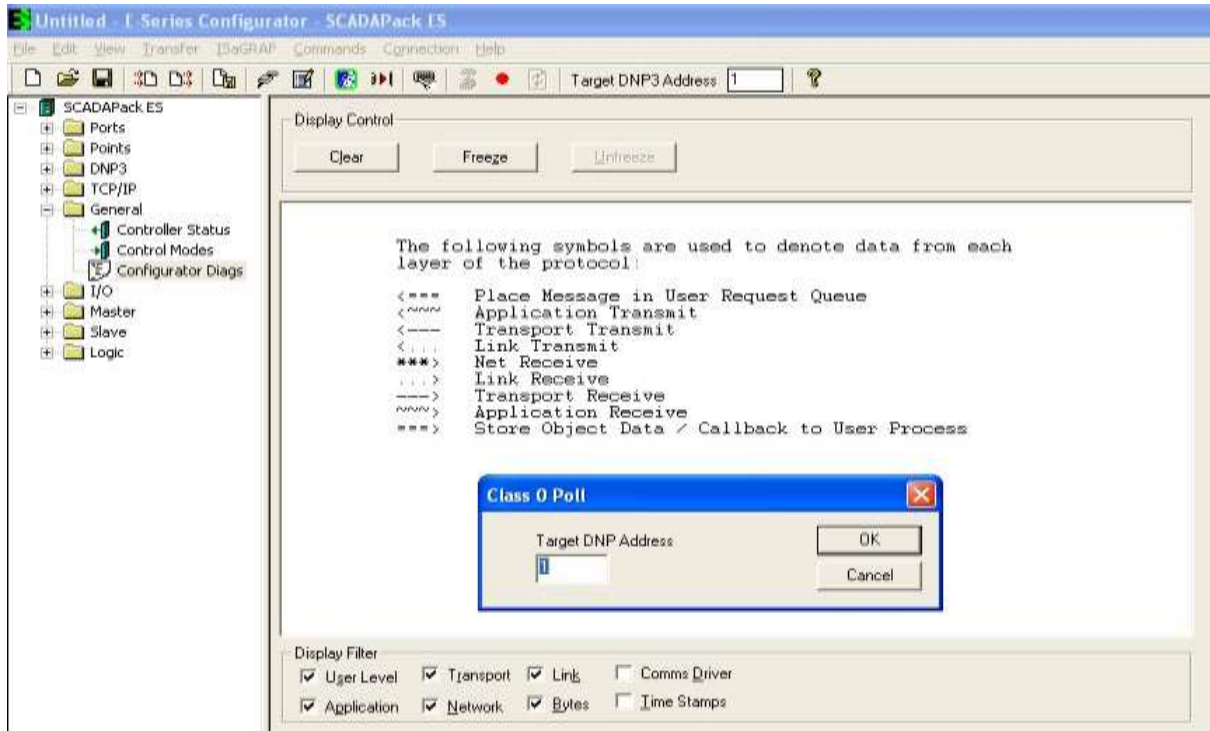


Expand the “General” tab of the “SCADAPack ES” menu and select the “ Configurator Diags” item to open the communications display window as shown in the screenshot above .

Now open the “Transfer” menu and select the “Class 0 Poll” as shown below



You should then see a dialog box similar to the following –



Press the OK button, and the poll will take place then a dialog box similar the following will appear.



Press the OK again and complete any assessments as required.

Now Log off the server (Do not save any files on server).