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How do you replace a serial MD2 connection with SHDSL with SINAUT ST7?

SCALANCE M826-2 SHDSL Router

<https://support.industry.siemens.com/cs/ww/en/view/109744746>

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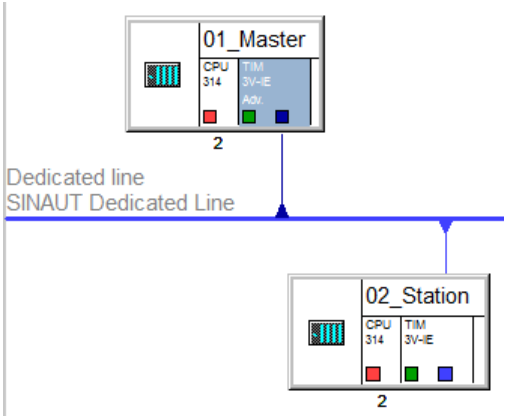
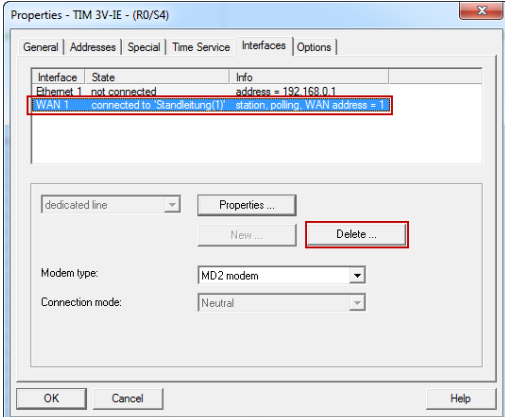
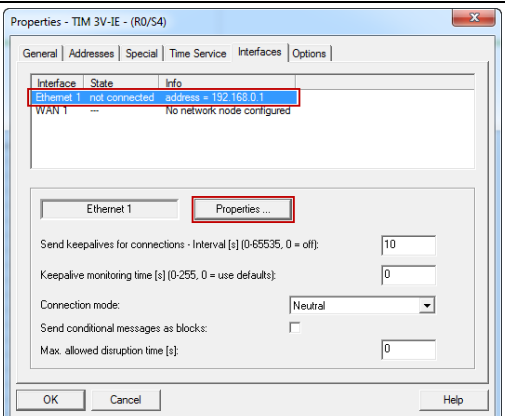
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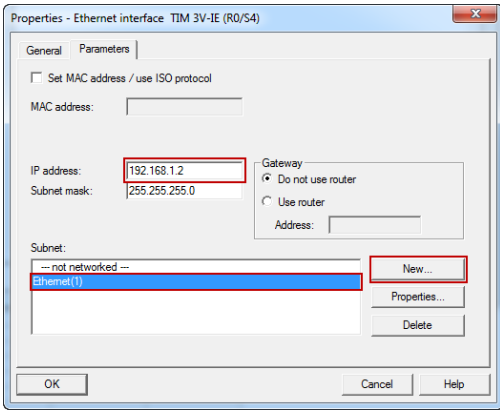
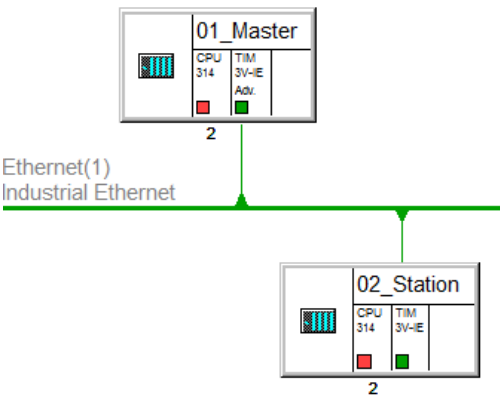
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1 Settings in the SIMATIC Manager

Table 1-1

| No. | Action | Remark |
|-----|---|--|
| 1. | Open your STEP 7 project in the SIMATIC Manager and switch to NETPRO. | |
| 2. | Select the TIM to which the modem to be replaced is connected. |  |
| 3. | Go to the "Interfaces" tab. Select the dedicated line ("Standleitung") and delete it from the station using the "Delete..." button. |  |
| 4. | Select the Ethernet interface and change the IP address by clicking "Properties...". |  |

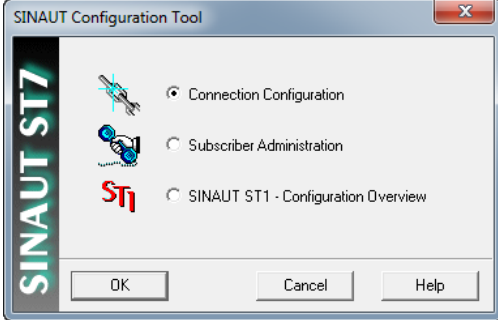
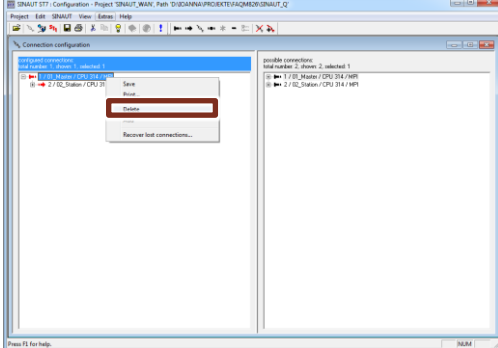
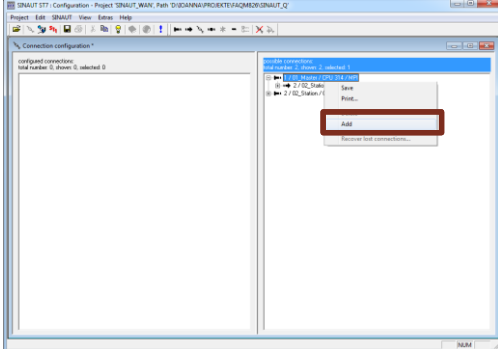
1 Settings in the SIMATIC Manager

| No. | Action | Remark |
|-----|--|---|
| 5. | <p>Enter the required IP address. Then create a new Ethernet network and connect it to the station.</p> <p>Note: Connect all the stations of the dedicated line to be replaced to the same Ethernet network.</p> |  |
| 6. | Repeat this procedure for the other stations connected to the dedicated line. | |
| 7. | <p>Compile the project.</p> <p>The completed network configuration is now as shown in the figure.</p> |  |

2 Settings in the SINAUT ST7 Engineering

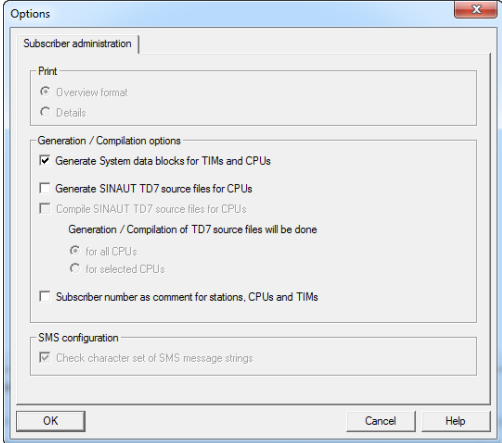
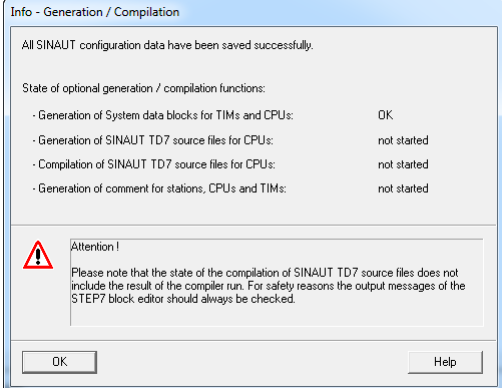
2.1 Configure SINAUT Connections

Table 2-1

| No. | Action | Remark |
|-----|---|--|
| 1. | Start the SINAUT ST7 Configuration Tool and open your project. | |
| 2. | The Connection Configuration option is selected. Click OK. |  |
| 3. | The configured connections are shown in the left window. The invalid connection is marked in red. Delete this connection via "Right-click > Delete". |  |
| 4. | The possible connections are shown in the right window. Select the required connection(s) via "Right-click > Add". The added connections are shown in the "configured connections" window on the left. |  |
| 5. | Save the configuration and switch to "Subscriber Administration". | |

2.2 Save and Create System Data

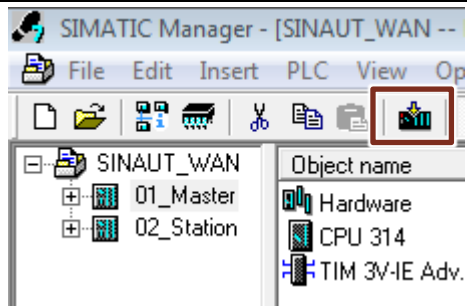
Table 2-2

| No. | Action | Remark |
|-----|--|---|
| 1. | Save and compile your project in the subscriber administration. | |
| 2. | <p>Confirm the first window with OK. Leave the options unchanged and proceed with OK.</p> <p>Note: Only the option "Generate System data blocks for TIMs and CPUs" should be selected. It is not necessary to compile the TD7 sources.</p> |  |
| 3. | <p>The SDBs are regenerated and saved in the STEP 7 project.</p> <p>If no errors occur, close the program.</p> |  |

3 Download Stations

When you have completed the settings in the SIMATIC Manager and SINAUT Configuration Tool, you can download the stations.

Table 3-1

| No. | Action | Remark |
|-----|--|--|
| 1. | Connect your PG/PC with the Ethernet interface of the TIM. | |
| 2. | Download the project from the SIMATIC Manager. |  |
| 3. | Repeat the procedure for all the stations. | |

4 Connect Hardware

Table 4-1

| No. | Action | Remark |
|-----|--|--------|
| 1. | Connect the Ethernet interface of the TIM to the Ethernet interface of the SCALANCE M826-2. | |
| 2. | In 2-wire mode you connect the 2-wire conductor directly to the first connection block (X1) of the device. | |

When the SHDSL connection is established, the LED X1 lights green.

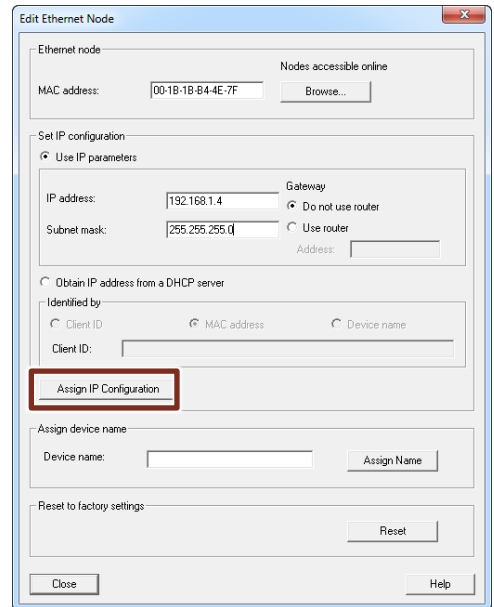
5 Configure SCALANCE M 826-2

If the SHDSL connection is not established or if you want to configure a 4-wire mode, you have to make settings in the Web Based Management (WBM) of the SCALANCE M826-2.

5.1 Assign IP Address

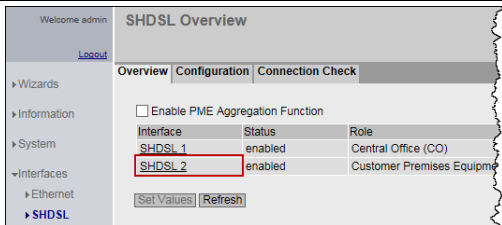
First assign an IP address to the SCALANCE M826-2 as described below, because there is no factory-set IP address (IP address: 0.0.0.0).

Table 5-1

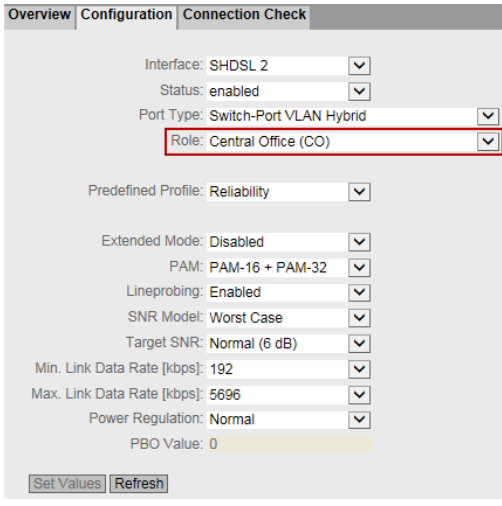
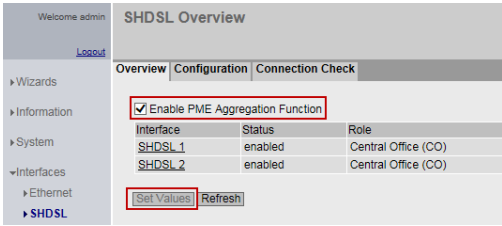
| No. | Action | Remark |
|-----|--|---|
| 1. | Connect your PG/PC to the Ethernet interface of the SCALANCE M826-2. | |
| 2. | Open the SIMATIC Manager and go to "PLC > Edit Ethernet Node...". | |
| 3. | Click "Browse" and select the SCALANCE M826-2. | |
| 4. | Enter the required IP address and assign it via "Assign IP Configuration". |  |
| 5. | Repeat the procedure for all the SCALANCE M826-2s. | |

5.2 Settings for 4-wire Mode

Table 5-2

| No. | Action | Remark | | | | | | | | | |
|-----------|---|--|-----------|--------|------|---------|---------|---------------------|---------|---------|-----------------------------|
| 1. | In the web browser you enter the IP address of the SCALANCE M826-2 (in this example "192.168.1.4"). | | | | | | | | | | |
| 2. | Switch to "Interfaces > SHDSL" and select the interface "SHDSL 2". |  <table border="1"> <thead> <tr> <th>Interface</th> <th>Status</th> <th>Role</th> </tr> </thead> <tbody> <tr> <td>SHDSL 1</td> <td>enabled</td> <td>Central Office (CO)</td> </tr> <tr> <td>SHDSL 2</td> <td>enabled</td> <td>Customer Premises Equipment</td> </tr> </tbody> </table> | Interface | Status | Role | SHDSL 1 | enabled | Central Office (CO) | SHDSL 2 | enabled | Customer Premises Equipment |
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| SHDSL 1 | enabled | Central Office (CO) | | | | | | | | | |
| SHDSL 2 | enabled | Customer Premises Equipment | | | | | | | | | |

5 Configure SCALANCE M 826-2

| No. | Action | Remark | | | | | | | | | |
|-----------|---|---|-----------|--------|------|---------|---------|---------------------|---------|---------|---------------------|
| 3. | Set the same role as for the interface "SHDSL 1". |  <p>Overview Configuration Connection Check</p> <p>Interface: SHDSL 2</p> <p>Status: enabled</p> <p>Port Type: Switch-Port VLAN Hybrid</p> <p>Role: Central Office (CO)</p> <p>Predefined Profile: Reliability</p> <p>Extended Mode: Disabled</p> <p>PAM: PAM-16 + PAM-32</p> <p>Lineprobing: Enabled</p> <p>SNR Model: Worst Case</p> <p>Target SNR: Normal (6 dB)</p> <p>Min. Link Data Rate [kbps]: 192</p> <p>Max. Link Data Rate [kbps]: 5696</p> <p>Power Regulation: Normal</p> <p>PBO Value: 0</p> <p>Set Values Refresh</p> | | | | | | | | | |
| 4. | Select the option "Enable PME Aggregation Function" and apply the setting via "Set Values". |  <p>Welcome admin SHDSL Overview</p> <p>Logout</p> <p>Wizards</p> <p>Information</p> <p>System</p> <p>Interfaces</p> <p>Ethernet</p> <p>SHDSL</p> <p>Overview Configuration Connection Check</p> <p><input checked="" type="checkbox"/> Enable PME Aggregation Function</p> <table border="1"> <thead> <tr> <th>Interface</th> <th>Status</th> <th>Role</th> </tr> </thead> <tbody> <tr> <td>SHDSL 1</td> <td>enabled</td> <td>Central Office (CO)</td> </tr> <tr> <td>SHDSL 2</td> <td>enabled</td> <td>Central Office (CO)</td> </tr> </tbody> </table> <p>Set Values Refresh</p> | Interface | Status | Role | SHDSL 1 | enabled | Central Office (CO) | SHDSL 2 | enabled | Central Office (CO) |
| Interface | Status | Role | | | | | | | | | |
| SHDSL 1 | enabled | Central Office (CO) | | | | | | | | | |
| SHDSL 2 | enabled | Central Office (CO) | | | | | | | | | |

The 2-wire conductors are thus grouped into one single connection with a higher transmission rate.

5.3 Other Settings for the SHDSL Interfaces

You can also make other settings, like the maximum transmission rate, for example. Information about this is available in the configuration manual "SCALANCE M-800 Web Based Management" at the link.