

MDT Solution proposal

Commissioning of the IP Router or IP Interface, with and without activated KNX Secure.

Info:

There are two variants to program the MDT IP Router or the MDT IP Interface, with and without activated KNX Secure. Activated KNX Secure requires ETS version 5.7.2 or higher. If you use the latest version of the ETS and use additional KNX Secure devices, follow the first solution. If you are working with an older ETS version or if you do not use additional KNX Secure devices, you can follow the second solution without activated KNX Secure.

The commissioning of the IP router and the IP interface is identical. In this example, we show the process using the IP router.

Used ETS version: 6.0.6

Used devices:

MDT IP Router/ MDT IP Interface
SCN-IP100.03/ SCN-IP000.03

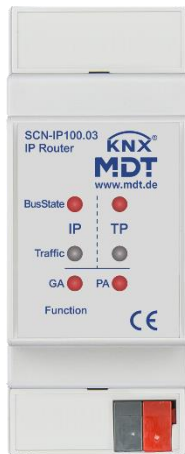
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Reset to factory settings

If the device was already in use or if the first commissioning failed, reset the IP Router or the IP Interface to factory settings according to the following scheme.

1. Press and hold the "Function" key for at least 15 seconds.
The two upper and lower LEDs then light up red/orange.

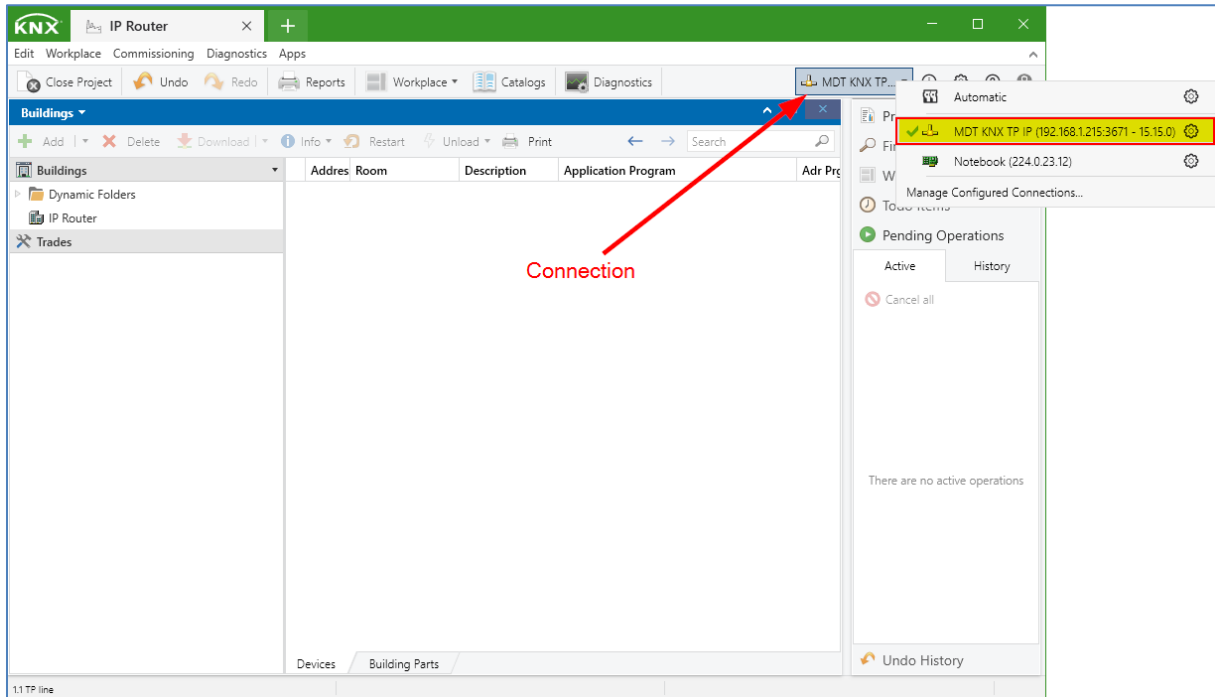


2. Now release the button briefly and press it again for at least 3 seconds until all LEDs go out. Now you can release the key.
3. The device performs a restart. It disappears briefly in the interface overview of the ETS and then appears with activated DHCP and its physical default address. (IP Router 15.15.0, IP Interface 15.15.255)

The device has now been reset.

Solution 1: Commissioning with activated KNX Secure function:

Expand the drop-down menu displayed at the top right and select the IP router/ IP interface as active connection. In factory settings or after resetting, the device expects an IP address via DHCP from your Internet router, for example.



For commissioning, two applications are transferred to the device, i.e. there are also two Individual addresses per IP Router/ IP Interface. You can recognize the KNX Secure applications by the blue shield symbol.

IP Router:

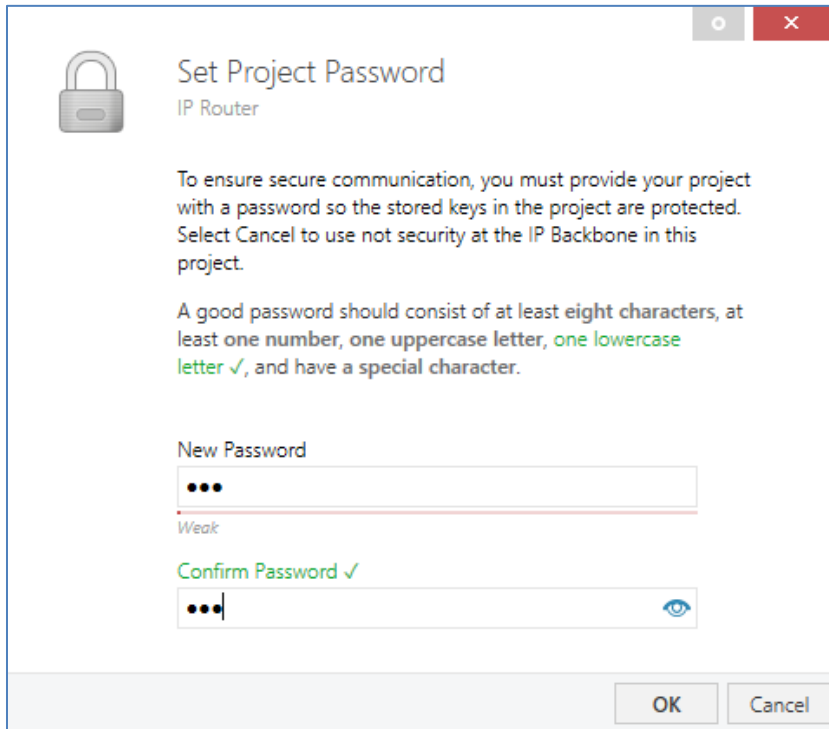
	MDT technologies	SCN-IP100.03 IP Router with Secure	SCN-IP100.03
	MDT technologies	SCN-IP100.03 Email for IP Router with Secure	SCN-IP100.03

IP Interface:

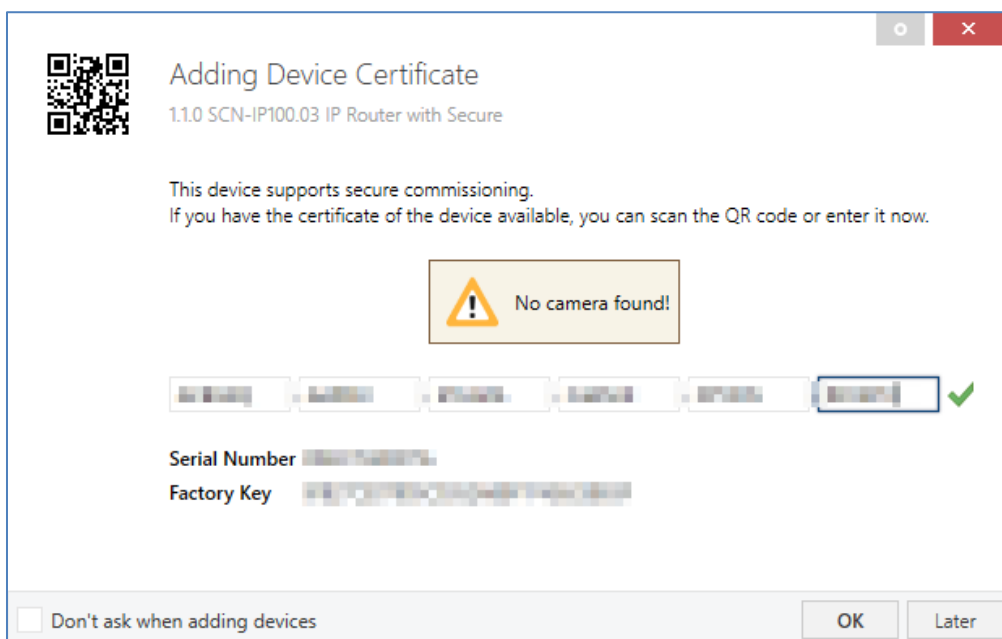
	MDT technologies	SCN-IP000.03 IP Interface with Secure	SCN-IP000.03
	MDT technologies	SCN-IP000.03 Email for IP Interface with Secure	SCN-IP000.03

Main application (IP settings):

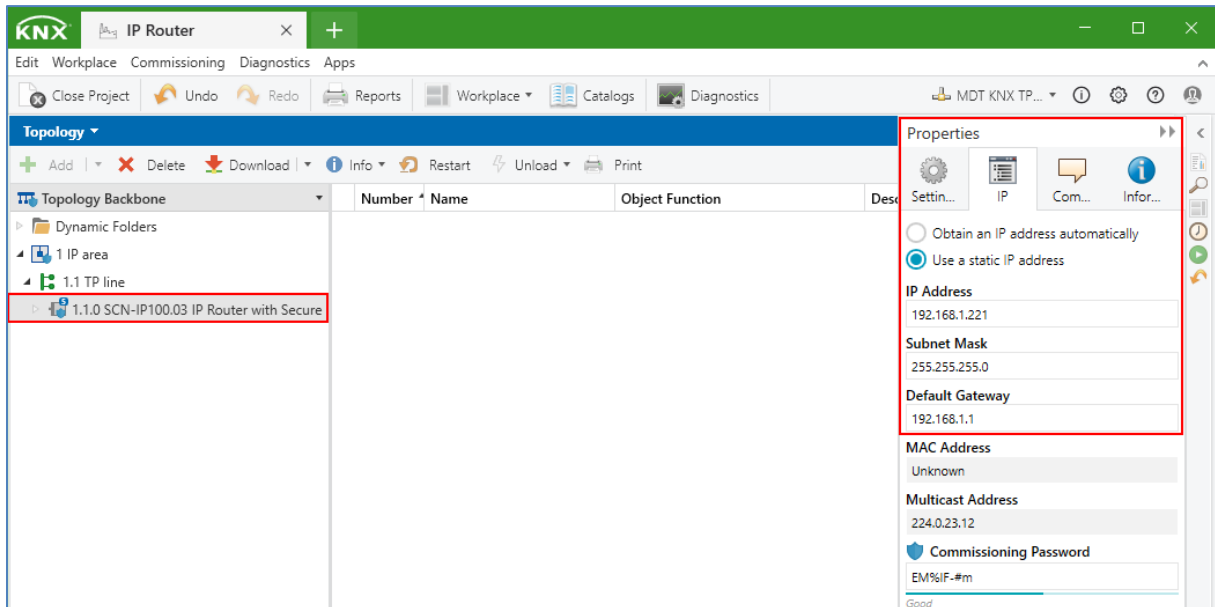
Add the first application ("IP Router with Secure" or "IP Interface with Secure") to your line. If you have not yet assigned a project password, you will now be prompted to do so. A secure commissioning is only possible with a project password. Remember this password well, it cannot be restored afterwards.



In the next step, you will be prompted to add the first device certificate. There are two different device certificates on the left and right side of the device. In this step, the certificate for the Router/Interface is required. Confirm your entry with "OK".

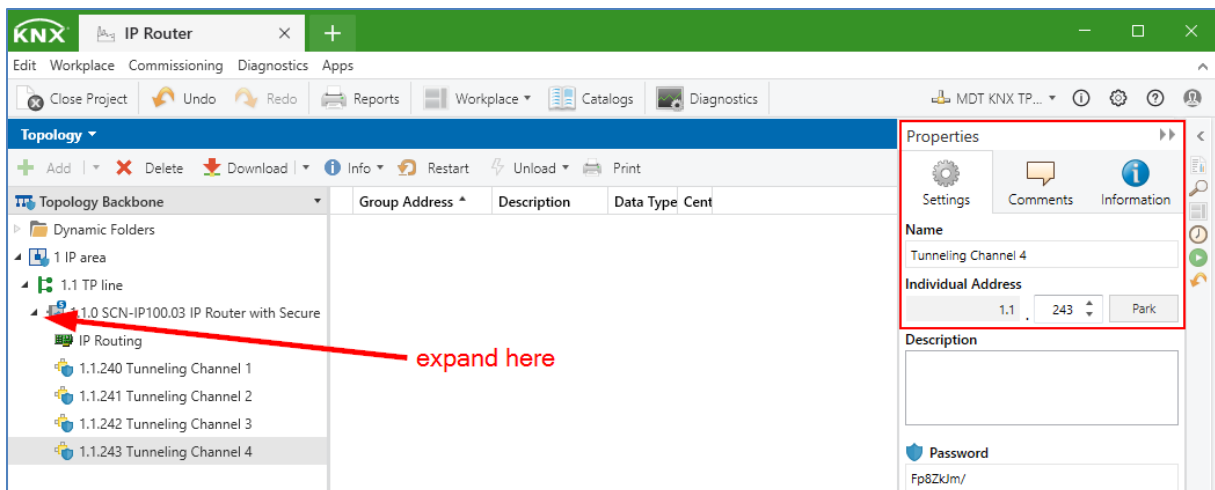


If required, the Individual address and the IP settings can now be adjusted in the "Properties" window. In the case of the IP Router, we leave the individual address at **x.x.0** to retain the line coupler functionality. An IP interface on the other hand, can have any address **except x.x.0**.

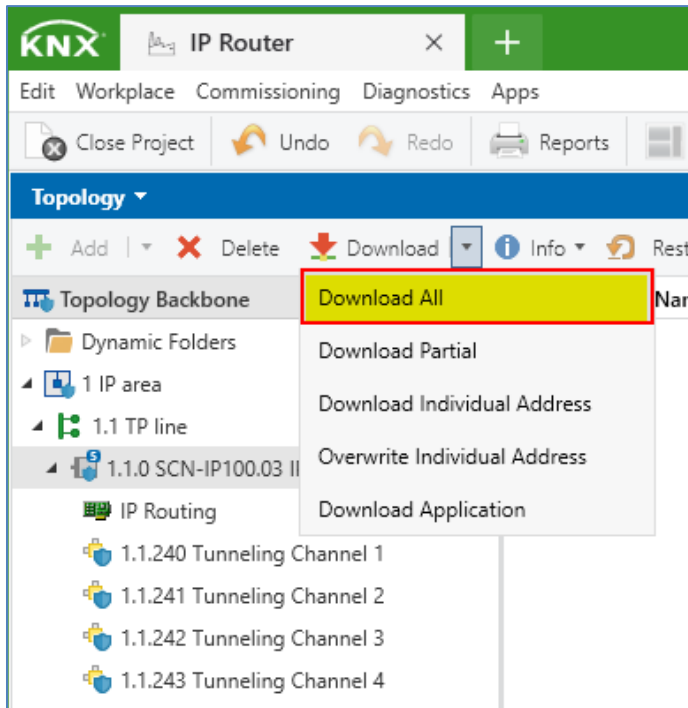


Assignment of tunneling addresses:

In addition, we now assign the four tunneling addresses for the device. These can be placed in a higher address range so that the lower addresses are not blocked for other devices. You can access the tunneling addresses via the topology view on the left.

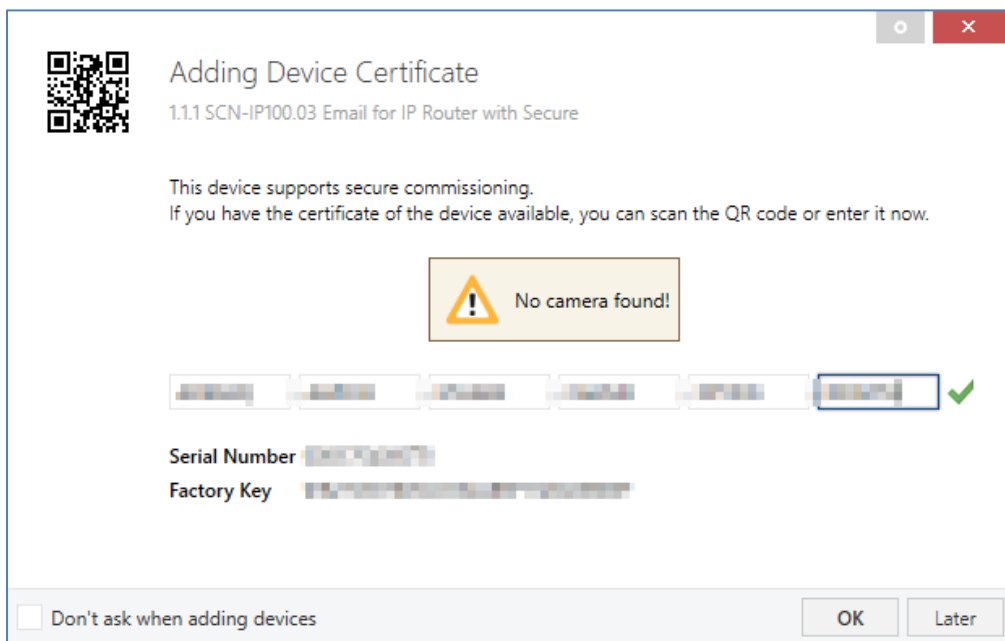


Now activate the programming mode of the IP Router or the IP Interface by **briefly** pressing the programming button. The programming LED now lights up **continuously red**. You can now download the individual address and the application.

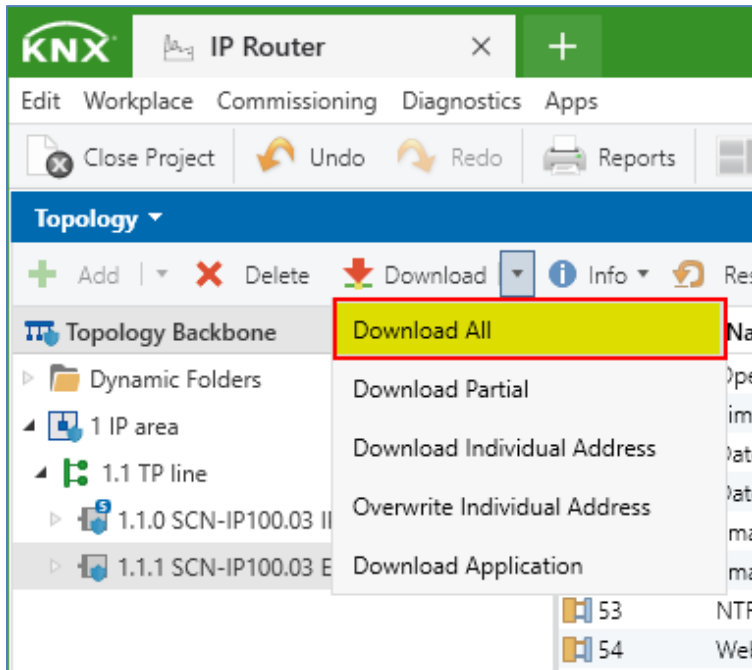


Email and time server application:

Now add the second application ("**Email for IP Router with Secure**" or "**Email for IP Interface with Secure**") to your line. You will be prompted to enter the second device certificate here. Confirm the entry again with OK.



This application allows you to link the group addresses for date and time, for example. Once all settings have been made, press and hold the programming button until the programming LED starts flashing red. You can now transfer the individual address and the application.

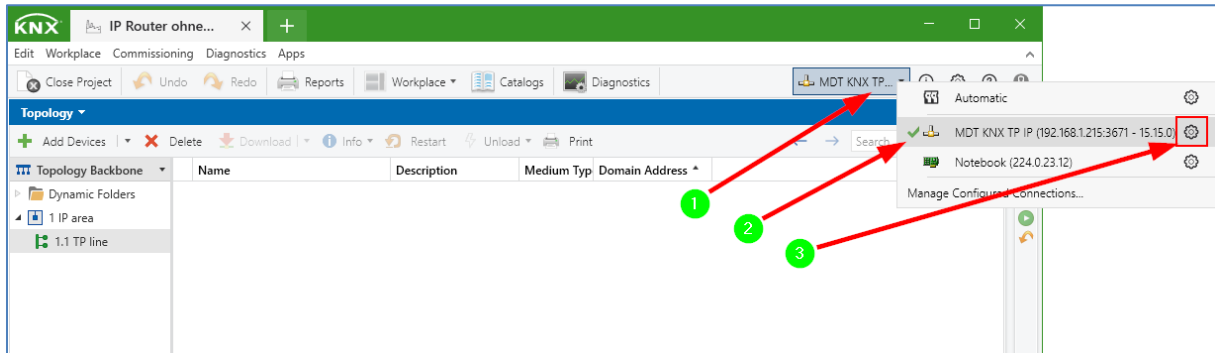


Note: After downloading the application, the default password for the web interface is now "admin"! The password can be changed in the application.

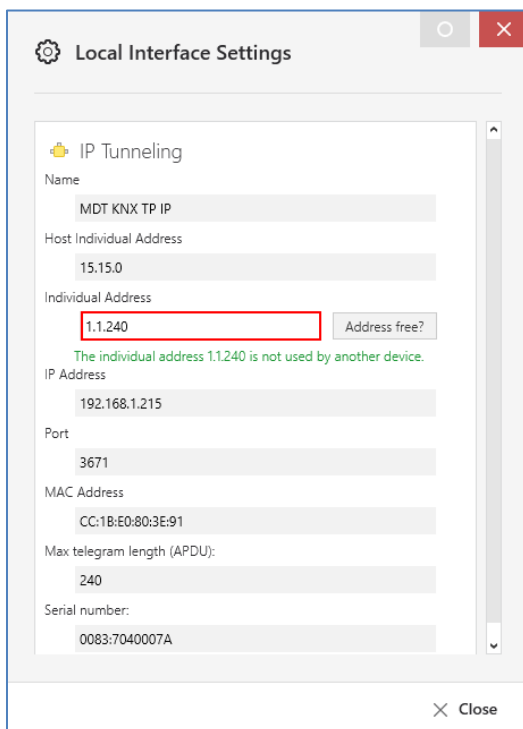
The IP Router/ IP Interface is now set up with KNX-Secure activated.

Solution 2: Commissioning without KNX Secure function:

Open the drop-down menu displayed (1) and select the IP router/ IP interface as active connection (2). In factory setting or after resetting, the device expects an IP address via DHCP, for example from your Internet router. Click on the gear symbol to access the settings (3).



In the following window we assign the first tunneling address. In our example we use 1.1.240 in order not to block the lower addresses for other devices. Check the address by clicking on "Address free?" and close the window.



Note: "Individual Address" is the tunneling address used for the connection between the ETS and the KNX bus. "Host Individual Address" refers to the individual address of the device itself. 15.15.0, because of the IP router is in factory setting.

All other tunneling addresses are assigned in the following section.

Assignment of tunneling addresses:

Type the IP address followed by the port 8080 in your web browser to open the web interface.
In this example: **192.168.1.223:8080**

Please refer to the interface selection in the ETS or your Internet router for the IP address of your device.

You have to login to see this page!

Password

In factory default, no password is assigned. Click "Login" to enter the web interface.





The screenshot shows a web browser window displaying the MDT KNX-IP Router configuration page. The browser address bar shows the URL `192.168.1.223:8080/tunnel.cgi?`. The page header includes the MDT logo and the title "KNX-IP Router". A "Logged in (29 min left)" status is shown in the top right corner, along with a "Logout" button. On the left side, there is a navigation menu with tabs for "Device Info", "Prog. Mode" (marked with a green circle and the number 1), "Email", "Time", and "Firmware Update". The main content area is divided into two sections: "KNX IP-Router" and "TP Device (E-Mail)". Under "KNX IP-Router", the "Status Programming Mode" is "Off", and "Change Programming Mode" has "ON" and "OFF" buttons. The "Individual Address" is "15.15.0". The "Tunneling Addresses" section lists four addresses: "1. 1.240", "1. 1.241", "1. 1.242", and "1. 1.243", each followed by "not in use". A red box highlights the "1. 1.240" address and the "Set" button (marked with a green circle and the number 2) below it. The "Set Tunneling Addresses" section also shows "Routing Multicast Address" as "224.0.23.12" and "Serial Number" as "0083-7040007A". The "TP Device (E-Mail)" section shows similar settings for a TP device with "Individual Address" "15.15.254" and "Serial Number" "0083-7040007B".

You will reach the tunneling addresses via the tab "Prog. Mode"(1). By clicking on "Set" (2) the addresses are added up on the address 1.1.240 assigned in the previous chapter. Close the web interface, no further settings are necessary here.





Main application (IP settings):

For commissioning, two applications are transferred to the device, i.e. there are also two Individual addresses per IP Router/ IP Interface. The applications **without** the blue shield symbols are required.

IP Router:

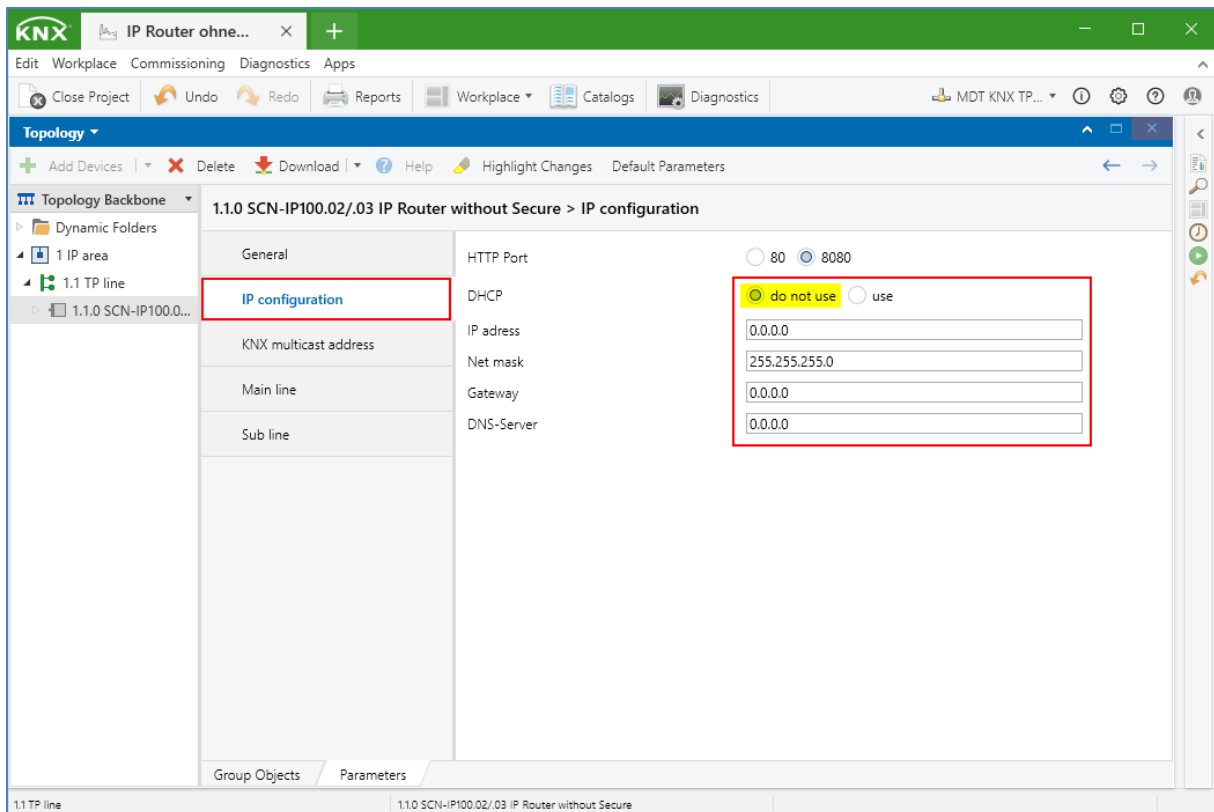
		MDT technologies	SCN-IP100.02/.03 IP Router without Secure	SCN-IP100.02
		MDT technologies	SCN-IP100.02/.03 Email for IP Router without Secure	SCN-IP100.02

IP Interface:

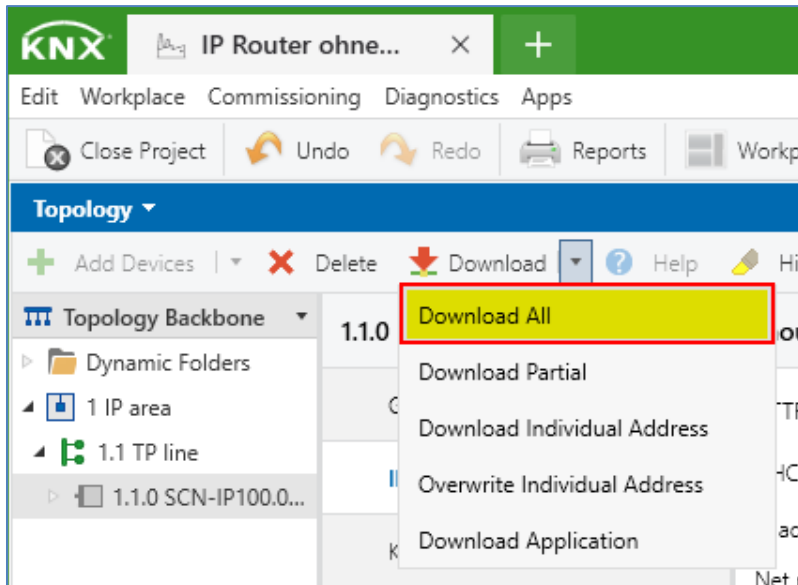
		MDT technologies	SCN-IP000.02/.03 IP Interface without Secure	SCN-IP000.02
		MDT technologies	SCN-IP000.02/.03 Email for IP Interface without Secure	SCN-IP000.02

Add the first application ("IP Router without Secure" or "IP Interface without Secure") to your line. If necessary the physical address can now be adjusted via the "Properties" tab of the device. In the case of the IP Router, leave the Individual address at x.x.0 to retain the line coupler functionality. An IP interface on the other hand, can have any address **except** x.x.0.

IP settings are made via the "Parameter" tab. For example, a static IP address can be assigned here.

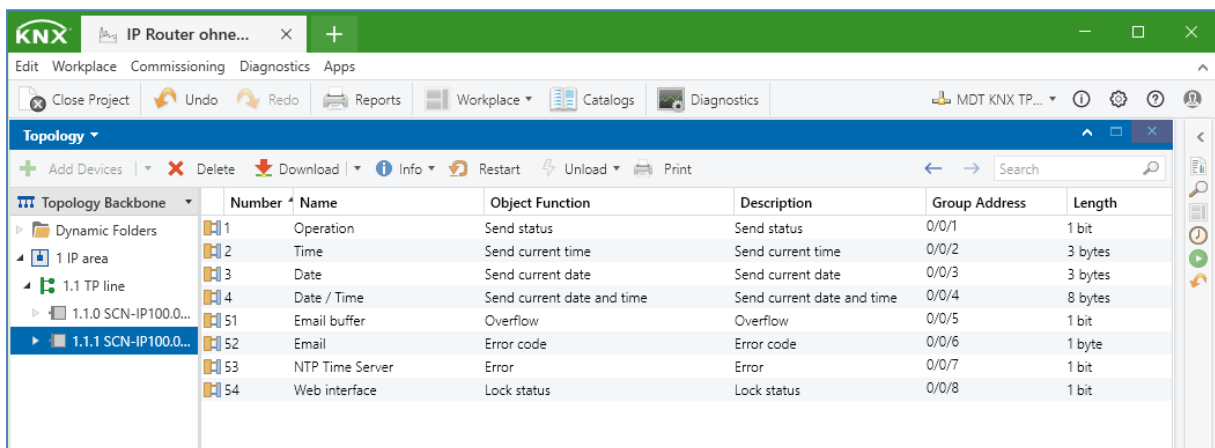


Now activate the programming mode of the IP Router or the IP Interface by **briefly** pressing the programming button. The programming LED now lights up **continuously red**. You can now download the individual address and the application.

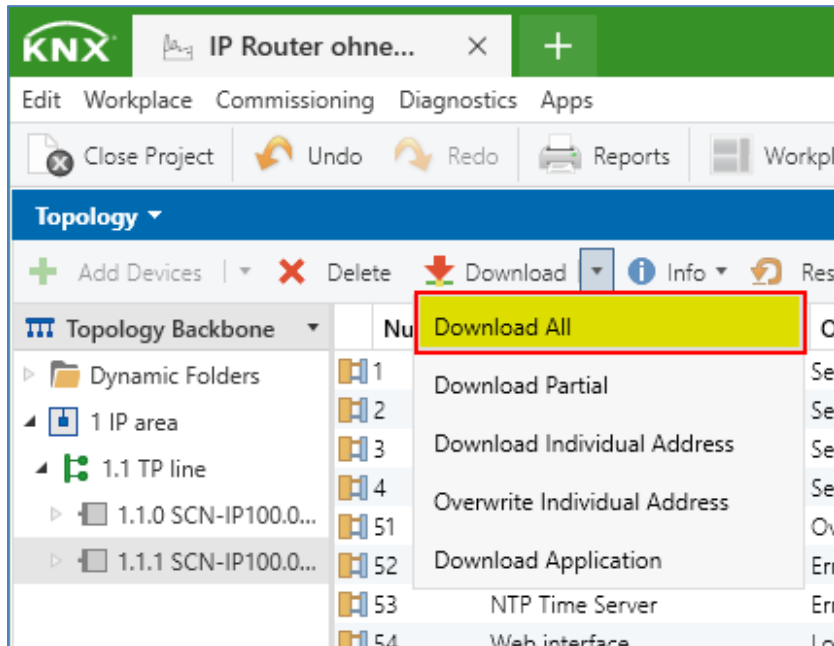


Email and time server application:

Now add the second application ("Email for IP Router without Secure" or "Email for IP Interface without Secure") to your line. In addition to set up the email functions, this application also allows you to link the group addresses for date and time.



Once you have made all the settings in the application, **press and hold** the programming button until the programming LED starts **flashing red**. You can now download the individual address and the application.



Note: After downloading the application, the default password for the web interface is now "admin"! The password can be changed in the application.

The IP Router/ IP Interface is now set up without KNX-Secure.

What to do if?

The IP Router/the IP Interface is not shown in the ETS.

- Have you checked the network connection?
- Is the firmware of your Internet router up to date or has an update been carried out recently?
- Do not use a function in your Internet router such as:
"Always assign the same IPv4 address to this network device".
- Assign static IP addresses outside the DHCP range of your Internet router. Refer to the manual of the Internet router.
- If the IP Router/ IP Interface is shown in your Internet router, configure the interface with the displayed IP address manually in the ETS.
- The "multicast address" 224.0.23.12 defined by the KNX Association must not be blocked in your firewall/network. If in doubt, talk to your network administrator.

I get the ETS error message:
„Incompatible BCU version“

You are trying to download to the wrong memory.
If necessary, reset the device to the factory defaults as described at the beginning of this document.

Hint:

Programming LED lights up = main application for IP settings
Programming LED flashes = email and time server application

The time and date are not updated.

The NTP server required for updating may not be accessible. A valid DNS entry is required for this. If you set up a static IP address for the IP Router/ IP Interface, check the DNS entry in the ETS. Normally, the IP address of your internet router can be entered here.

If necessary, switch off the firewall for the MDT IP Router / IP Interface in your internet router.