



We change the shape of the world

Manual

Interworking Configuration for Cisco Unified Communications Manager and NovaTec S6 or S20 SIP Gateways

Version 1.0 dated April 29th, 2010

Subject to alterations



We change the shape of the world

Contents

Configuration of the Cisco Unified Communications Manager.....	3
Step 1 – SIP Configuration.....	3
Step 2 – Trunk Configuration	4
Step 3 – Route Patterns.....	7
Configuration of the S6/S20 SIP Gateways.....	9
Step 1 – Basic Configuration.....	9
Step 2 – IP Configuration	10
Step 3 – Configure Subscribers	11
Step 4 – Add Subscribers to Numbering Plan	12
Step 5 – Configure CUCM	13
Step 6 – Firmware License	15
Step 7 – Process the Configuration	16
Step 8 –Transfer the Configuration.....	17



Configuration of the Cisco Unified Communications Manager

Even though the S6 and S20 are gateways, you configure them in Cisco Unified Communication Manager Administration as a trunk.

Step 1 – SIP Configuration

SIP Configuration:

Choose **Device > Device Settings > SIP Profile**.

Click the **Add New** button.

The SIP Profile Configuration window displays.

In the Name field, enter a name for the profile.

In the Early Offer for G. Clear Calls drop-down list box you got the following options:

- CLEARMODE
- CCD
- G.nX64
- X-CCD

Please select X-CCD.

Click **Save**.

The SIP Profile Configuration window refreshes and indicates “Add successful”.



We change the shape of the world

Step 2 – Trunk Configuration

Choose **Device > Trunk**.

Click the **Add New** button.

The Trunk Configuration window displays.

The screenshot shows the Cisco Unified CM Administration interface. The main heading is "Trunk Configuration". Below the heading, there is a "Next" button with a green arrow. A "Status" section shows "Status: Ready". The "Trunk Information" section contains two dropdown menus: "Trunk Type*" is set to "SIP Trunk" and "Device Protocol*" is set to "SIP". Below these fields is another "Next" button. An information icon (i) is followed by the text "*- indicates required item." The page footer shows "Fertig" and "Internet" with a 100% zoom level.

From the Trunk Type drop-down list box, select **SIP Trunk**.

Click **Next**.



We change the shape of the world

In the Device Name field, enter a name for the Device.

From the Device Pool drop-down list box, select **Default**.

In the Description field enter the same name as the Device Name.

The screenshot shows the Cisco Unified CM Administration interface for configuring a SIP Trunk. The page title is "Trunk Configuration" and it includes a "Save" button. The status is "Ready". The "Device Information" section contains the following fields:

Product:	SIP Trunk
Device Protocol:	SIP
Device Name*	<input type="text"/>
Description	<input type="text"/>
Device Pool*	-- Not Selected --
Common Device Configuration	< None >
Call Classification*	Use System Default
Media Resource Group List	< None >
Location*	Hub_None
AAR Group	< None >
Packet Capture Mode*	None
Packet Capture Duration	0

Additional options:

- Media Termination Point Required
- Retry Video Call as Audio



We change the shape of the world

Scroll down to the SIP Information box.

The screenshot shows the Cisco Unified CM Administration web interface. The top navigation bar includes 'Cisco Unified CM Administration' and 'For Cisco Unified Communications Solutions'. The main menu has options like 'System', 'Call Routing', 'Media Resources', 'Voice Mail', 'Device', 'Application', 'User Management', 'Bulk Administration', and 'Help'. The current page is 'Trunk Configuration', with a 'Save' button and a 'Related Links: Back To Find/List' link. The 'SIP Information' section contains the following fields:

Destination Address	<input type="text"/>
Destination Address IPv6	<input type="text"/>
<input type="checkbox"/> Destination Address is an SRV	
Destination Port*	<input type="text" value="5060"/>
MTP Preferred Originating Codec*	<input type="text" value="711ulaw"/>
Presence Group*	<input type="text" value="Standard Presence group"/>
SIP Trunk Security Profile*	<input type="text" value="-- Not Selected --"/>
Rerouting Calling Search Space	<input type="text" value="< None >"/>
Out-Of-Dialog Refer Calling Search Space	<input type="text" value="< None >"/>
SUBSCRIBE Calling Search Space	<input type="text" value="< None >"/>
SIP Profile*	<input type="text" value="-- Not Selected --"/>
DTMF Signaling Method*	<input type="text" value="No Preference"/>

The 'Geolocation Configuration' section contains the following fields:

Geolocation	<input type="text" value="< None >"/>
Geolocation Filter	<input type="text" value="< None >"/>
<input type="checkbox"/> Send Geolocation Information	

In the Destination Address field enter the IP Address from the target system (CCU-3).

From the SIP Trunk Security Profile drop-down list box select **Non Secure SIP Trunk Profile**.

From the SIP Profile drop-down list box, select the profile that you created in Step 1.

Click **Save**.

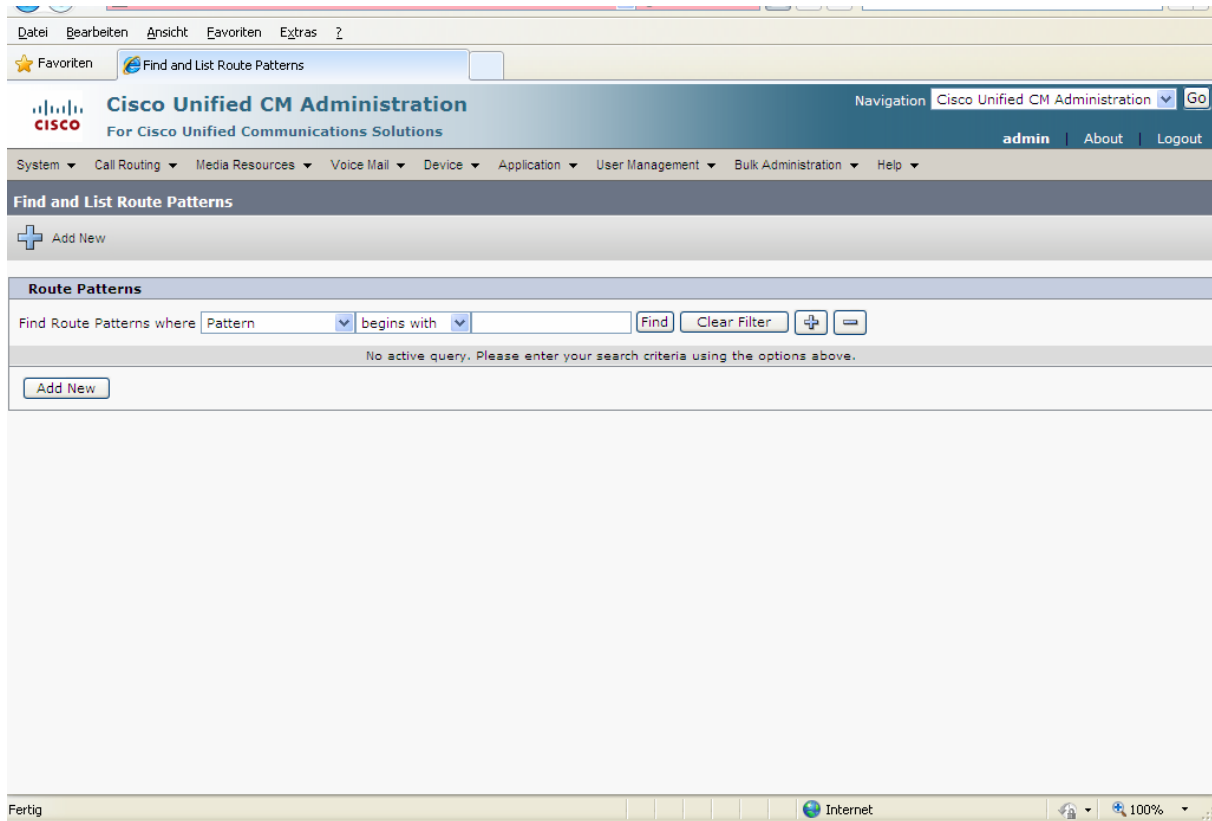


We change the shape of the world

Step 3 – Route Patterns

Choose > **Call Routing** > **Route/Hunt** > **Route Patterns**.

The Find and List Route Patterns window displays.

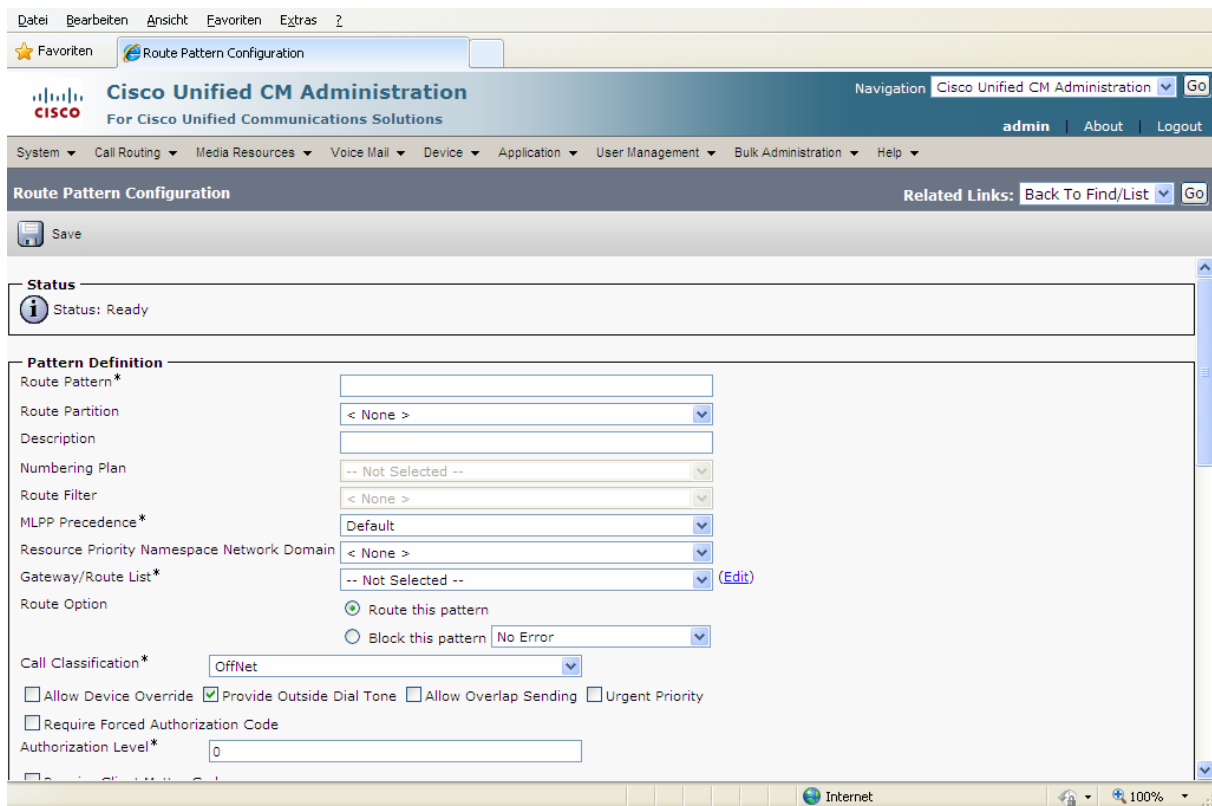


Click **Add New**.



We change the shape of the world

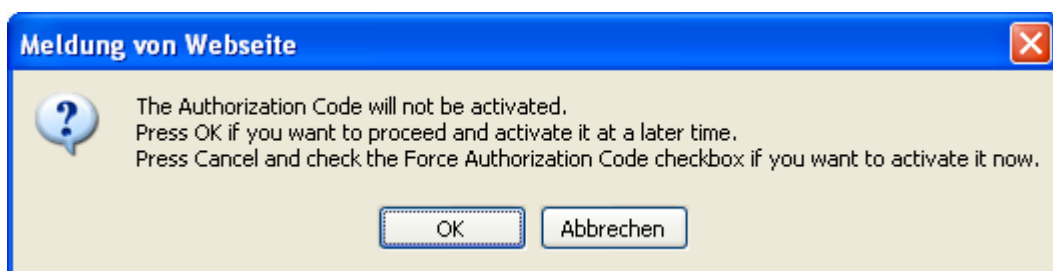
The Route Pattern Configuration window displays.



In the Route Pattern field, enter the Directory Number for the Route Pattern.

From the Gateway/Route List drop-down list box, select the name that you created in Step 3.

Click **Save**.



Click **OK**.

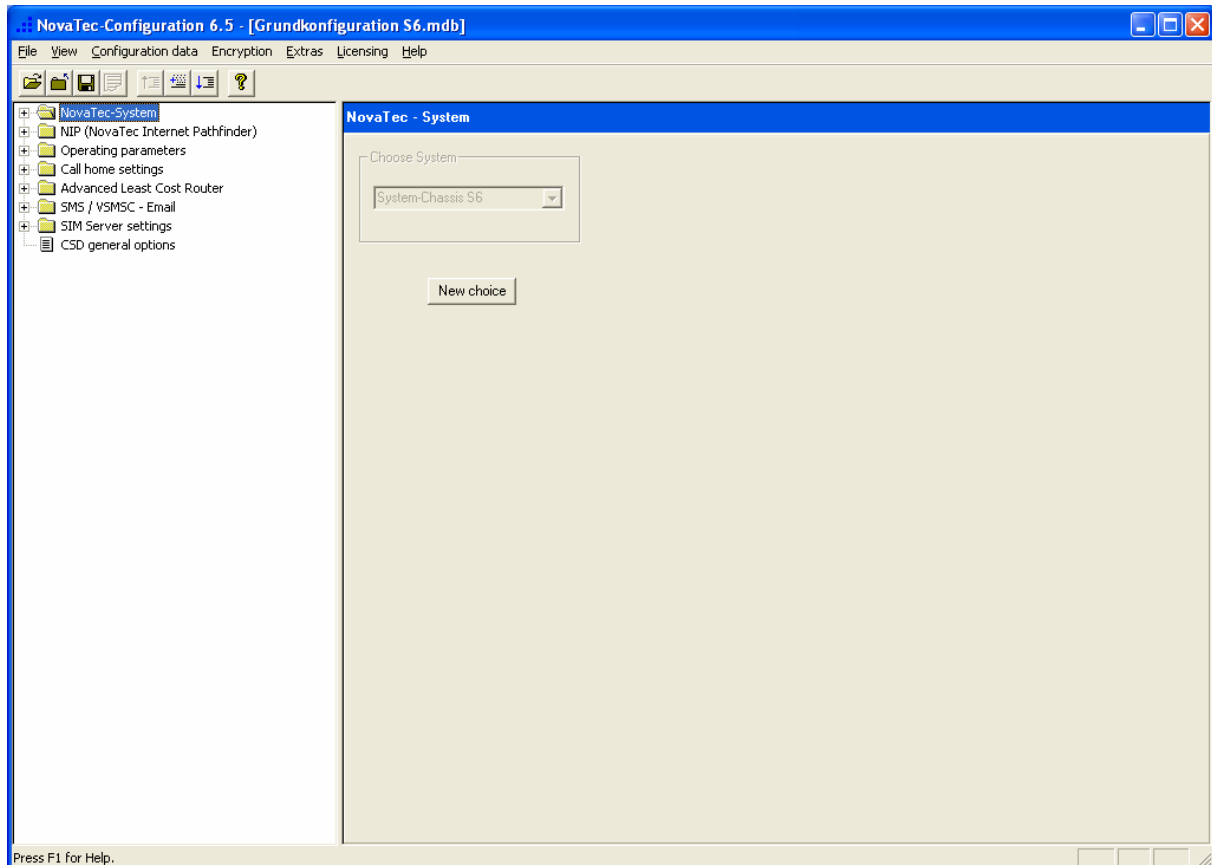


We change the shape of the world

Configuration of the S6/S20 SIP Gateways

Step 1 – Basic Configuration

Open the basic configuration with the application NovaTec Configuration from the NMP (see www.novatec.de > Download area).

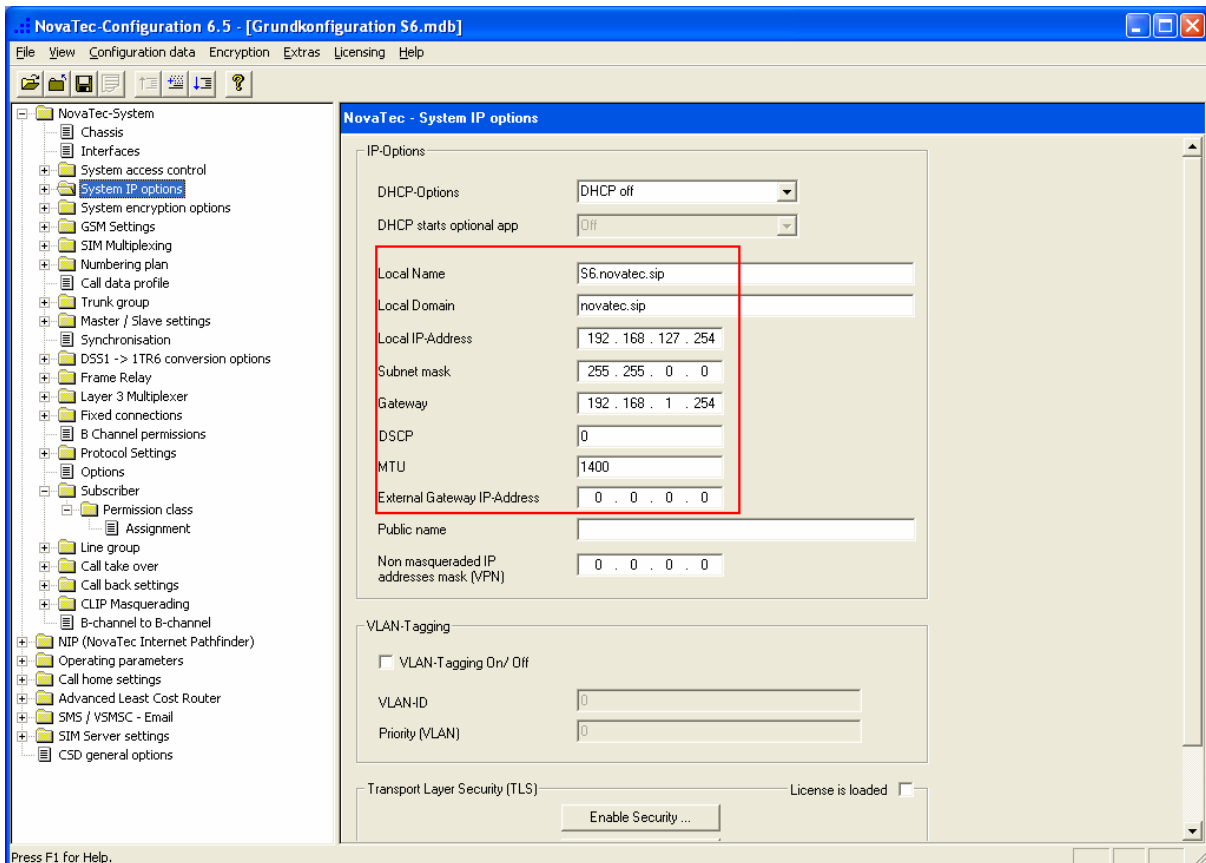
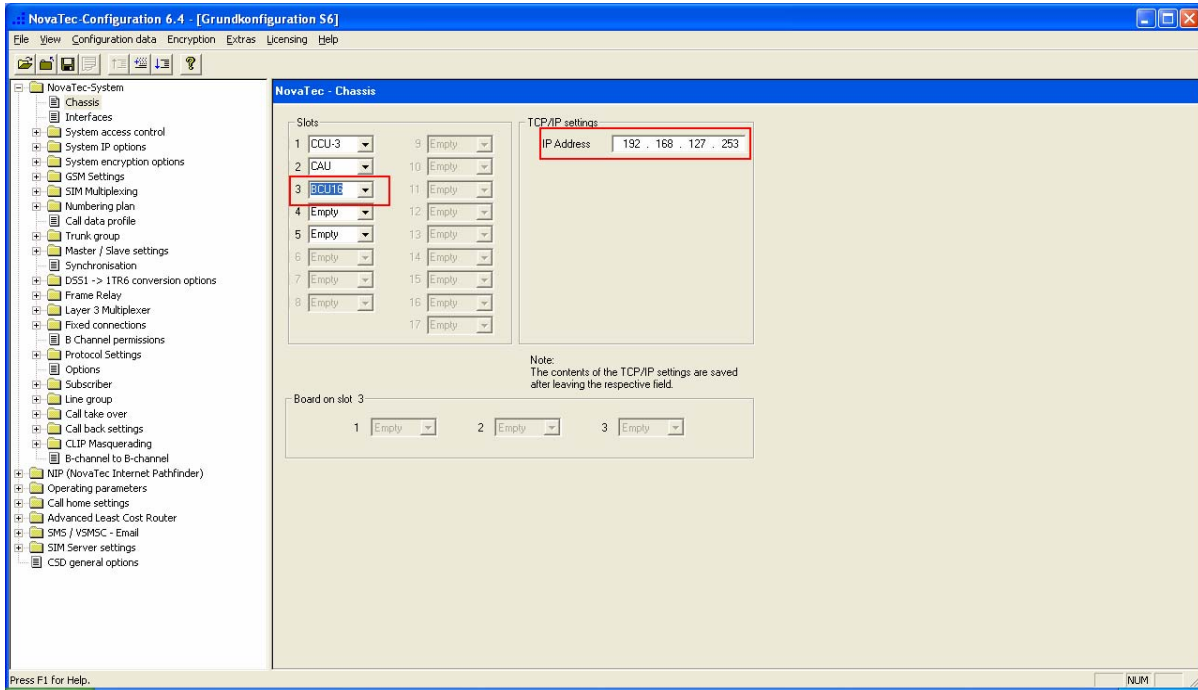




We change the shape of the world

Step 2 – IP Configuration

Configure the IP address, Subnet mask, Gateway name etc.





We change the shape of the world

Step 3 – Configure Subscribers

Now configure the subscribers. To add new subscribers click **New**

To modify existing entries, select the entry you want to change and click **Edit**

The screenshot shows the NovaTec Configuration 6.5 software interface. The main window is titled "NovaTec - Subscriber" and displays a table of subscriber configurations. The table has five columns: Number, Description, Interface, Permission class, and Call take over. The data is as follows:

Number	Description	Interface	Permission class	Call take over
601		Slot 01: CCU3 : Interface 01	Permission class 1	Call take over 1
602		Slot 01: CCU3 : Interface 02	Permission class 1	Call take over 1
603		Slot 01: CCU3 : Interface 03	Permission class 1	Call take over 1
604		Slot 01: CCU3 : Interface 04	Permission class 1	Call take over 1
605		Slot 01: CCU3 : Interface 05	Permission class 1	Call take over 1
606		Slot 01: CCU3 : Interface 06	Permission class 1	Call take over 1
607		Slot 01: CCU3 : Interface 07	Permission class 1	Call take over 1
608		Slot 01: CCU3 : Interface 08	Permission class 1	Call take over 1

Below the table, there are three buttons: "New...", "Edit...", and "Delete". The left sidebar shows a tree view of the configuration hierarchy, with "Subscriber" selected. The status bar at the bottom left says "Press F1 for Help."



Step 4 – Add Subscribers to Numbering Plan

Choose **Numbering plan** > **Dialling plans** > **1-SIP**.

Select all existing entries and delete them by clicking **Delete**.

Click **Subscriber** to insert the numbers of all configured subscribers into the dialling plan.

The screenshot shows the NovaTec Configuration 6.5 interface. The left sidebar displays a tree view of the configuration hierarchy, with 'Numbering plan' > 'Dialling plans' > '1-SIP' selected. The main window, titled 'NovaTec - Assignment of dialing plans', shows a table with two columns: 'Objects' and 'Number'. The table contains eight entries, each representing a slot and interface combination with a corresponding number. Below the table are several buttons: 'New...', 'DDI Wizard', 'Edit...', 'Adopt...', 'Subscriber', and 'Delete'.

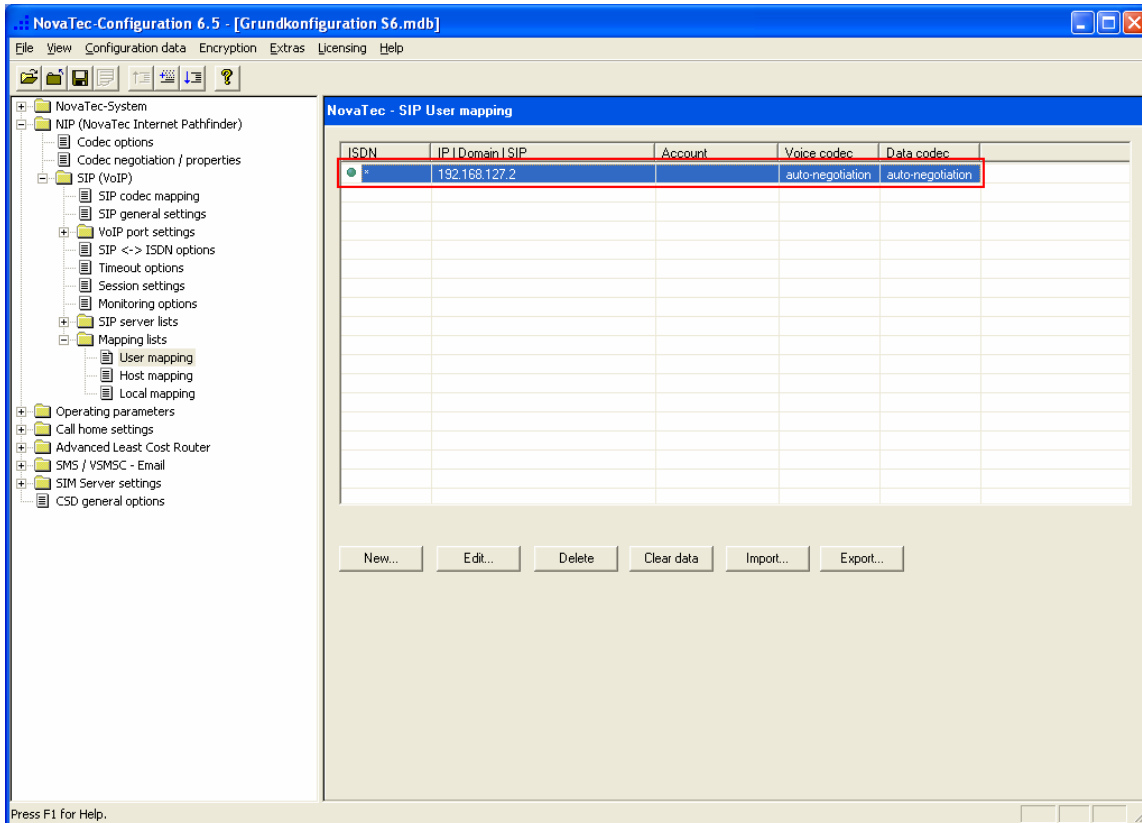
Objects	Number
Slot 01: CCU3: Interface 01	601
Slot 01: CCU3: Interface 02	602
Slot 01: CCU3: Interface 03	603
Slot 01: CCU3: Interface 04	604
Slot 01: CCU3: Interface 05	605
Slot 01: CCU3: Interface 06	606
Slot 01: CCU3: Interface 07	607
Slot 01: CCU3: Interface 08	608



Step 5 – Configure CUCM

Choose **NIP/SIP > Mapping lists > User mapping**.

To modify the IP address of the SIP counterpart (CUCM, IOS) select the entry and click **Edit**.





We change the shape of the world

Click in the field **URI / Name / IP** and change the existing IP address to the IP address of your CUCM/IOS gateway.

Edit User mapping

User mapping is active

ISDN options

ISDN Wildcard WearOut
Incoming prefix Number length

Device options

Device Sub: LLC:
 BC: HLC:

Facsimile over IP (T.38)

Enable T.38

SIP URI / Name / Domain / IP information

URI / Name / IP
IP verification mask significant bits
Voice / Data codec
Trusted Accept all names Correct faulty format
Public access User name is a prefix Can redirect in LAN
ISDN is a user name Additional flags

Account settings

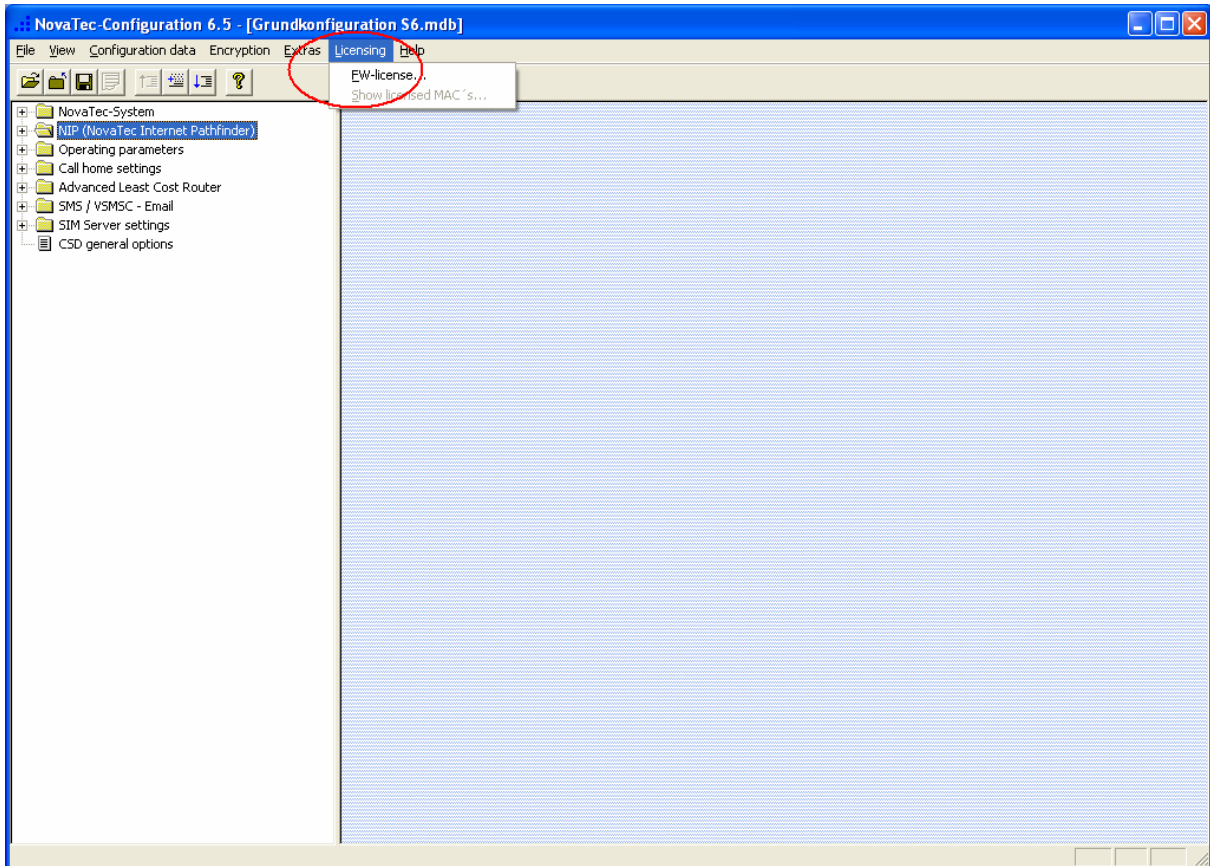
Account Password
Simplified digest Basic authorisation Proxy authorisation
Reserved 1 May use alternative encryption methods
Encryption setting Handling profile
Additional flags



We change the shape of the world

Step 6 – Firmware License

Choose **Licensing** > **FW-license** and upload the Firmware license.





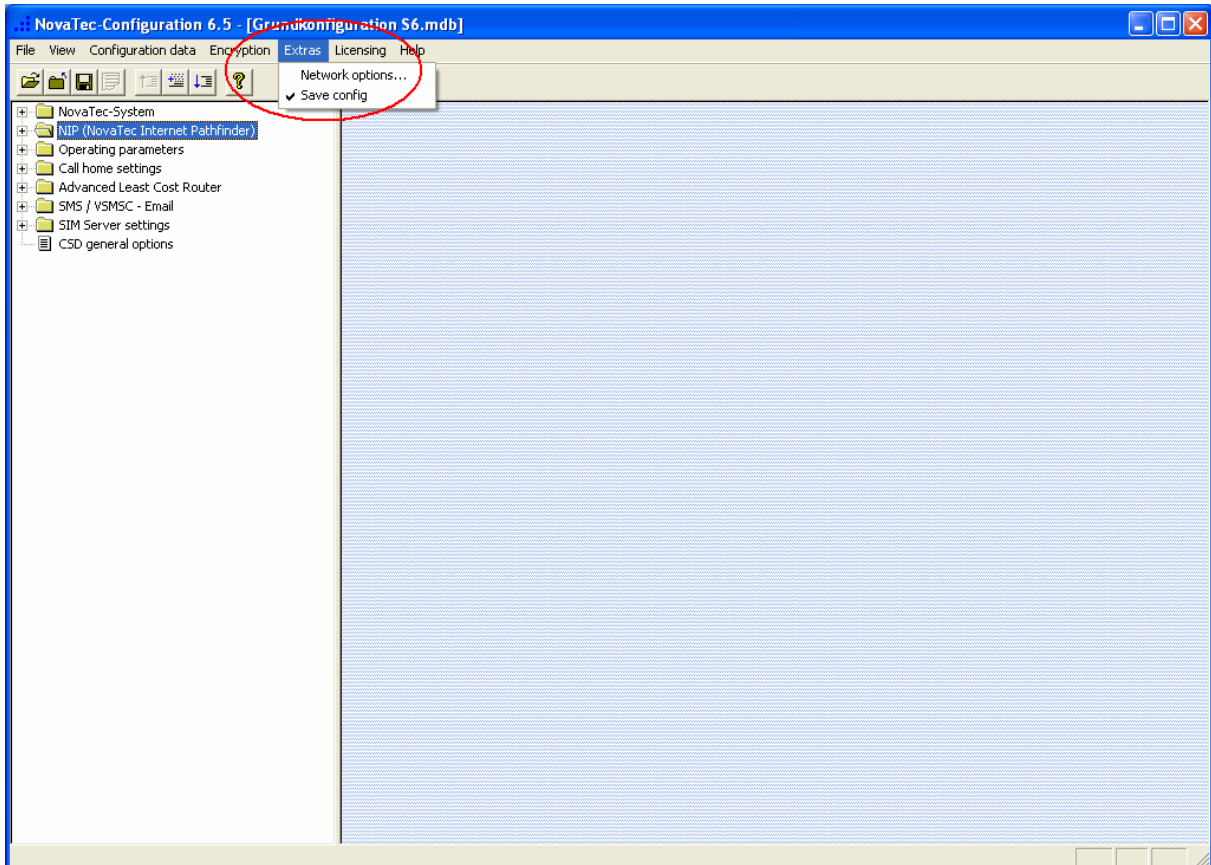
We change the shape of the world

Step 7 – Process the Configuration

Choose **Extras**

Check if **Save config** is ticked.

Process the configuration file with **F7**.



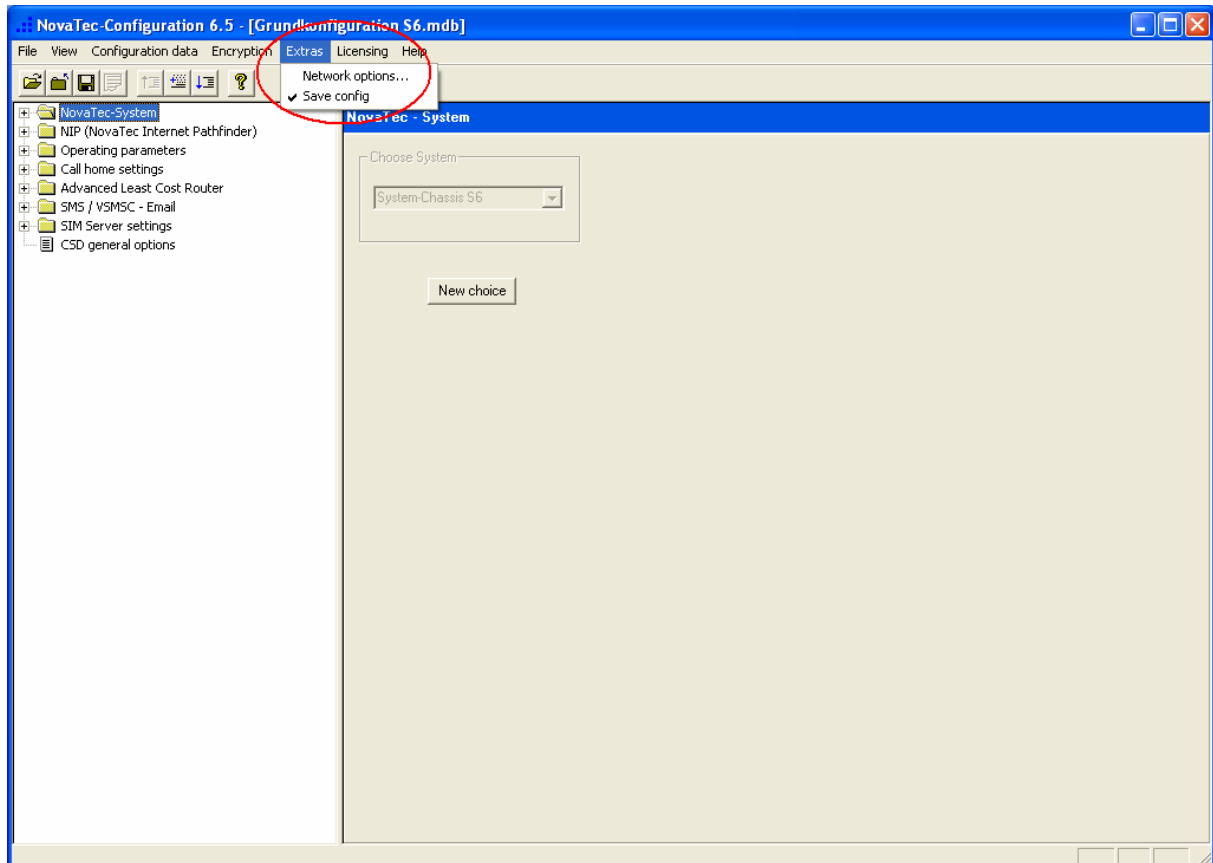


We change the shape of the world

Step 8 –Transfer the Configuration

Choose **Extras**.

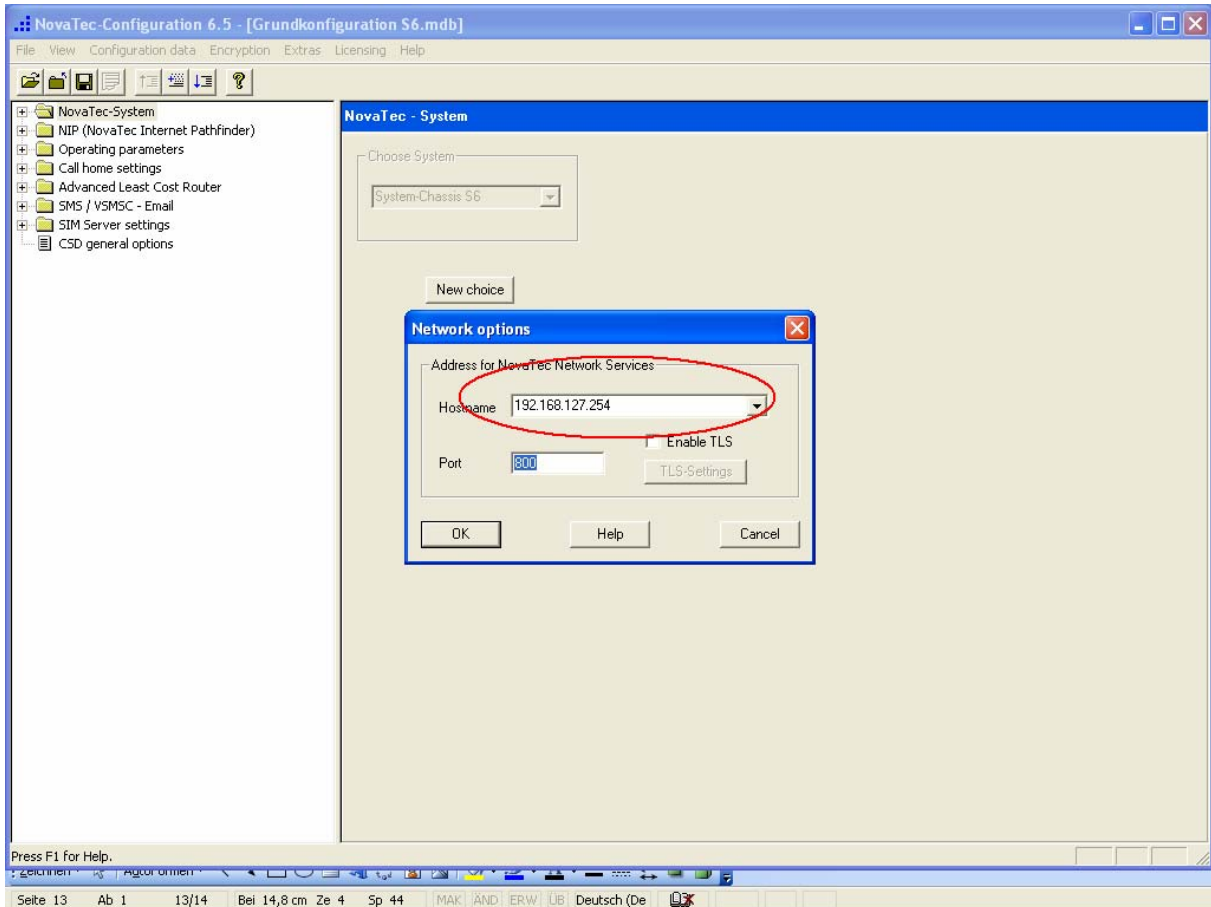
Select **Network options**.





We change the shape of the world

Enter the IP address of the target system and click **OK**.

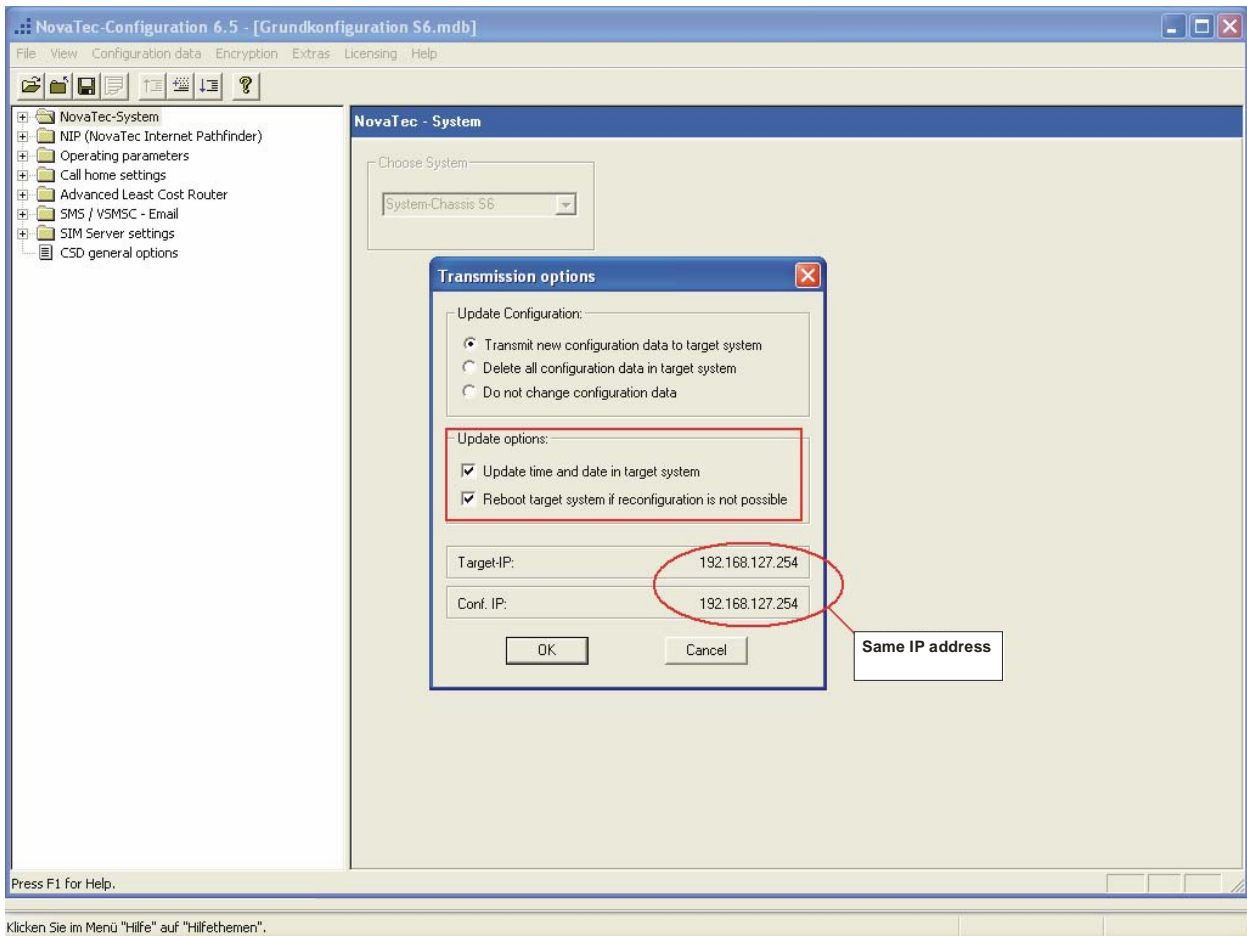


Press **F5** to transfer to the target system.



We change the shape of the world

Set the ticks as shown below and click **OK**.



After the first configuration of the target system a system reset is required for the configuration changes to become active.

The following list shows all configuration settings which can be re-configured without a system reset. If you change an option which is not in this list, then the change will require a system reset to become active.

The list of re-configurable configuration options depends on the installed FW version:



We change the shape of the world

FW 00.07.00.55 or older:

- NovaTec-System/Analogue Interface-Configuration/Supplementary Services
- NovaTec-System/System access control
- NovaTec-System/GSM settings
- NovaTec-System/SIM multiplexing
- NovaTec-System/Numbering plan
- NovaTec-System/Call data profile
- NovaTec-System/Protocol Settings
- NovaTec-System/Options/System ASR
- NovaTec-System/Options/ISDN ASR
- NovaTec-System/Options/GSM ASR
- NovaTec-System/Options/SIP ASR
- NovaTec-System/Call back settings
- NovaTec-System/B-channel to B-channel
- NIP (NovaTec Internet Pathfinder)/SIP (VoIP)/SIP <-> ISDN options
- Operating parameters/Remote maintenance
- Operating parameters/Customer target data
- Call home settings
- Advanced Lease Cost Router
- NovaTec-System/SMS / VSMSC – E-Mail/SMS <-> E-Mail settings/SMS settings
- CSD general options

FW 00.07.00.63:

- NovaTec-System/Analogue Interface-Configuration/Supplementary Services
- NovaTec-System/System access control
- NovaTec-System/GSM settings
- NovaTec-System/SIM multiplexing
- NovaTec-System/Numbering plan
- NovaTec-System/Call data profile
- NovaTec-System/Protocol Settings
- NovaTec-System/Options/System ASR
- NovaTec-System/Options/ISDN ASR
- NovaTec-System/Options/GSM ASR
- NovaTec-System/Options/SIP ASR
- NovaTec-System/Call back settings
- NovaTec-System/B-channel to B-channel
- NIP (NovaTec Internet Pathfinder)/NLP (Network Link Protocol)/Connection options/Connection profiles:
Only the Backplane-ID in existing remote profiles can be changed without a reset.
- NIP (NovaTec Internet Pathfinder)/SIP (VoIP)/SIP <-> ISDN options
- Operating parameters/Remote maintenance
- Operating parameters/Customer target data
- Call home settings
- Advanced Lease Cost Router
- NovaTec-System/SMS / VSMSC – E-Mail/SMS <-> E-Mail settings/SMS settings
- CSD general options