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# Handbook

# Reconfiguration of NovaTec gateways

Version 1.0 from Mai 27<sup>th</sup>, 2011

**This document is subject to changes.**



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## 1 Overview

### 1.1 Prequel, changes compared to earlier versions

Not applicable

### 1.2 List of literature

Not applicable

### 1.3 Foreseeable changes

The document will be updated if new configuration options in the software or firmware are realized.

### 1.4 Abbreviations

<b>CLIP</b>	<b>C</b> alling <b>L</b> ine <b>I</b> dentification <b>P</b> resentation
<b>CSD</b>	<b>C</b> ircuit <b>S</b> witched <b>D</b> ata
<b>DDI</b>	<b>D</b> irect <b>D</b> ialling <b>I</b> n
<b>DNS</b>	<b>D</b> omain <b>N</b> ame <b>S</b> ystem
<b>DSS1</b>	<b>D</b> igital <b>S</b> ubscriber <b>S</b> ignalling System No. 1
<b>ESC</b>	<b>E</b> nddevice <b>s</b> election <b>c</b> ipher
<b>ENUM</b>	<b>E</b> .164 <b>N</b> UMber <b>M</b> apping
<b>GSM</b>	<b>G</b> lobal <b>S</b> ystem for <b>M</b> obile <b>C</b> ommunications
<b>IP</b>	<b>I</b> nternet <b>P</b> rotocol
<b>ISDN</b>	<b>I</b> ntegrated <b>S</b> ervices <b>D</b> igital <b>N</b> etwork
<b>MLPP</b>	<b>M</b> ulti <b>L</b> evel <b>P</b> recedence and <b>P</b> reemption
<b>MSN</b>	<b>M</b> ultiple <b>S</b> ubscriber <b>N</b> umber
<b>NAT</b>	<b>N</b> etwork <b>A</b> ddress <b>T</b> ranslation
<b>NIP</b>	<b>N</b> ovaTec <b>I</b> nternet <b>P</b> athfinder
<b>NLP</b>	<b>N</b> ovaTec <b>L</b> ink <b>P</b> rotocol
<b>NT</b>	<b>N</b> etwork <b>T</b> ermination
<b>PTMP</b>	<b>P</b> oint <b>T</b> o <b>M</b> ultipoint
<b>PTP</b>	<b>P</b> oint <b>T</b> o <b>P</b> oint
<b>RMCS</b>	<b>R</b> emote <b>M</b> aster <b>C</b> lock <b>S</b> ource
<b>RSA</b>	<b>R</b> ivest, <b>S</b> hamir und <b>A</b> dleman
<b>RTP</b>	<b>R</b> ea <b>-</b> Time <b>T</b> ransport <b>P</b> rotocol
<b>SCEP</b>	<b>S</b> imple <b>C</b> ertificate <b>E</b> nrollment <b>P</b> rotocol
<b>SIM</b>	<b>S</b> ubscriber <b>I</b> dentify <b>M</b> odule
<b>SIP</b>	<b>S</b> ession <b>I</b> nitiation <b>P</b> rotocol
<b>SMS</b>	<b>S</b> hort <b>M</b> essage <b>S</b> ervice
<b>SRTP</b>	<b>S</b> ecure <b>R</b> T <b>P</b>
<b>TE</b>	<b>T</b> erminal <b>E</b> quipment
<b>TLS</b>	<b>T</b> ransport <b>L</b> ayer <b>S</b> ecurity
<b>UDP</b>	<b>U</b> ser <b>D</b> atagram <b>P</b> rotocol
<b>VoIP</b>	<b>V</b> oice <b>o</b> ver <b>I</b> nternet <b>P</b> rotocol
<b>VSMSC</b>	<b>V</b> irtual <b>S</b> hort <b>M</b> essage <b>S</b> ervice <b>C</b> enter



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## **1.5 Introduction**

This document describes the behaviour of NovaTec gateways during a reconfiguration whilst in operation. It is specified which adjustments can be made in operational mode and which need a system reset. If relevant, details of the method in which a reconfiguration of a feature can be made, are given. In the following document a configuration setting is stated as reconfigurable if changes of the setting can be made whilst in operation and no system reset of the target system is necessary to adopt the changes. If the adjustment of a configuration setting requires a system reset it is stated as not reconfigurable.

## **1.6 Compendium**

This document describes the behaviour of NovaTec gateways during a reconfiguration whilst in operation.

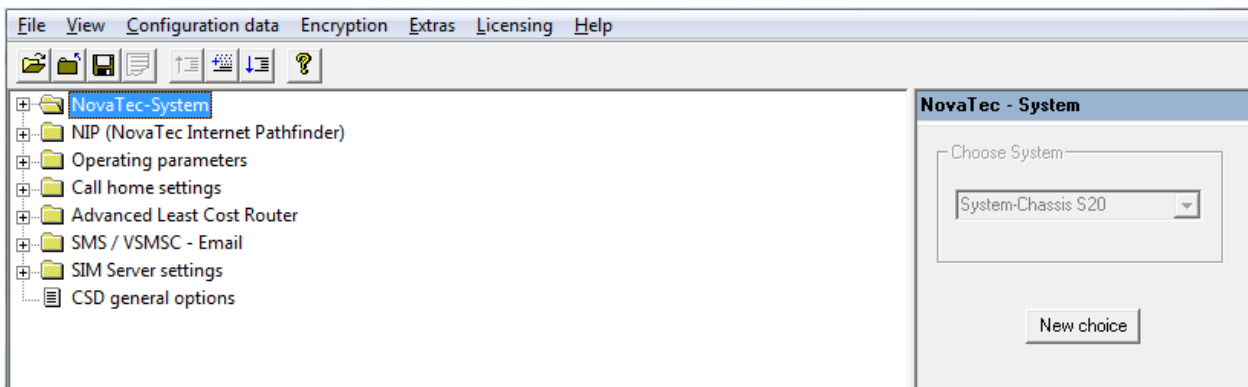


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## 2 Reconfiguration

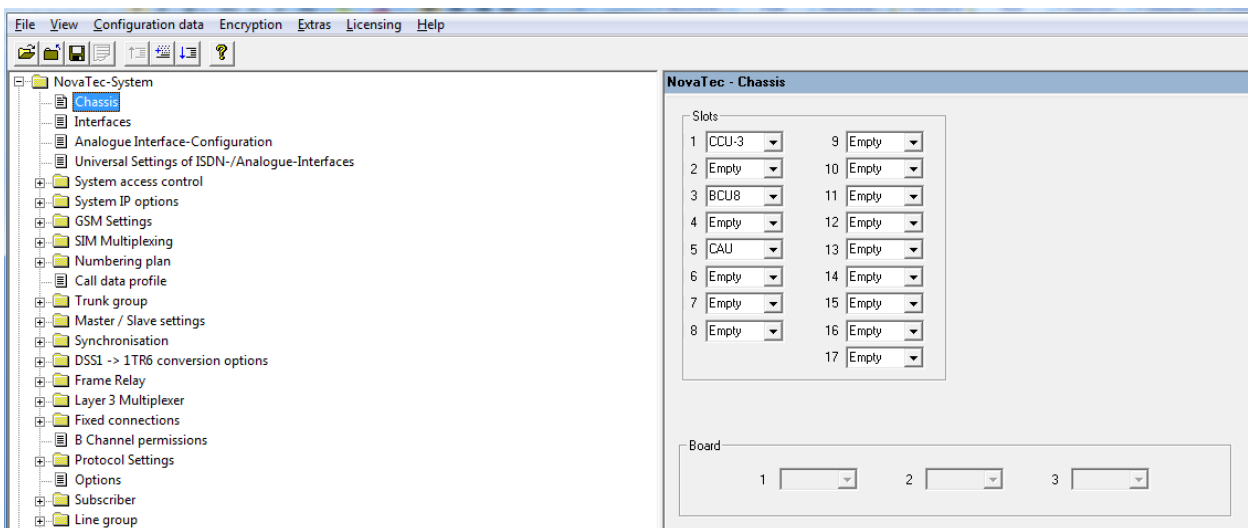
In the following subsections one node of the navigation menu on the left hand side of the main window of the NovaTec configuration software at a time is described. In most cases either all of the settings are reconfigurable or none at all. In the exceptions the reconfigurable and not reconfigurable settings of one page are described in detail.

### 2.1 NovaTec-System



On this page no settings are reconfigurable. Changes require a system reset.

#### 2.1.1 NovaTec-System/Chassis



On this page no settings are reconfigurable. Changes require a system reset.



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## 2.1.2 NovaTec-System/Interfaces

Interface	Mode
<input checked="" type="checkbox"/> Slot 01: CCU3 : Interface 01	Subscriber line
<input checked="" type="checkbox"/> Slot 01: CCU3 : Interface 02	Subscriber line
<input checked="" type="checkbox"/> Slot 01: CCU3 : Interface 03	Subscriber line
<input checked="" type="checkbox"/> Slot 01: CCU3 : Interface 04	Cross connection subscriber line
<input checked="" type="checkbox"/> Slot 01: CCU3 : Interface 05	Analog Subscriber-Line
<input checked="" type="checkbox"/> Slot 01: CCU3 : Interface 06	Analog Subscriber-Line
<input checked="" type="checkbox"/> Slot 01: CCU3 : Interface 07	Analog Subscriber-Line
<input checked="" type="checkbox"/> Slot 01: CCU3 : Interface 08	Analog Subscriber-Line
<input checked="" type="checkbox"/> Slot 03: BCU8 : Interface 01	SIP
<input checked="" type="checkbox"/> Slot 03: BCU8 : Interface 02	SIP
<input checked="" type="checkbox"/> Slot 03: BCU8 : Interface 03	SIP
<input checked="" type="checkbox"/> Slot 03: BCU8 : Interface 04	SIP
<input checked="" type="checkbox"/> Slot 05: CAU : Interface 01	Subscriber line
<input checked="" type="checkbox"/> Slot 05: CAU : Interface 02	Subscriber line
<input checked="" type="checkbox"/> Slot 05: CAU : Interface 03	Subscriber line
<input checked="" type="checkbox"/> Slot 05: CAU : Interface 04	Subscriber line

On this page no settings are reconfigurable. Changes require a system reset.

## 2.1.3 NovaTec-System/Analogue Interface-Configuration

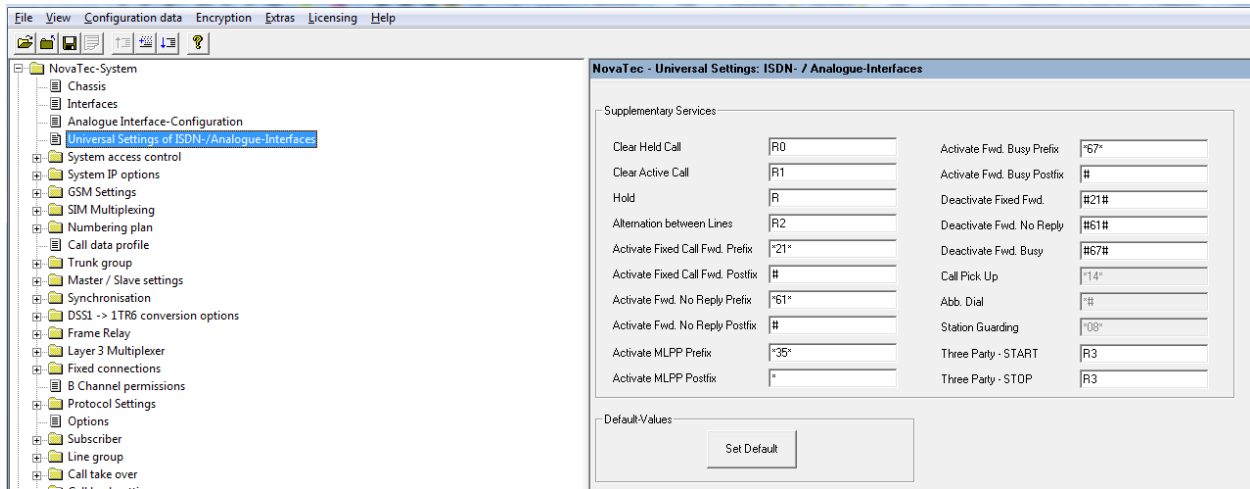
Interface
<input checked="" type="checkbox"/> Slot 01: CCU3 : Submodule 02 (ANA04): Interface 05
<input checked="" type="checkbox"/> Slot 01: CCU3 : Submodule 02 (ANA04): Interface 06
<input checked="" type="checkbox"/> Slot 01: CCU3 : Submodule 02 (ANA04): Interface 07
<input checked="" type="checkbox"/> Slot 01: CCU3 : Submodule 02 (ANA04): Interface 08

On this page no settings are reconfigurable. Changes require a system reset.



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## 2.1.4 NovaTec-System/Universal Settings of ISDN-/Analogue-Interfaces



The settings on this page are adjustable and immediately operative.

A subscriber using a supplementary service feature code that is no longer valid after the reconfiguration will receive a corresponding fault report when dialling the first digit after the reconfiguration.

Example:

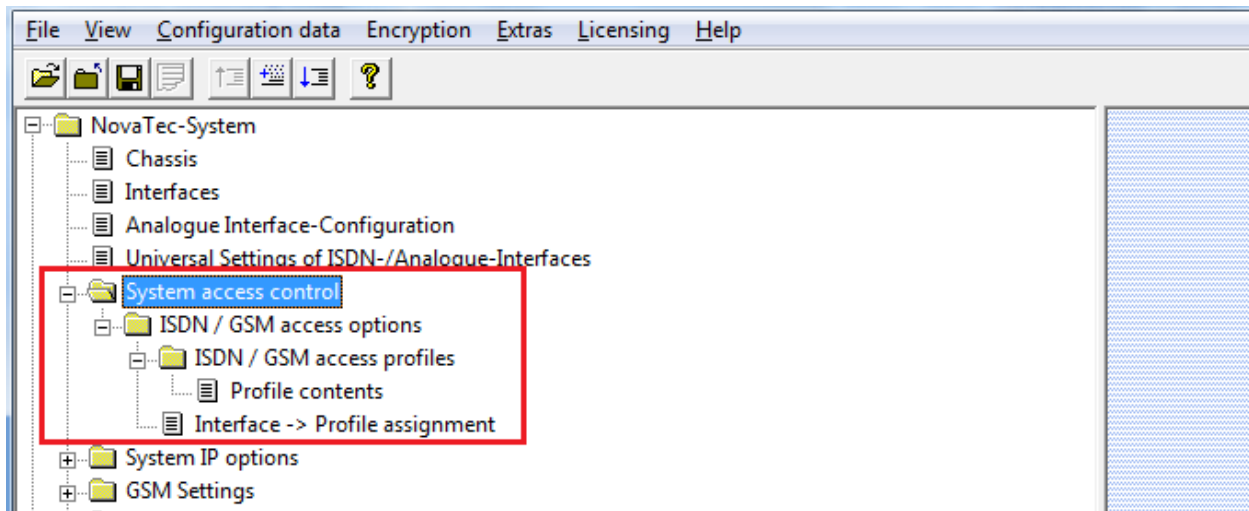
1. A subscriber wants to program a fixed call diversion and begins to dial „\*21“.
2. During the dialing process the administrator transfers a new configuration to the target system. In this configuration the dialling code for a fixed call diversion has been changed from “\*21” to “\*31\*”.
3. The target system adopts the adjustments promptly.
4. The subscriber has not yet continued dialling. The call state remains unchanged.
5. Now the subscriber dials the next digit „\*“. The call is rejected as the current dialled number „\*21\*“ is no longer a valid dialling code.





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### 2.1.5 NovaTec-System/System access control



All settings and sub items of „System access control“ are reconfigurable and immediately operative.

Existing calls or calls in the establishment phase are not influenced by changes. Only calls that are established after the reconfiguration are influenced by changes.

Example:

1. Subscriber „123“ is making a call.
2. During the dialing process the administrator transfers a new configuration to the target system. In this configuration subscriber „123“ is not allowed to make any calls.
3. The target system adopts the adjustments promptly.
4. The call of the subscriber persists.
5. Subscriber „123“ ends his call.
6. Subscriber „123“ tries to make a new call.
7. The call is rejected.



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## 2.1.6 NovaTec-System/System IP options

The screenshot displays the NovaTec configuration interface. On the left, a tree view shows the configuration hierarchy, with 'System IP options' highlighted in a red box. The main window shows the 'NovaTec - System IP options' configuration panel. The 'IP-Options' section includes settings for DHCP-Options (set to 'DHCP off'), DHCP starts optional app (set to 'Off'), Local Name (gw.example.sip), Local Domain (example.sip), Local IP-Address (192.168.0.2), Subnet mask (255.255.0.0), Gateway (192.168.0.1), DSCP (0), MTU (1400), External Gateway IP-Address (0.0.0.0), Public name (gw.example.de), and Non masqueraded IP addresses mask (VPN) (255.255.0.0). The 'VLAN-Tagging' section has a checkbox for 'VLAN-Tagging On/ Off' (unchecked), VLAN-ID (0), and Priority (VLAN) (0). The 'Transport Layer Security (TLS)' section has a 'License is loaded' checkbox (checked) and buttons for 'Enable Security ...' and 'Disable Security ...'.

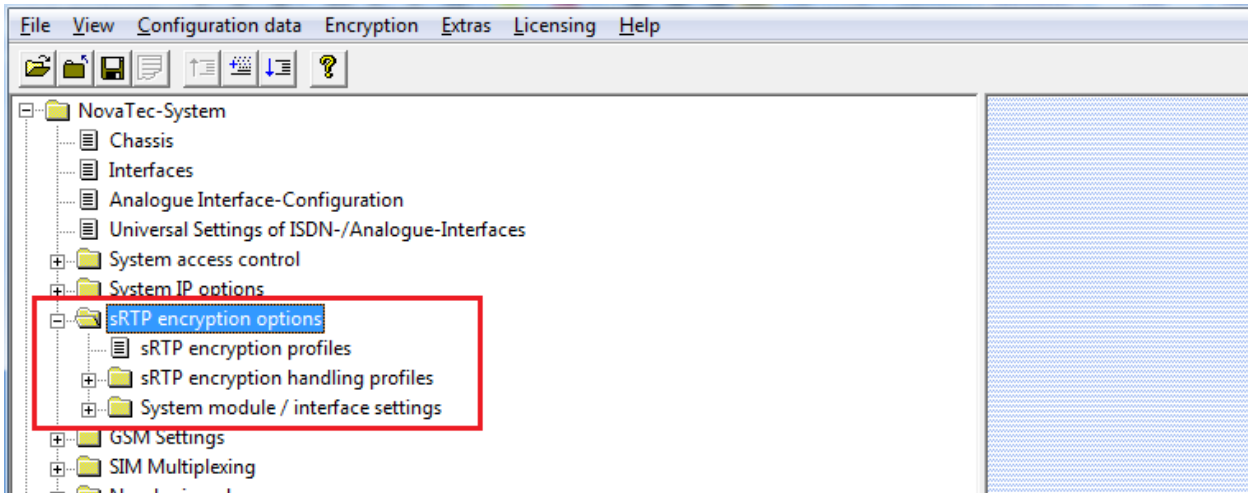
None of the settings and sub items of „System IP options“ are reconfigurable.

All changes in „System IP options“, „DNS servers“, „Available IP services“, „System NAT mapping“, „ENUM servers“ and „TLS Security“ require a system reset to come into effect.



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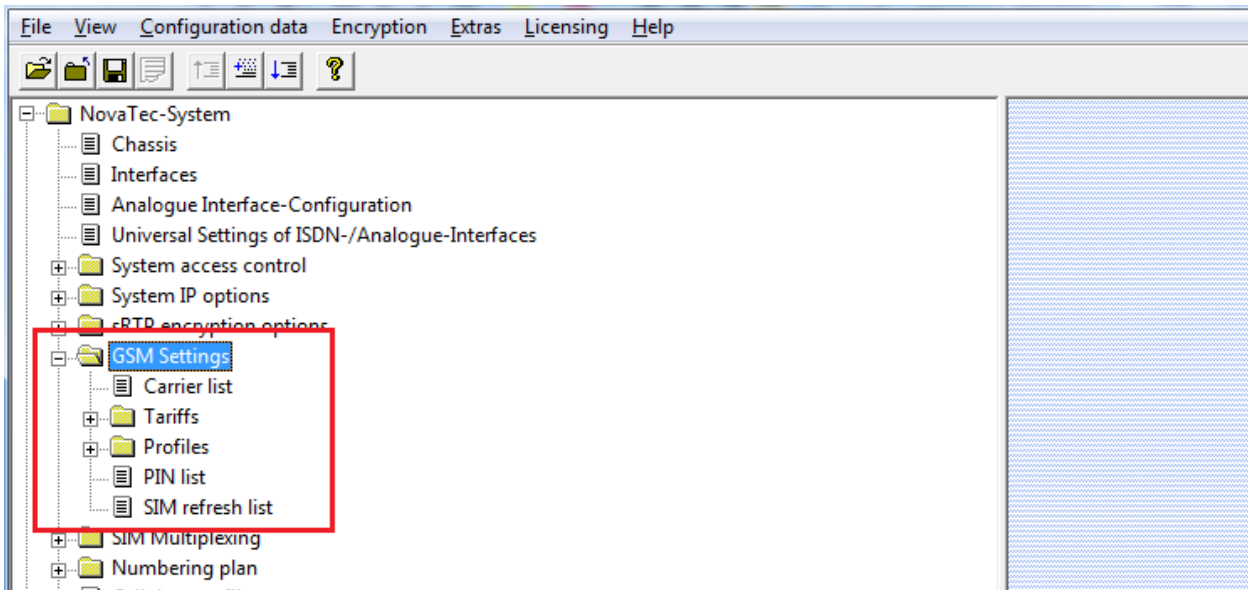
### 2.1.7 NovaTec-System/sRTP encryption options



None of the settings and sub items of „sRTP encryption options” are reconfigurable.

All changes in „sRTP encryption options“, „sRTP encryption profiles“, „sRTP encryption handling profiles“ and „System module / interface settings“ require a restart to come into effect.

### 2.1.8 NovaTec-System/GSM Settings



All settings and sub items of „GSM settings“ are reconfigurable and immediately operative.



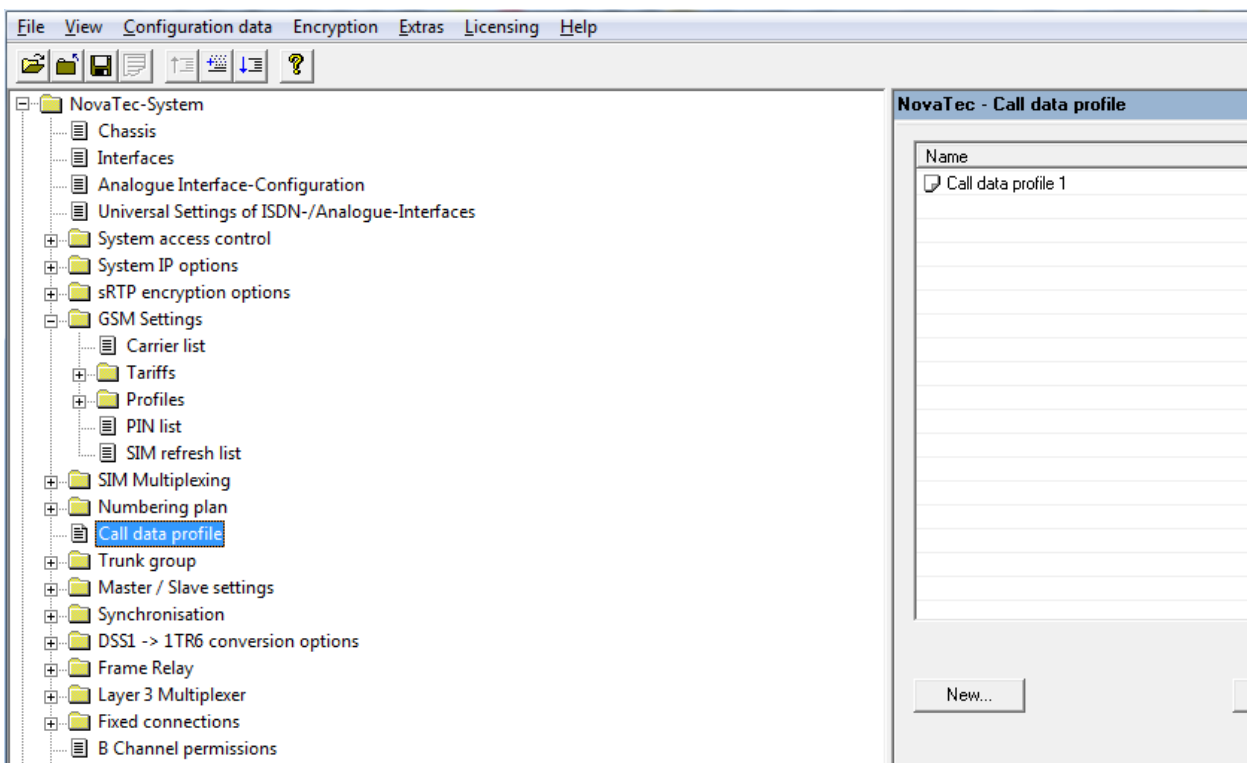


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Example:

1. A subscriber wants to call subscriber number „123456“ and begins to dial „123“.
2. During the dialing process the administrator transfers a new configuration to the target system. In this configuration the number „123456“ has been deleted from the numbering plan.
3. The target system adopts the new settings immediately.
4. The subscriber has not yet continued to dial. The call state remains unchanged.
5. The subscriber continues to dial with digit „4“. The call is now rejected as the current dialled number “1234” is no longer included in the numbering plan.

### 2.1.11 NovaTec-System/Call data profile



The settings on this side are reconfigurable and changes are immediately operative.



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## 2.1.12 NovaTec-System/Trunk group

The screenshot shows the NovaTec configuration software interface. On the left, a tree view displays the system configuration structure, with 'Trunk group' highlighted in a red box. On the right, the 'NovaTec - Trunk group' configuration window is open, displaying a table with the following data:

No.	Name	Numbering plan	Price per unit	Profile
0	SIP	SIP	0,06	Call data
1	ISDN	Subscriber	0,06	Call data

Below the table, there are three buttons: 'New...', 'Edit...', and 'Delete'.

All settings and sub items of „Trunk group“ are reconfigurable and immediately operative.

Calls as occupy a set of circuits in the moment of the reconfiguration and for which the telephone of the called subscriber does not yet ring keep on working with the data sets as were valid for the occupied trunk group before the reconfiguration.

Calls that are build up after the reconfiguration work instantly with the new data sets.

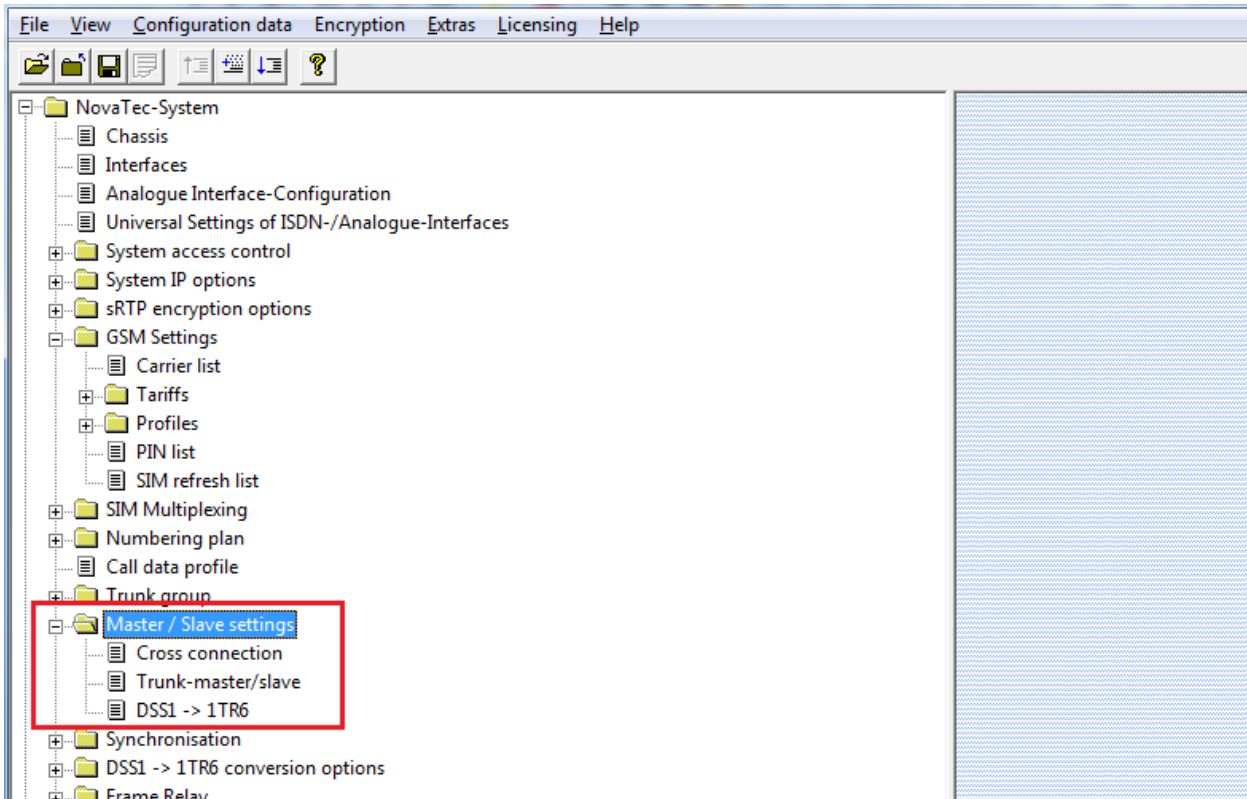
Example:

1. A subscriber begins to build up a call via the trunk group „Test“. The interfaces A and B are dedicated to the trunk group „Test“.
2. In this moment the administrator transfers a new configuration to the target system in which only interface a is dedicated to the trunk group „Test“.
3. A rerouting of the existing call via the trunk group „Test“ is operated. During the rerouting a B channel is chosen. As the call build up started before the reconfiguration the next free B channel of interfaces A and B is chosen.
4. A new call is build up via trunk group „Test“. The new call chooses a free B channel of interface A as the call build up began after the reconfiguration was effected.



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### 2.1.13 NovaTec-System/Master / Slave settings



None of the settings and sub items of „Master / Slave settings“ are reconfigurable.

All changes on „Master / Slave settings“, „Cross connection“, „Trunk-master/slave“ and „DSS1 -> 1TR6“ require a system reset to be adopted.

### 2.1.14 NovaTec-System/Synchronisation

No settings can be made in „NovaTec-System/Synchronisation“.

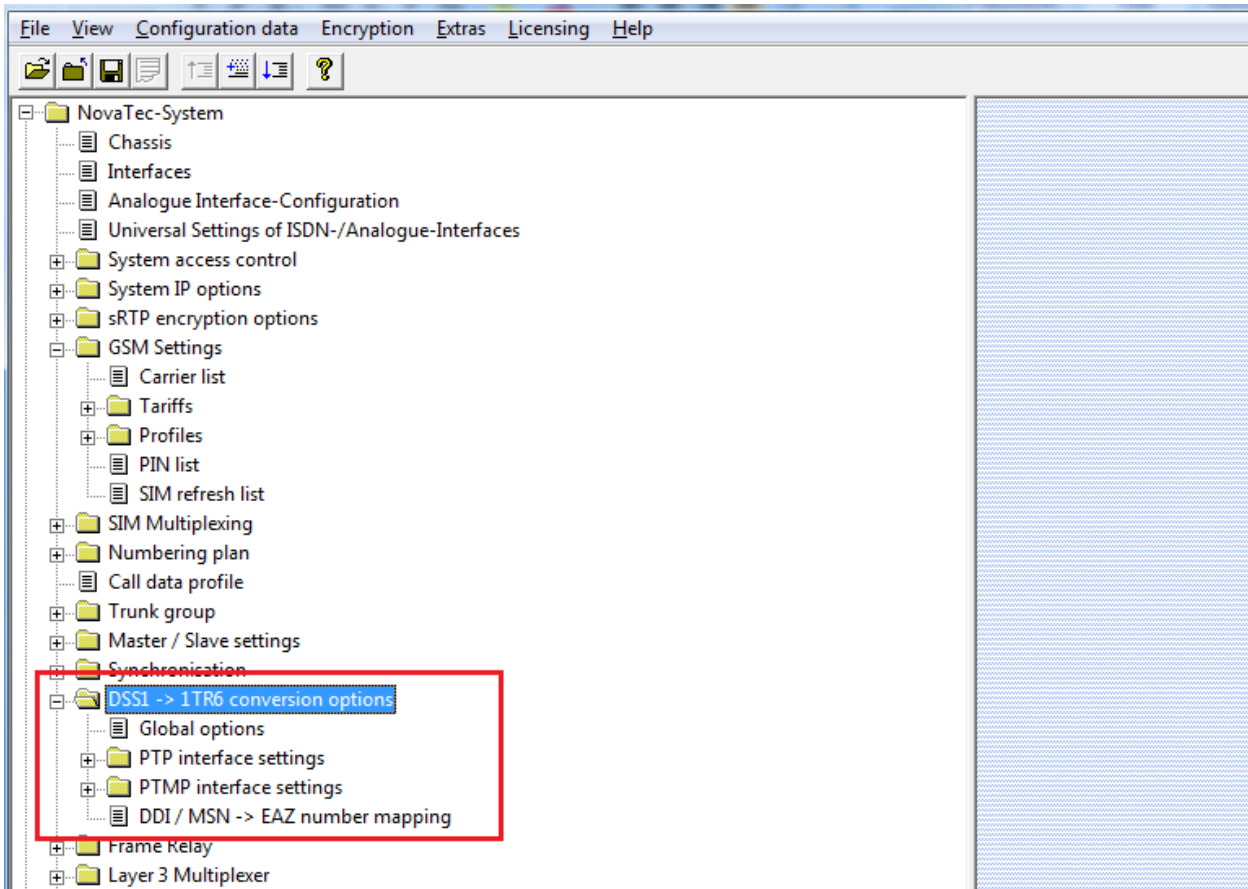






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### 2.1.15 NovaTec-System/DSS1 -> 1TR6 conversion options



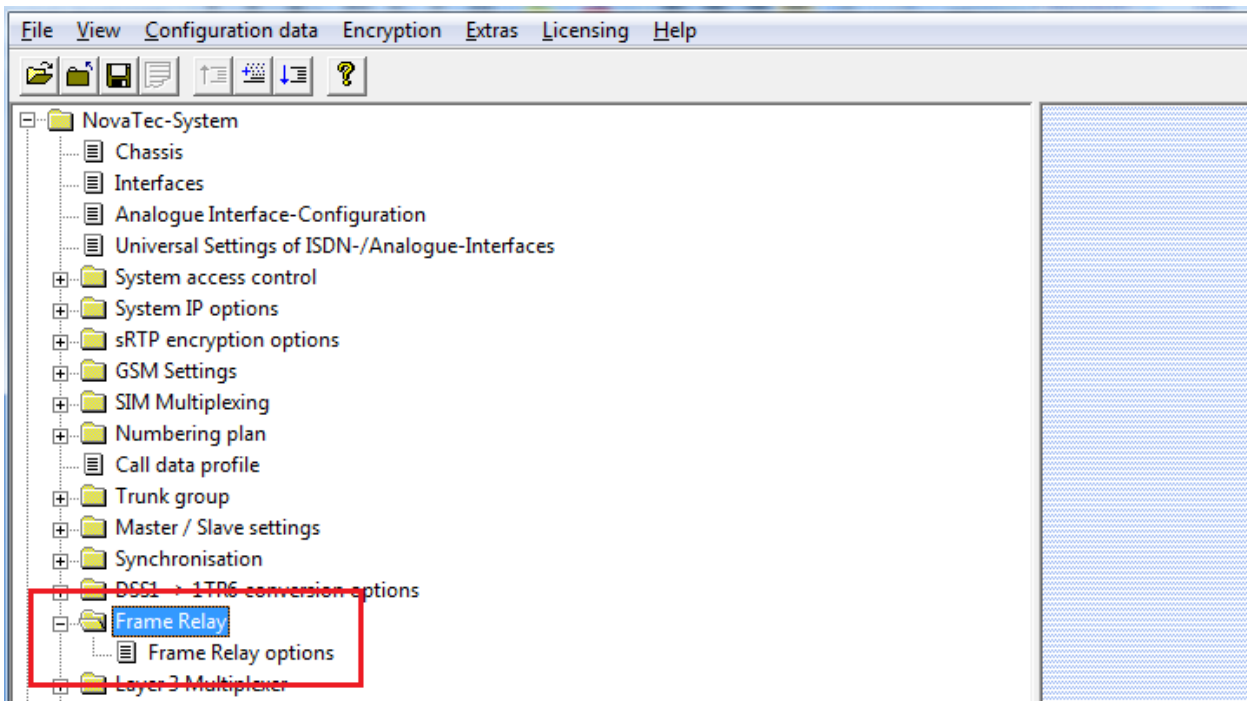
None of the settings and sub items of „DSS1-> 1TR6 conversion options“ are reconfigurable.

All changes on the pages „DSS1 -> 1TR6 conversion options“, „Global options“, „PTP interface settings“, „PTMP interface settings“ and „DDI / EAZ number mapping“ require a system reset to be adopted.



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## 2.1.16 NovaTec-System/Frame Relay



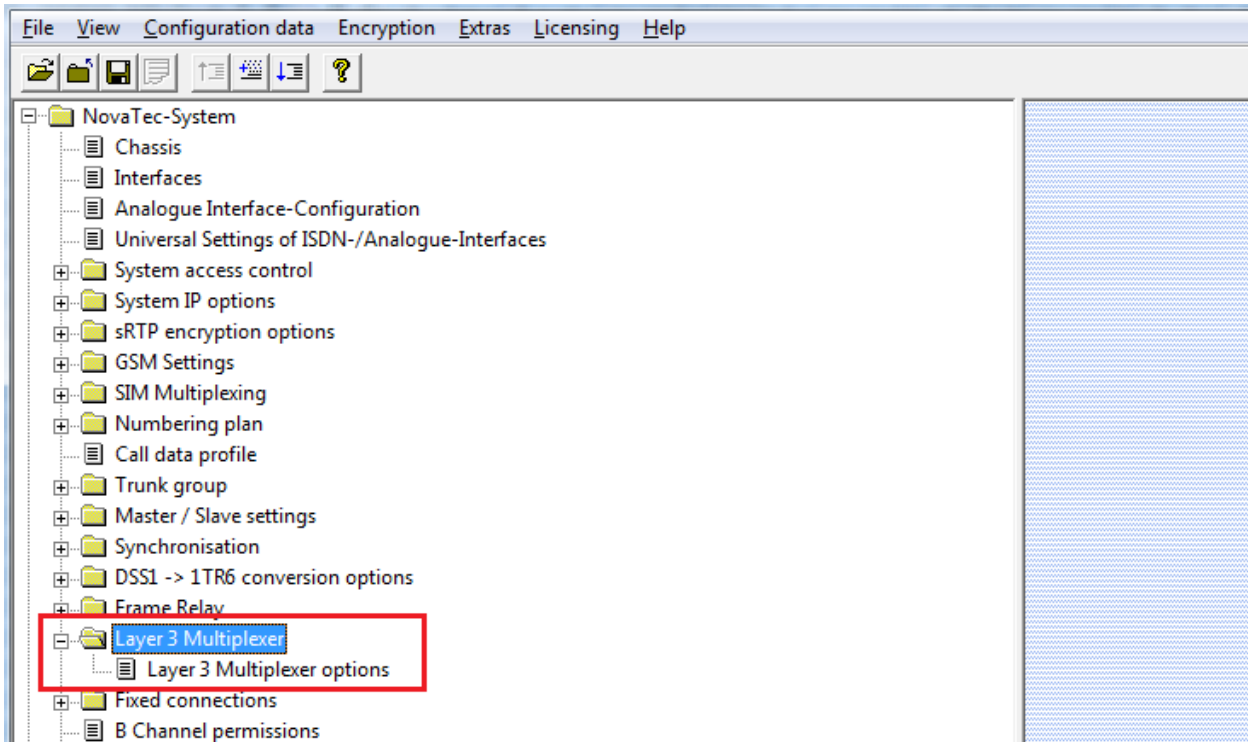
None of the settings and sub items of “Frame relay” are reconfigurable.

All changes on the pages „Frame Relay“ and „Frame Relay options“ require a system restart to be adopted.



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### 2.1.17 NovaTec-System/Layer 3 Multiplexer



None of the settings and sub items of „Layer 3 Multiplexer“ are reconfigurable.

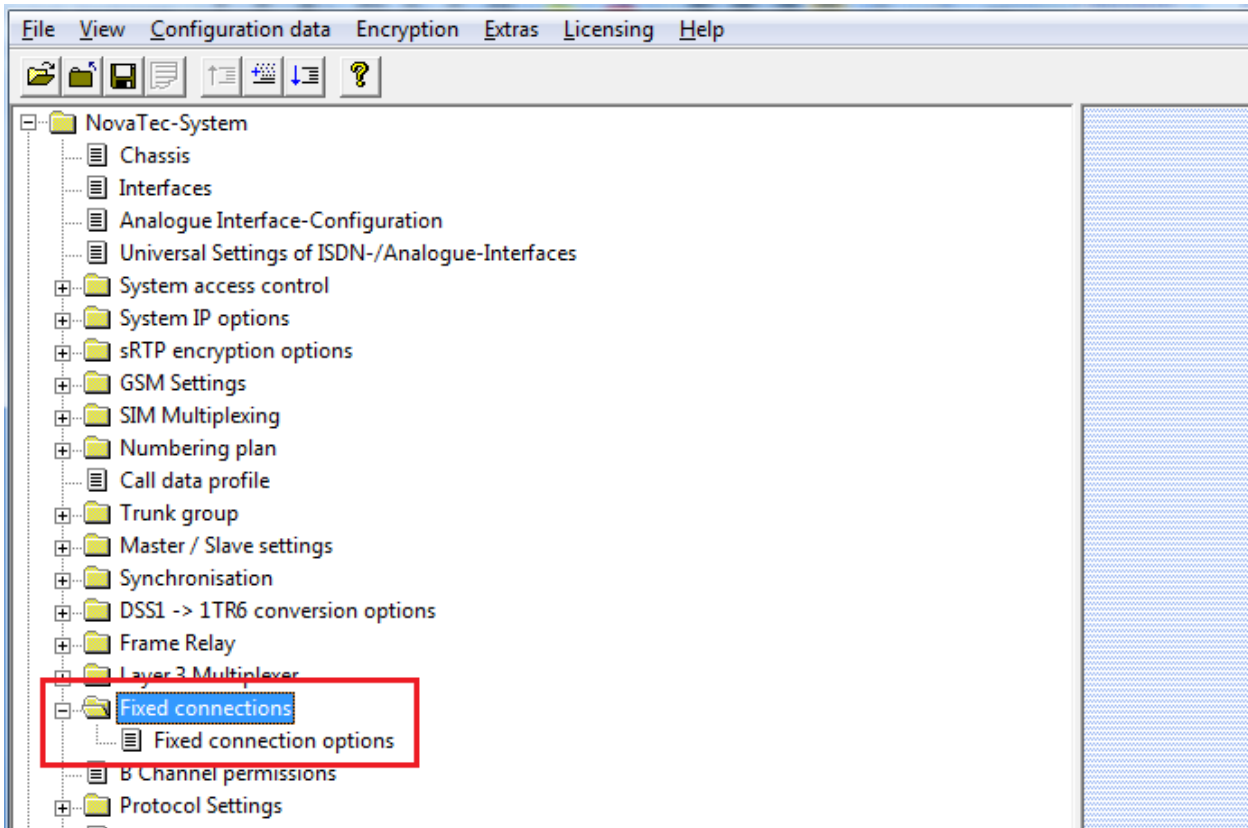
All changes on the pages „Layer 3 Multiplexer“ and „Layer 3 Multiplexer options“ require a system restart to be adopted.

The feature is no longer supported by current firmware versions.



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### 2.1.18 NovaTec-System/Fixed connections



None of the settings and sub items of „Fixed connections“ are reconfigurable.

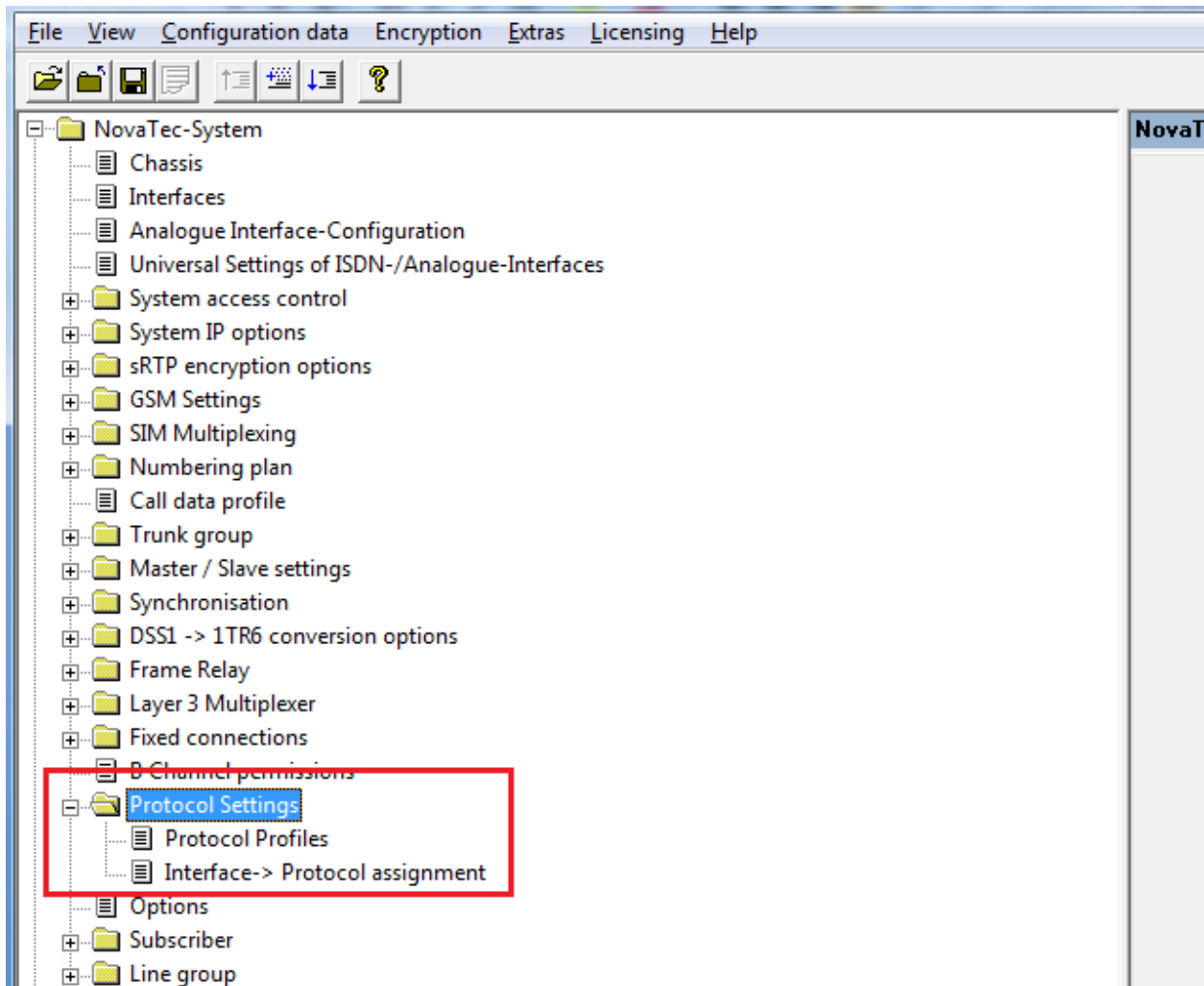
All changes on the pages „Fixed connections“ and „Fixed connections options“ require a system reset to be adopted.





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## 2.1.20 NovaTec-System/Protocol Settings



All settings and sub items of „Protocol Settings“ are reconfigurable and immediately operative.



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## 2.1.21 NovaTec-System/Options

The screenshot shows the NovaTec-System/Options configuration window. The left pane displays a tree view of the configuration hierarchy, with 'Options' selected. The right pane shows the configuration settings for 'NovaTec - Options'. The settings are organized into several sections:

- System ASR:** Minimal call duration (0 sec), Trigger Call home ASR < (0 %), Minimal number of calls for Call Home (1000).
- GSM ASR:** Minimal call duration (30 sec), Trigger Call home ASR < (85 %), Minimal number of calls for Call Home (1000).
- ISDN ASR:** Minimal call duration (30 sec), Trigger Call home ASR < (85 %), Minimal number of calls for Call Home (1000).
- SIP ASR:** Minimal call duration (30 sec), Trigger Call home ASR < (85 %), Minimal number of calls for Call Home (1000).
- PABX relative settings:** Explicit call transfer (checked), Call pick up (checked), Call forwarding (checked), Call pick up (\*14\*), Station guarding (\*08\*), Abb. dial (#).
- Tone generation options:** Generation active (checked), Always send progress indicator "INBAND INFO AVAILALBE" on disconnect, even when this indicator is not present (checked). This section is highlighted with a red box.
- Cause value "Congested" (34) options:** Alternative value (34). This section is highlighted with a red box.
- Pool buffer options:** Size of pool buffer (270). This section is highlighted with a red box.
- Music On Hold:** Import Audio (PCM) ..., Remove Audio..., Audio: PCM, 8-Bit, 8 kHz, Mono. This section is highlighted with a red box.

The settings boarded in red on this page are not reconfigurable. Changes require a system reset.

All other settings on this page are reconfigurable. Changes to these settings are immediately operative.

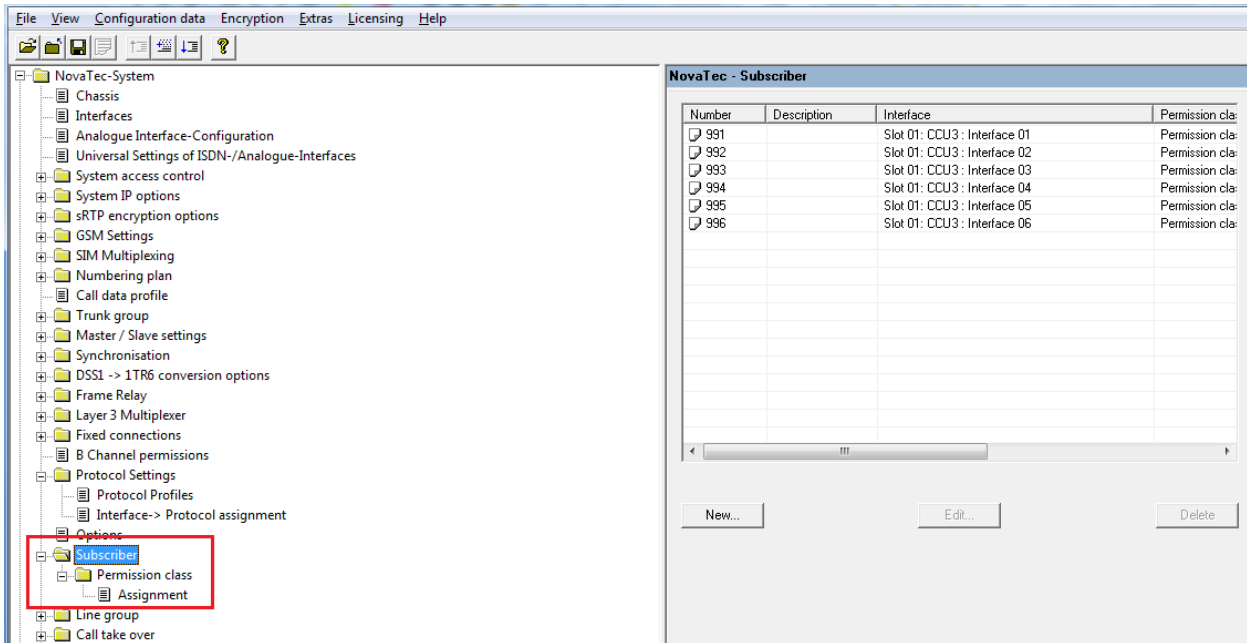
I.e. changes to the following settings require a system reset to be adopted:

- Tone generation options
- Pool buffer options
- Music On Hold



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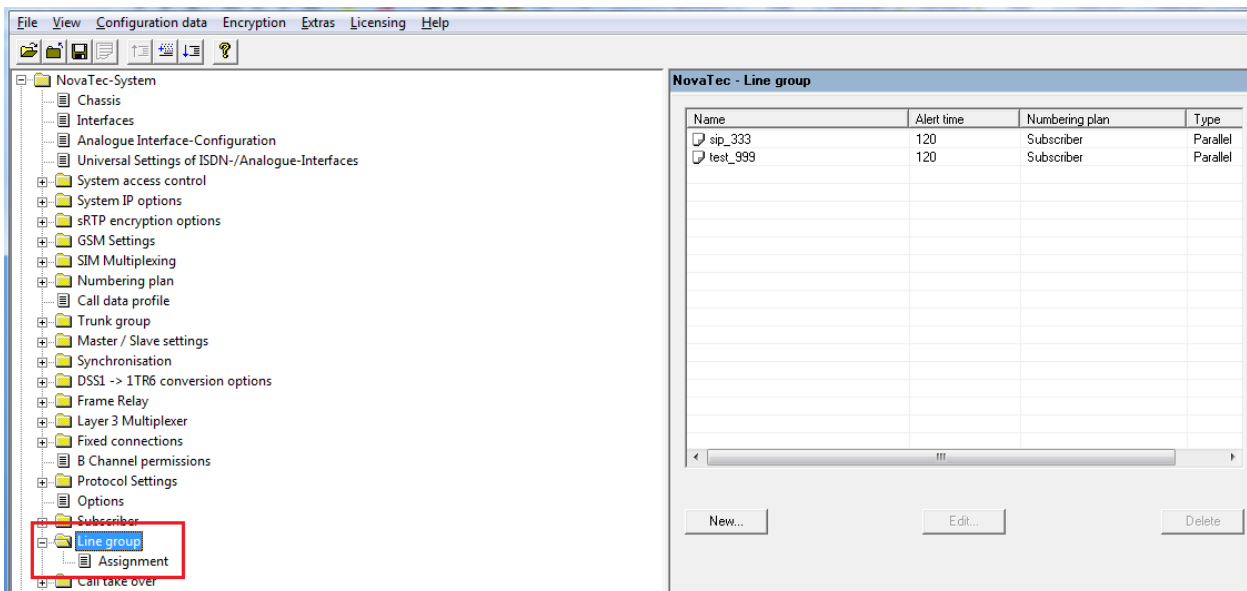
### 2.1.22 NovaTec-System/Subscriber



All settings and sub items of „Subscriber“ are reconfigurable and immediately operative.

If a subscriber is deleted calls build up before the reconfiguration remain active. After the reconfiguration the deleted subscriber cannot build up new calls.

### 2.1.23 NovaTec-System/Line group



All settings and sub items of „Line group“ are reconfigurable and immediately operative.

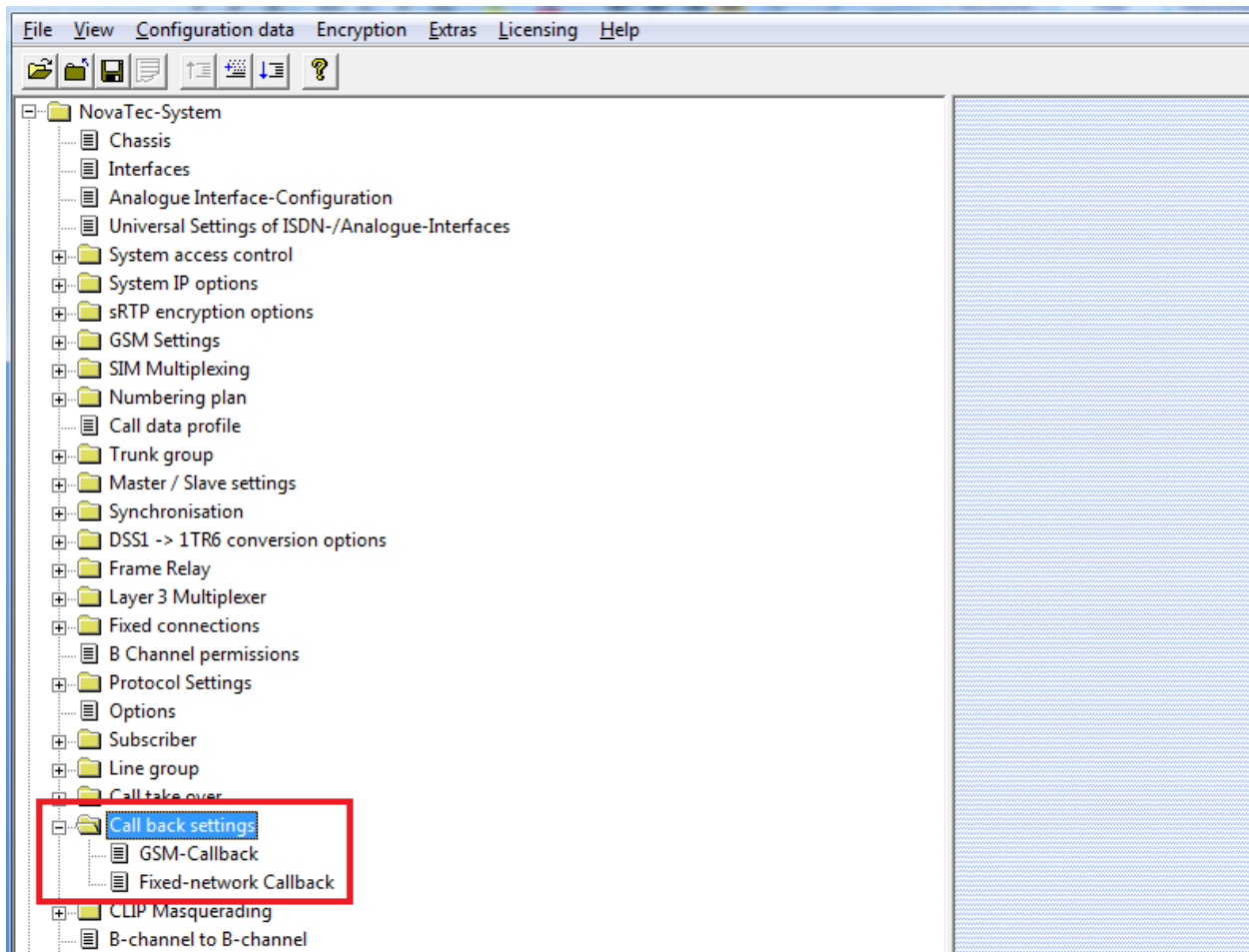






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### 2.1.25 NovaTec-System/Call back settings

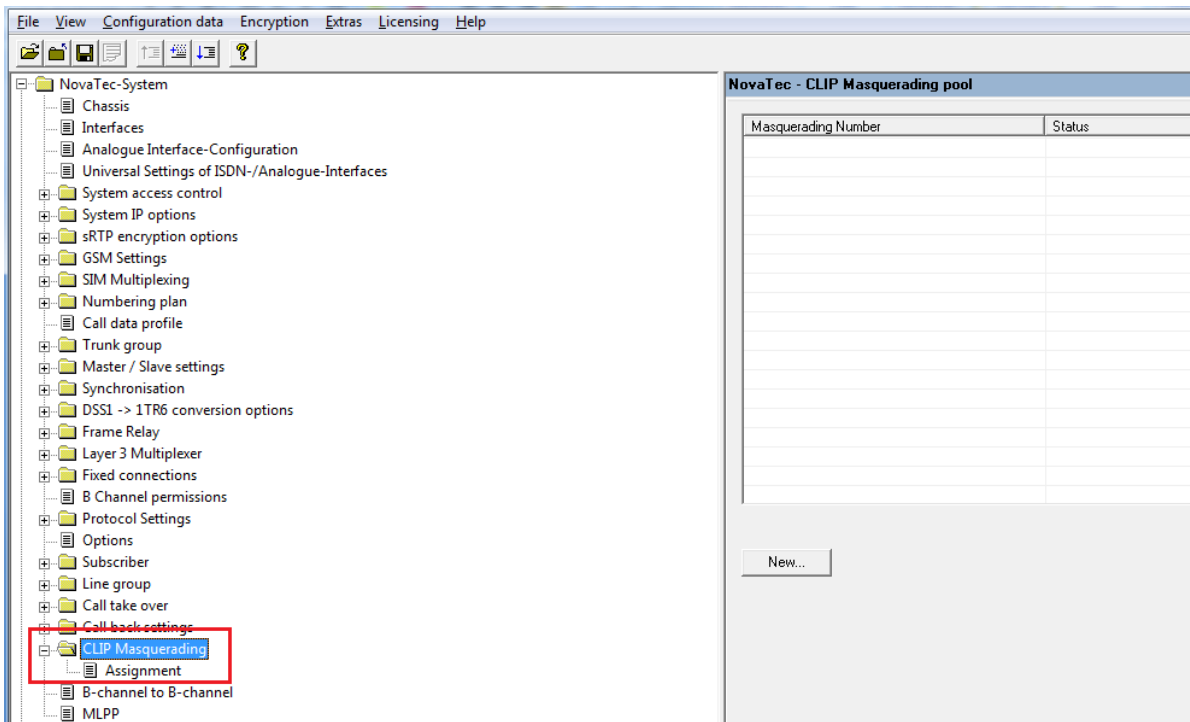


All settings and sub items of „Call back settings“ are reconfigurable and immediately operative.



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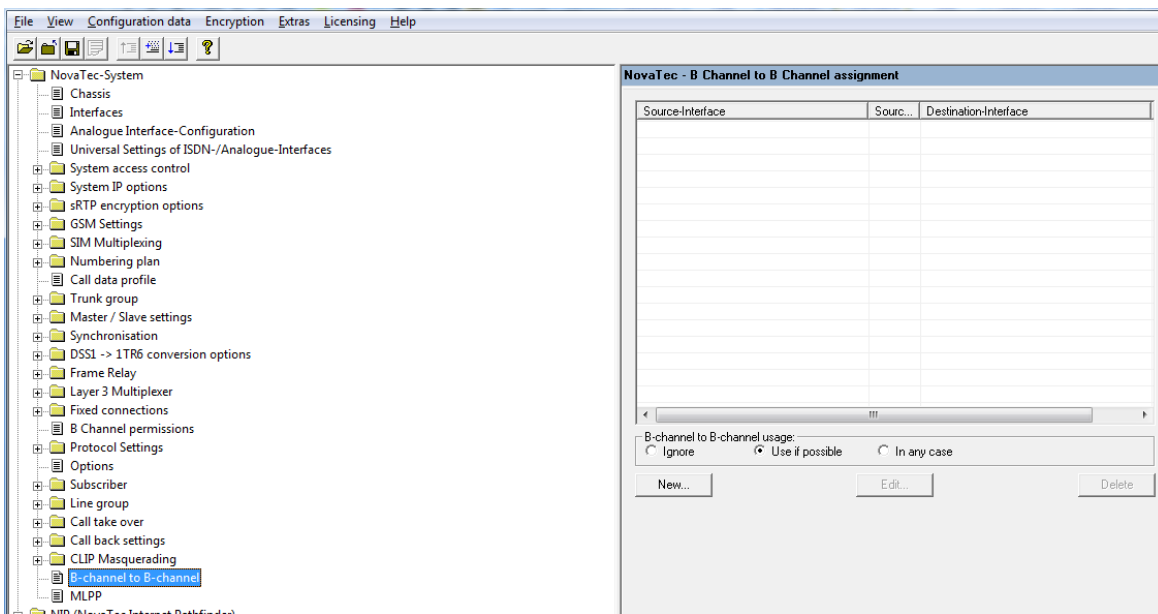
### 2.1.26 NovaTec-System/CLIP Masquerading



None of the settings and sub items of „CLIP Masquerading“ are reconfigurable.

All changes to „CLIP Masquerading“ and „Assignment“ require a system reset to be adopted.

### 2.1.27 NovaTec-System/B-channel to B-channel



The settings on this page are reconfigurable and immediately operative.



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## 2.1.28 NovaTec-System/MLPP

Resource-Priority-Nam...	Priority-Text for Flash-Over...	Priority-Text for Flash	Priority-Text for Immedi...	Priority-Text for ...	Priority-Text for Rout
<input checked="" type="checkbox"/> Test	5	4	3	2	1

The settings on this page are reconfigurable and immediately operative.

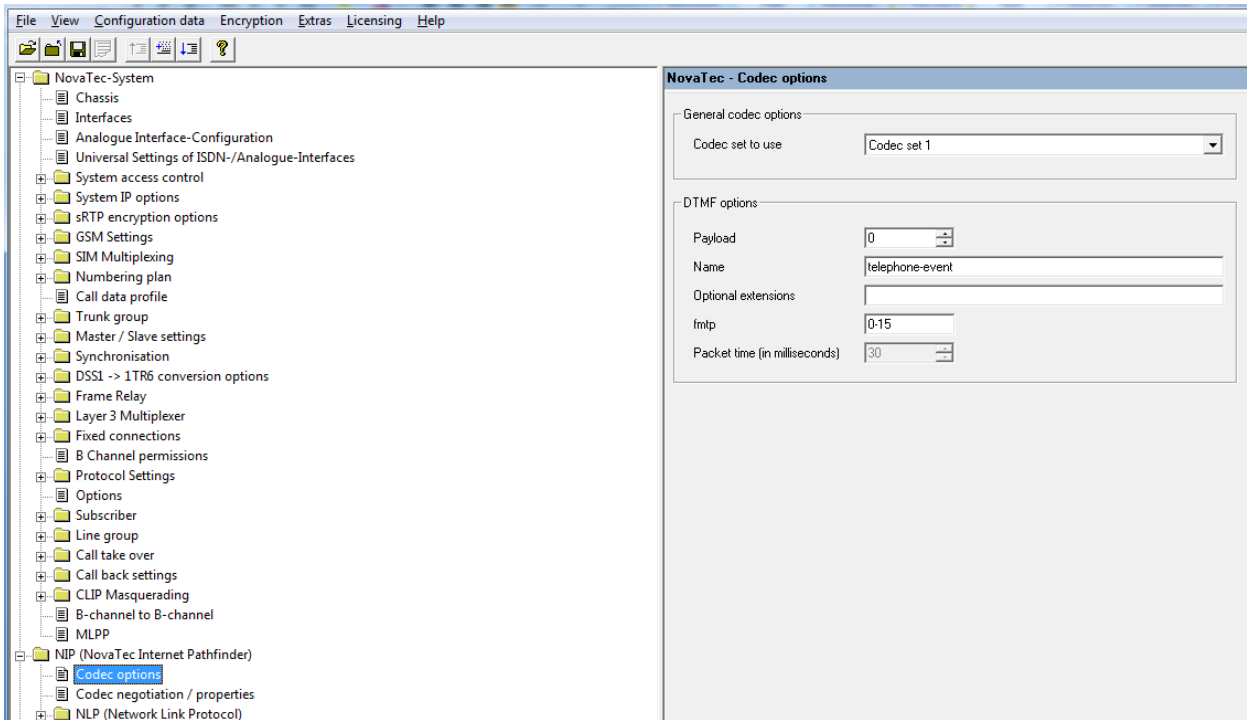
## 2.2 NIP (NovaTec Internet Pathfinder)

No settings can be adjusted on this page.



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### 2.2.1 NIP (NovaTec Internet Pathfinder)/Codec options



The settings on this page are not reconfigurable. Changes require a system reset.



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### 2.2.2 NIP (NovaTec Internet Pathfinder)/Codec negotiation / properties

Name	Payload	Description
pcma	8	aLaw 64kbit/s
G729	18	G.729A, 8kb/s MOS 4,0
G728	15	G.728 16kb/s MOS 4,0
G726-40	114	G.726 40kb/s MOS 4,0
G726-32	2	G.726 32kb/s MOS 3,7
G726-24	113	G.726 32kb/s MOS 3,2
G726-16	112	G.726 16kb/s MOS 3,2
pcmu	0	uLaw 56kbit/s

The settings on this page are not reconfigurable. Changes require a system reset.

### 2.2.3 NIP (NovaTec Internet Pathfinder)/NLP (Network Link Protocol)

You cannot change anything on this page.



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### **2.2.3.1 NIP (NovaTec Internet Pathfinder)/NLP (Network Link Protocol)/NLP NT/TE settings**

Interface	Physical	Data link
Slot 01: CCU3 : Interface 03	Master	Master

The settings on this page are not reconfigurable. Changes require a system reset.

### **2.2.3.2 NIP (NovaTec Internet Pathfinder)/NLP (Network Link Protocol)/Connection options**

You cannot change any settings on this page.



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### 2.2.3.2.1 NIP (NovaTec Internet Pathfinder)/NLP (Network Link Protocol)/Connection options/Connection profiles

Profile name	Profile type	UDP_port
Local	Local	1024
Test	Remote	2048

In the „Connection profiles“ you have to distinguish between a „Local Profile“ and a „Remote profile“.

Changes to a „Local Profile“ are not reconfigurable and require a system reset.

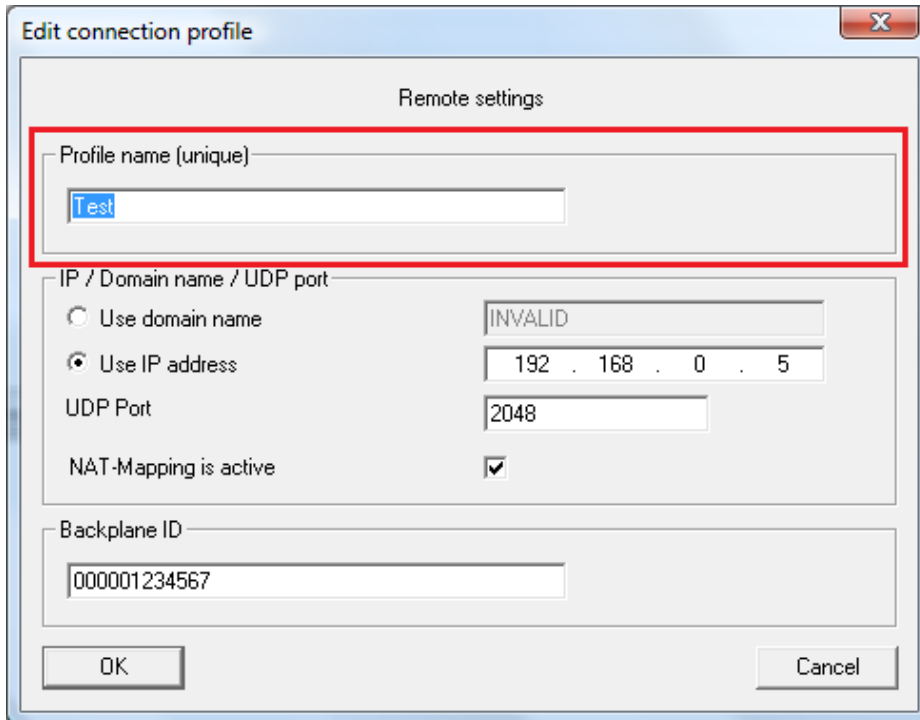
Concerning changes to a „Remote Profile“ you need to mind which parameters have been changed. The following parameter can be installed for a „Remote Profile“:

(See dialogue „Edit connection profile“ on next page)





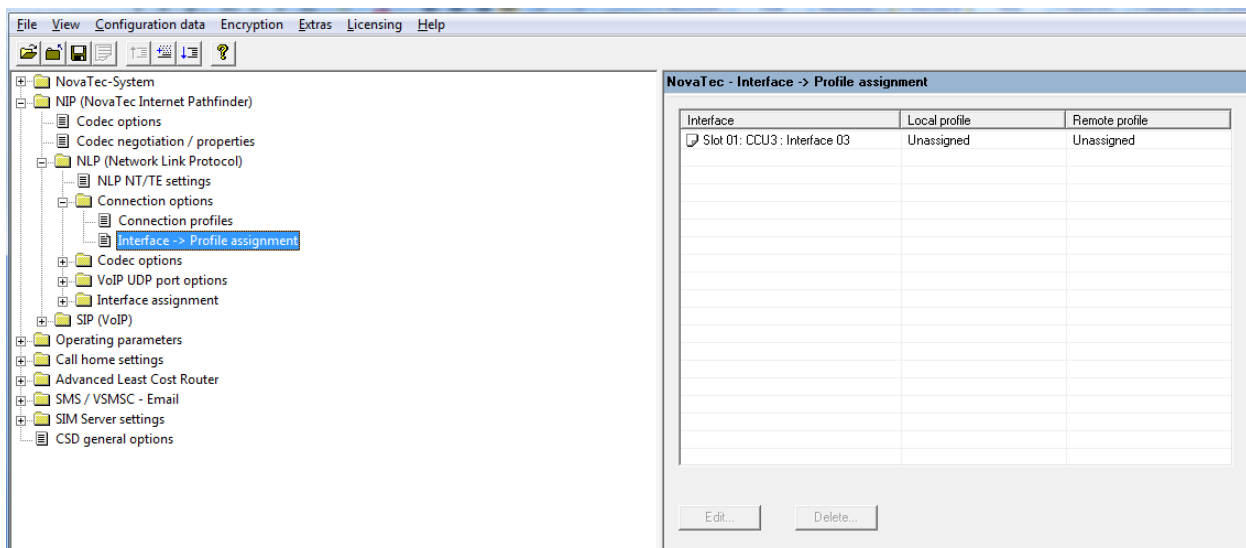
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The parameter „Profile name (unique)“ is not reconfigurable. A change of the profile name requires a system reset.

All other parameters of a „Remote Profile“ are reconfigurable.

### **2.2.3.2.2 NIP (NovaTec Internet Pathfinder)/NLP (Network Link Protocol)/Connection options/Interface -> Profile assignment**

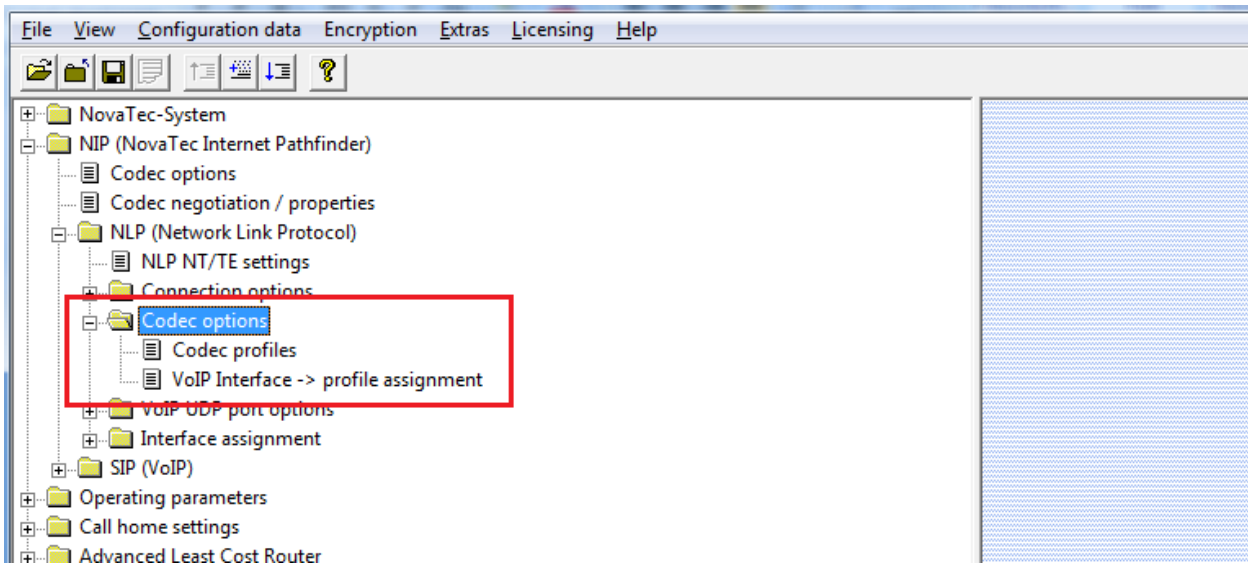


The settings on this page are not reconfigurable. Changes require a system reset.



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### **2.2.3.3 NIP (NovaTec Internet Pathfinder)/NLP (Network Link Protocol)/Codec options**



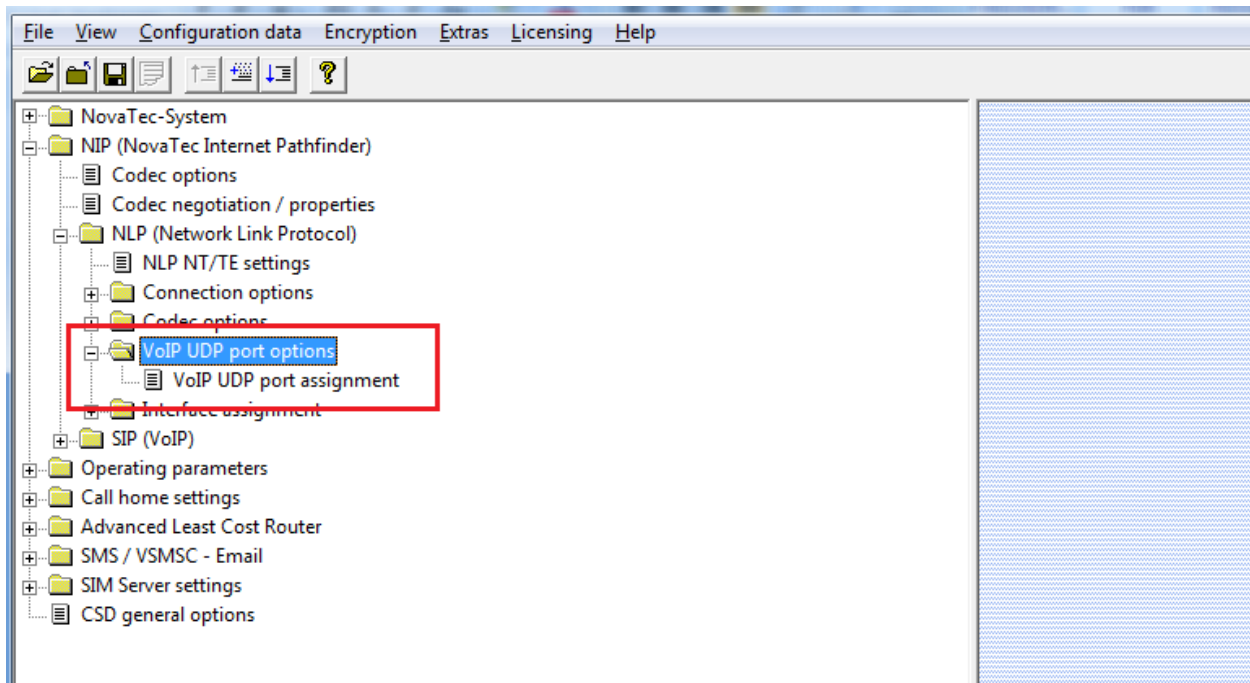
No settings and sub items of „Codec options“ are reconfigurable.

All changes on the pages „Codec options“, „Codec profiles“ and „VoIP Interface -> profile assignment“ require a system reset to be adopted.



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### 2.2.3.3.1 NIP (NovaTec Internet Pathfinder)/NLP (Network Link Protocol)/VoIP UDP port options



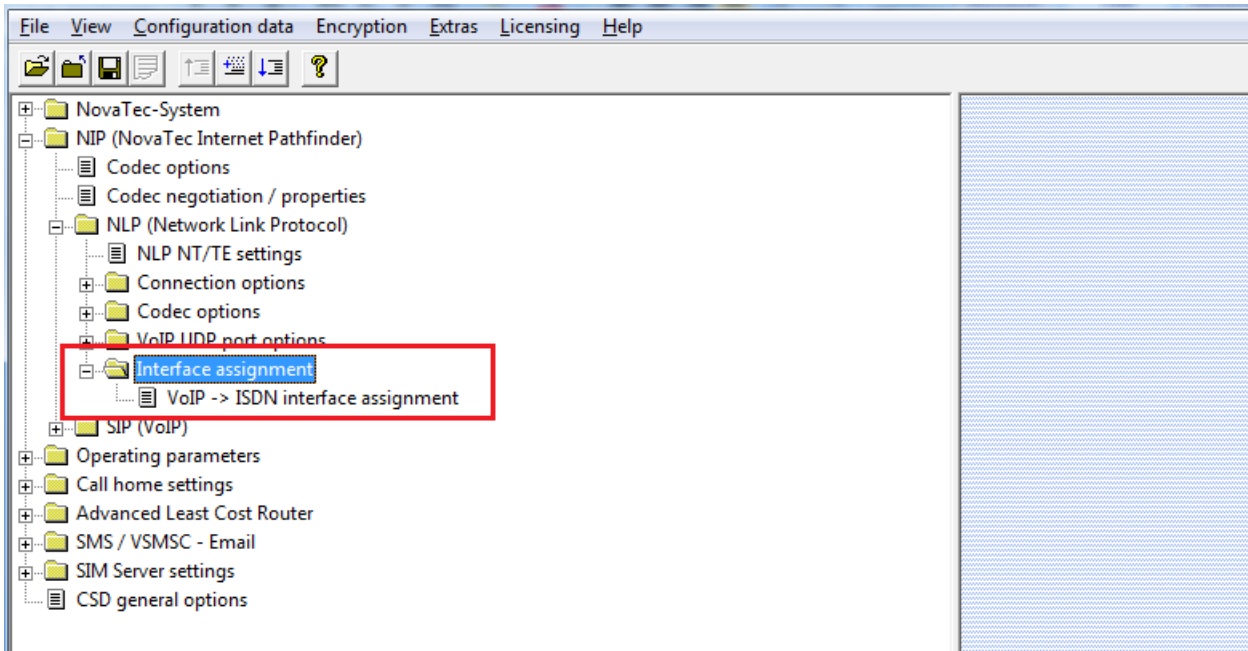
None of the settings and sub items of „VoIP UDP port options“ are reconfigurable.

All changes to „VoIP UDP port options“ and „VoIP UDP port assignment“ require a system reset to be adopted.



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#### 2.2.3.4 NIP (NovaTec Internet Pathfinder)/NLP (Network Link Protocol)/Interface assignment



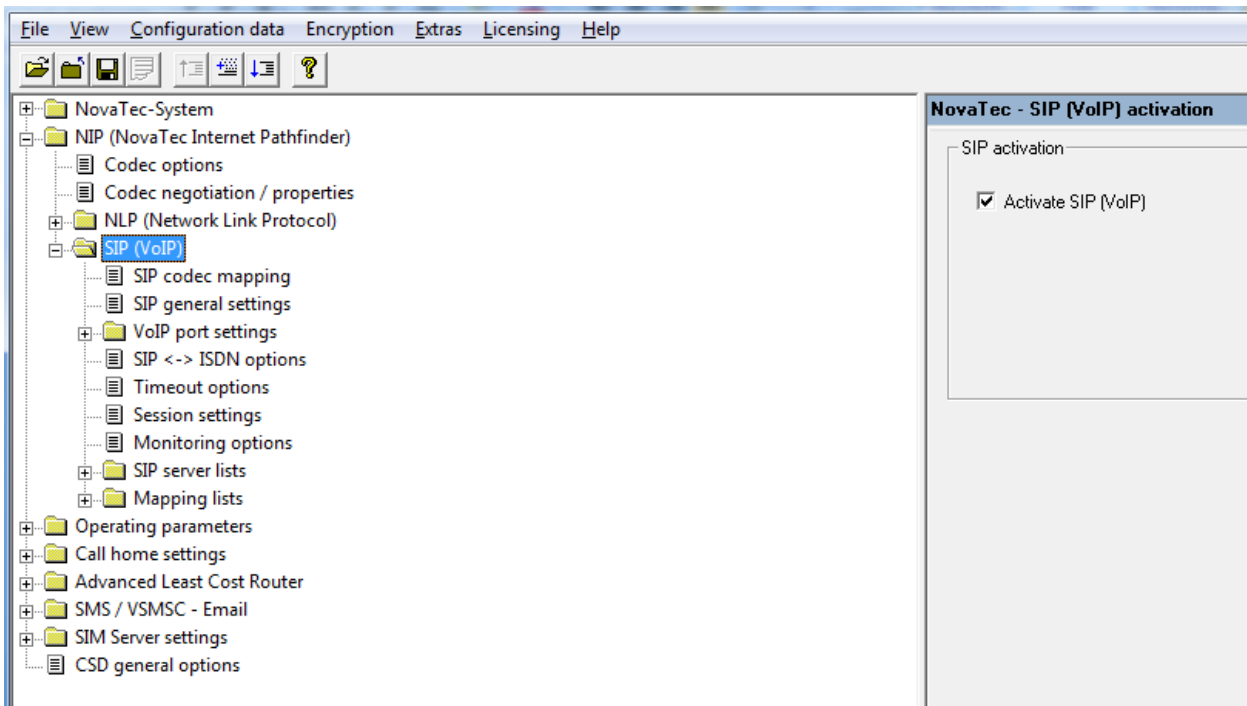
None of the settings and sub items of „Interface assignment“ are reconfigurable.

All changes to „Interface assignment“ and „VoIP -> ISDN interface assignment“ require a system reset to be adopted.



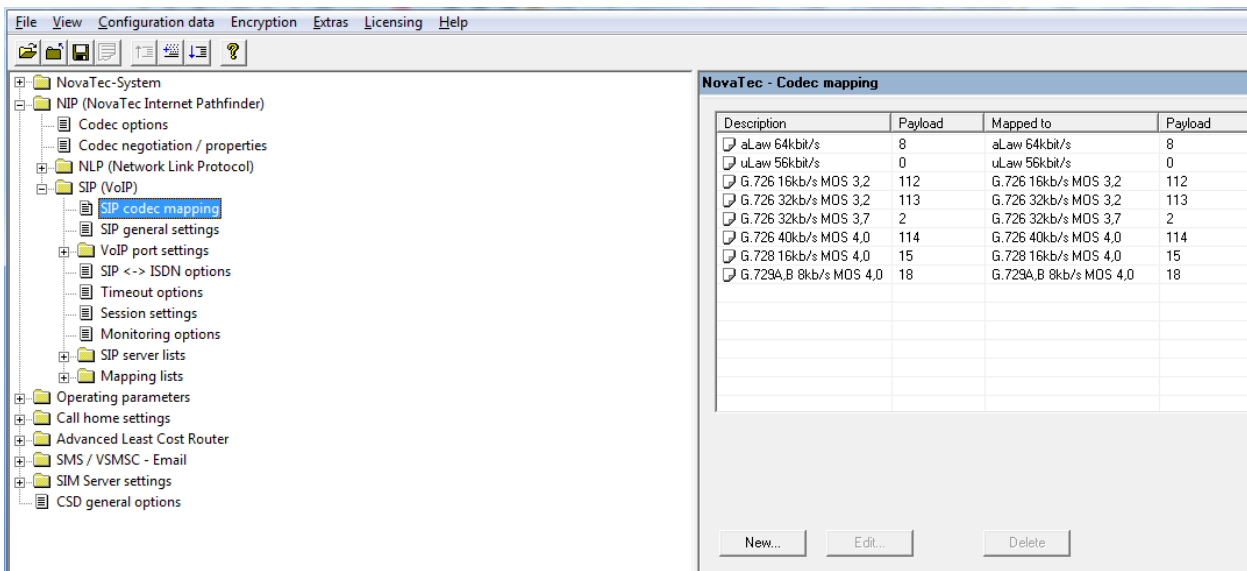
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## 2.2.4 NIP (NovaTec Internet Pathfinder)/SIP (VoIP)



The settings on this page are not reconfigurable. Changes require a system reset.

### 2.2.4.1 NIP (NovaTec Internet Pathfinder)/SIP (VoIP)/SIP codec mapping



The settings on this page are not reconfigurable. Changes require a system reset.



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## 2.2.4.2 NIP (NovaTec Internet Pathfinder)/SIP (VoIP)/SIP general settings

The screenshot displays the configuration interface for NovaTec SIP general settings. The left sidebar shows a tree view with the following structure:

- NovaTec-System
  - NIP (NovaTec Internet Pathfinder)
    - Codec options
    - Codec negotiation / properties
    - NLP (Network Link Protocol)
    - SIP (VoIP)
      - SIP codec mapping
      - SIP general settings**
      - VoIP port settings
      - SIP <-> ISDN options
      - Timeout options
      - Session settings
      - Monitoring options
      - SIP server lists
      - Mapping lists
    - Operating parameters
    - Call home settings
    - Advanced Least Cost Router
    - SMS / VSMSC - Email
    - SIM Server settings
    - CSD general options

The main window is titled "NovaTec - SIP general settings" and is divided into two sections:

**General**

- Local IP address: 192 . 168 . 0 . 2
- Software name: NovaTec SIP 5.6.4
- Initial sequence: 0
- Allow internal (routing) loops
- Ignore unauthorized sites
- Always try to internally resolve names/IP addresses first
- Use local name (if unchecked, use IPv4)
- Reply on syntax errors to counterpart
- Read internal server lists at startup
- Save dynamic server information every... 1 hours
- Forward numerical addresses to ISDN
- Activate SIP-Bridging
- Q value: 1.0
- PSTN prefix: PSTN prefix insert length: 0
- Min. session expire: 300
- Session expire: 3600
- Anonymous name: anon
- Optional flags: 0x0000000171D3778
- Optional flags 2: 0x0000000000000000

**UDP / RTCP options**

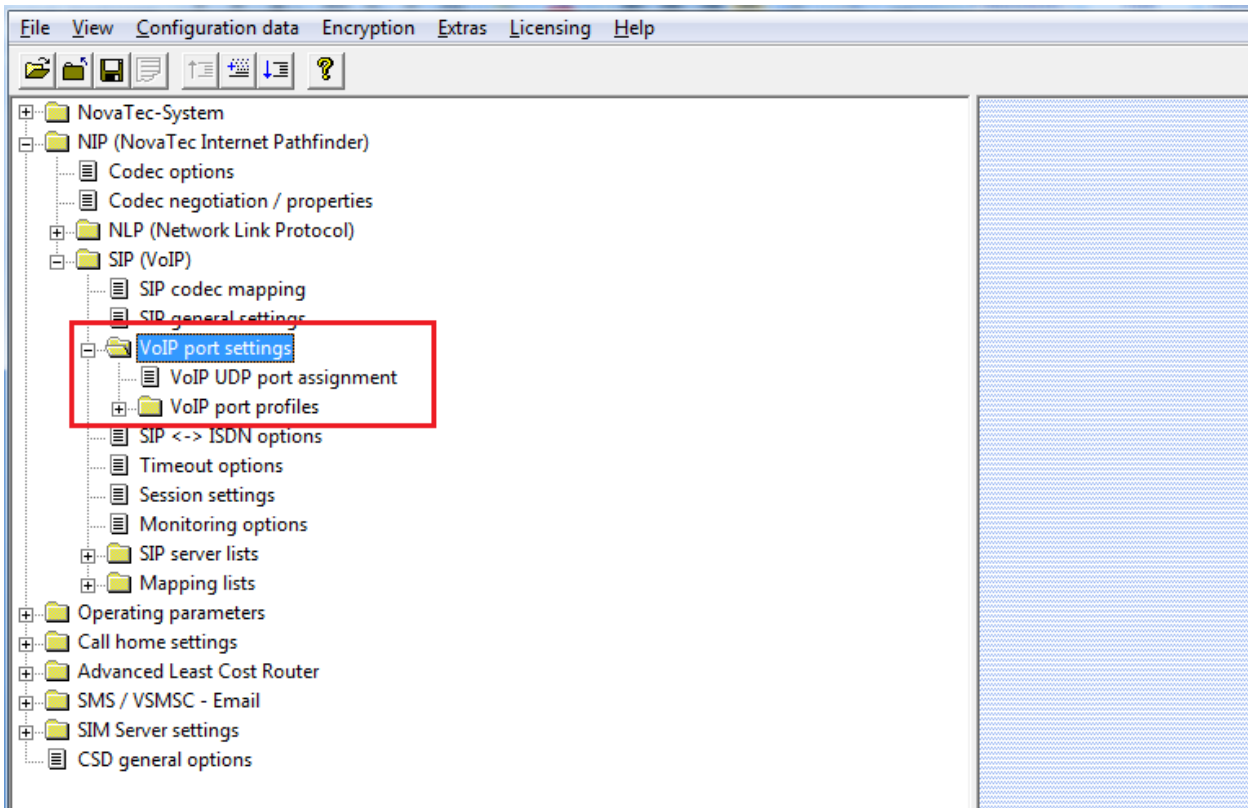
- UDP packet size: 1200
- Local RTP port: 30000
- Remote RTP port: 30000
- Local RCTP port: 30001
- Remote RCTP port: 30001
- RTP Packet time: 30

The settings on this page are not reconfigurable. Changes require a system reset.



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### 2.2.4.3 NIP (NovaTec Internet Pathfinder)/SIP (VoIP)/VoIP port settings



None of the settings and sub items of „VoIP port settings“ are reconfigurable.

All changes of the pages „VoIP port settings“, „VoIP UDP port assignment“ and „VoIP port profiles“ require a system reset to be adopted.



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#### 2.2.4.4 NIP (NovaTec Internet Pathfinder)/SIP (VoIP)/SIP <-> ISDN options

The screenshot shows the configuration window for 'NovaTec - SIP <-> ISDN options'. The left sidebar shows a tree view with 'SIP <-> ISDN options' selected. The main panel contains the following settings:

Dialing plan to use for incoming SIP calls	SIP
Access list to use	None
Call data record profile to use	Call data profile 1
Minimal number of digits required from ISDN	4
Wait time between each digit (overlapped)	1
<input type="checkbox"/> Activate progress indication	Indication type: Destination is non ISDN
<input type="checkbox"/> Activate "Fake" alerting after	7 seconds
Wait for ALERT (in seconds)	60
Wait for CONNECT (in seconds)	180
Wait for RELEASE (in seconds)	30
Wait for RELEASE COMPLETE (in seconds)	5
Maximal disconnect TONE duration (in seconds)	30
<input checked="" type="checkbox"/> Activate early media for VOICE calls	
<input type="checkbox"/> Activate early media for DATA calls	

The settings on this page are reconfigurable and immediately operative.

#### 2.2.4.5 NIP (NovaTec Internet Pathfinder)/SIP (VoIP)/Timeout options

The screenshot shows the configuration window for 'NovaTec - Timeout options'. The left sidebar shows a tree view with 'Timeout options' selected. The main panel contains the following settings:

Call setup timeout (in seconds)	102
Repeat interval (in milliseconds)	5000
Maximal number of repeats	5
Ping time (in seconds, 0 = disabled)	0
Disconnect wait (in seconds)	10
Expire time for active calls (in seconds)	14400
System session timeout (in seconds) MUST > Expire time	86400
Time limit to cache DNS resolutions (in seconds)	86400
Maximum number of retries to resolve an address	3
Backoff time for unresolved name (in seconds)	3600
DNS request timeout (in seconds)	10
URI (SIP) resolution timeout (in seconds)	30
Registration expire time (in seconds)	600
Public connection registration expire time (in seconds)	300
Proxy link expire time (in seconds)	180

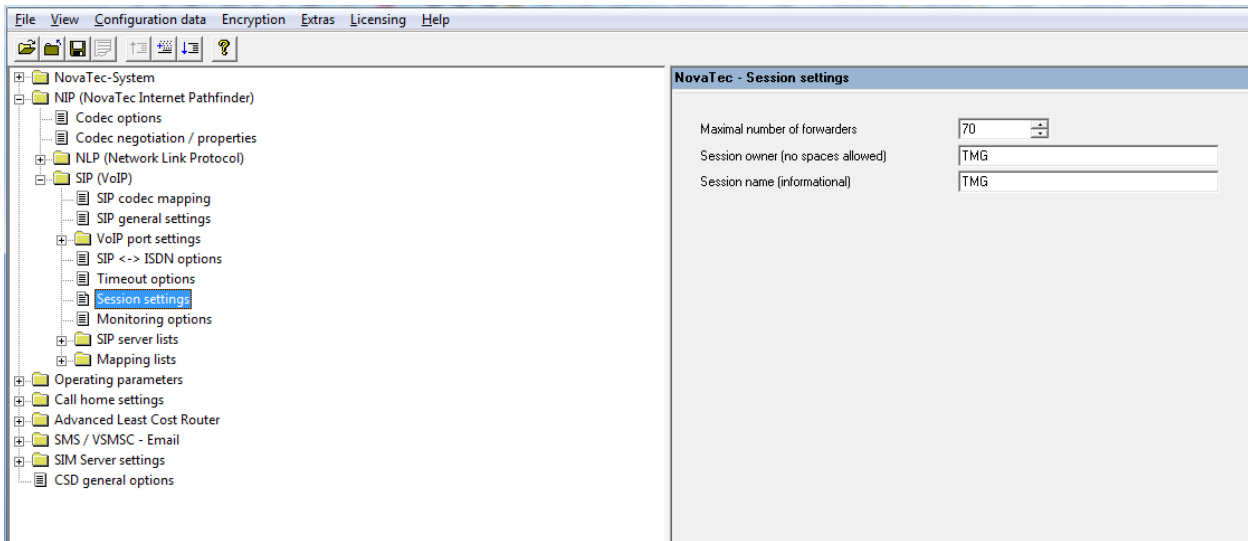
The settings on this page are not reconfigurable. Changes require a system reset.





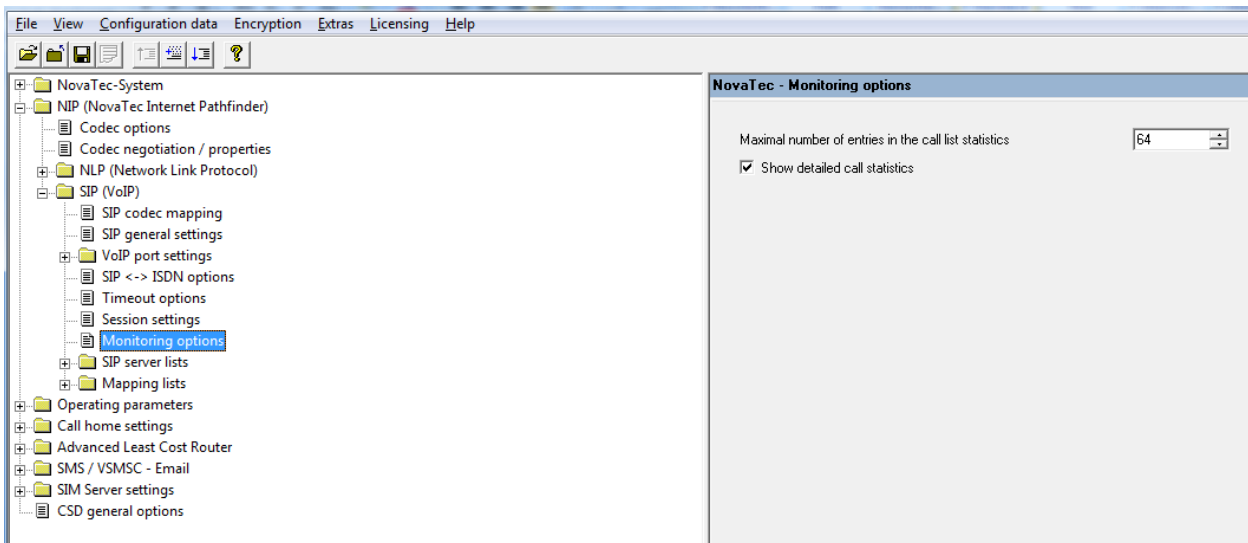
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#### 2.2.4.6 NIP (NovaTec Internet Pathfinder)/SIP (VoIP)/Session settings



The settings on this page are not reconfigurable. Changes require a system reset.

#### 2.2.4.7 NIP (NovaTec Internet Pathfinder)/SIP (VoIP)/Monitoring options

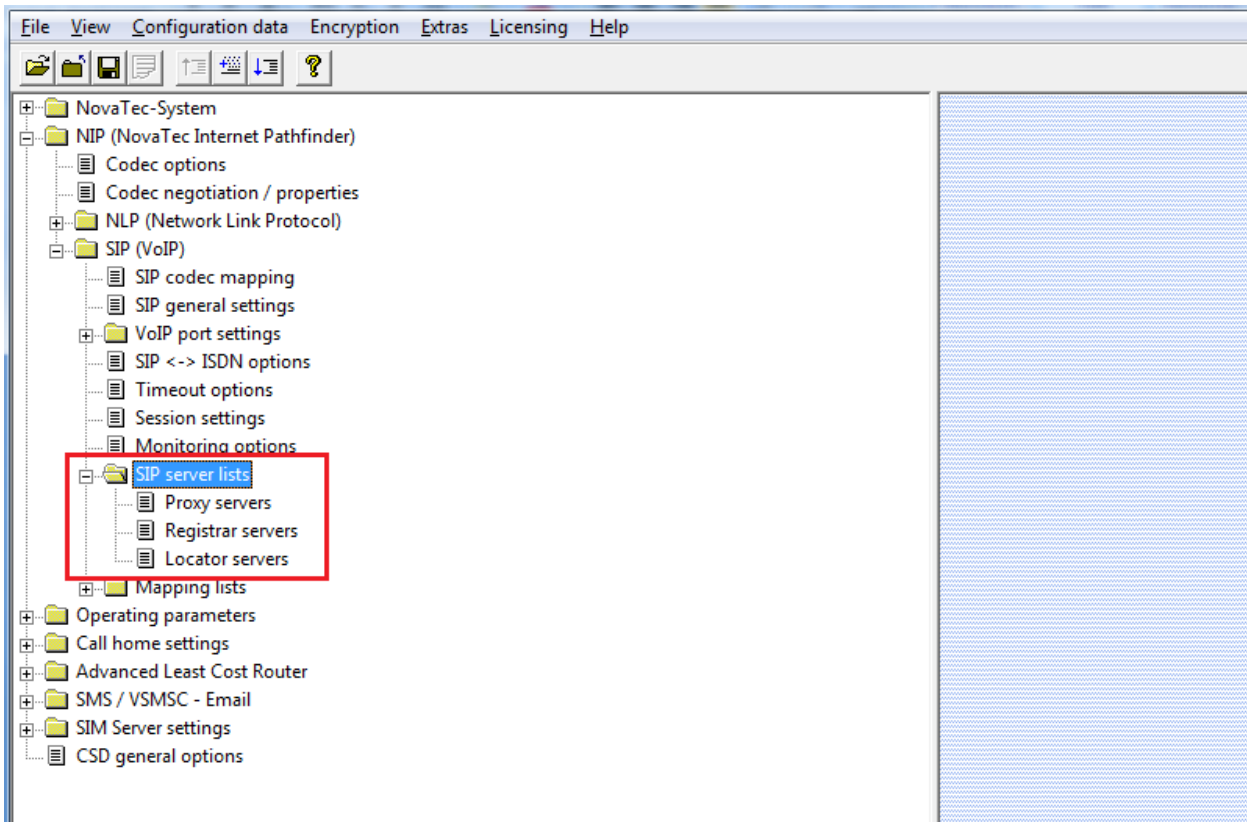


The settings on this page are not reconfigurable. Changes require a system reset.



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#### 2.2.4.8 NIP (NovaTec Internet Pathfinder)/SIP (VoIP)/SIP server lists



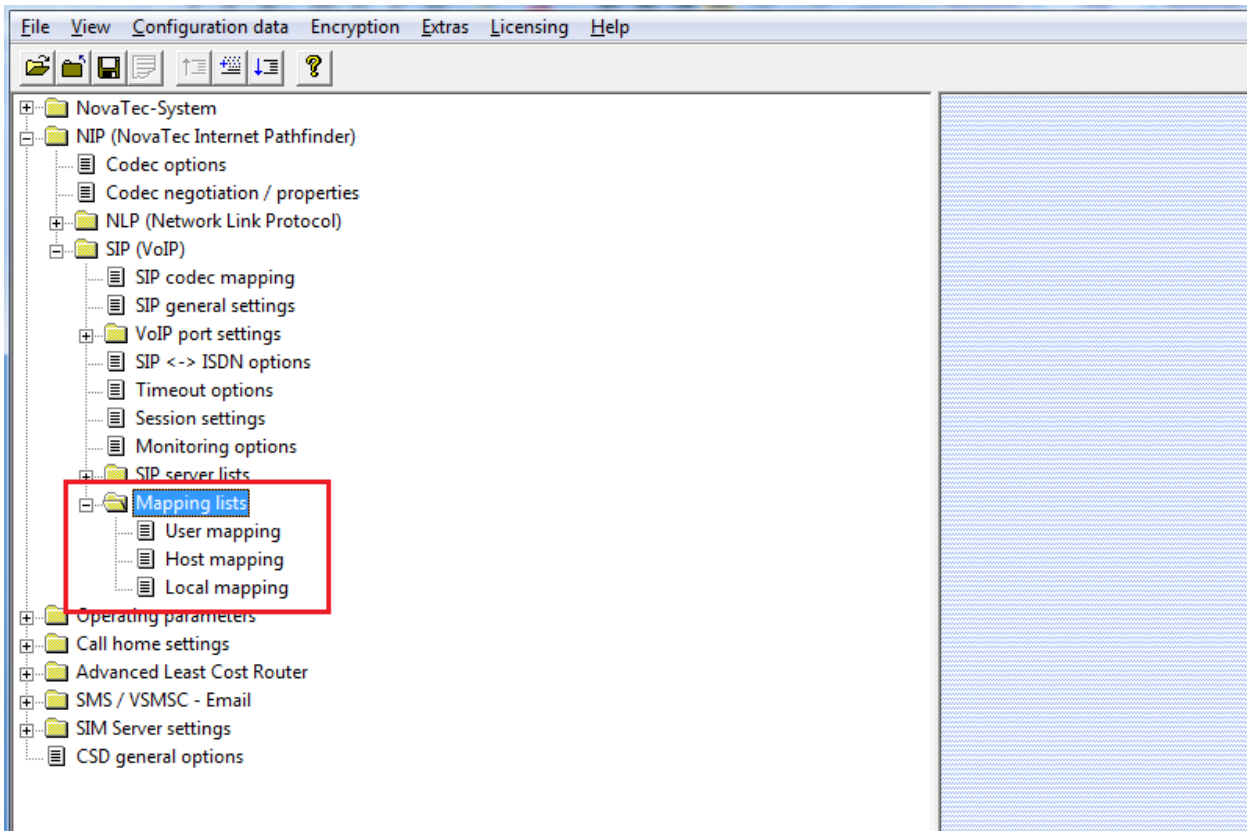
None of the settings and sub items of „SIP server lists“ are reconfigurable.

All changes to the pages „SIP server lists“, „Proxy servers“, „Registrar servers“ and „Locator servers“ require a system reset to be adopted.



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#### **2.2.4.9 NIP (NovaTec Internet Pathfinder)/SIP (VoIP)/Mapping lists**



None of the settings and sub items of „Mapping lists“ are reconfigurable.

All changes to „Mapping lists“, „User mapping“, „Host mapping“ and „Local mapping“ require a system reset to be adopted.

### **2.3 Operating Parameters**

You cannot change anything on this page.



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### 2.3.1 Operating Parameters/Basic configuration

The screenshot shows the NovaTec configuration interface. The left sidebar contains a tree view with the following items: NovaTec-System, NIP (NovaTec Internet Pathfinder), Operating parameters (expanded), Basic configuration (selected), Remote maintenance, System time settings, Customer target data, Local area options, RSA-key Settings, SCEP Settings, Call home settings, Advanced Least Cost Router, SMS / VSMSC - Email, SIM Server settings, and CSD general options. The main content area is titled 'Operating parameters - Basic configuration' and contains the following text:

The configuration database contains a range of parameters that can only be influenced by your equipment manufacturer.

This page provides the opportunity to update the basic configuration data. With one action, you can replace all existing basic configuration data with new data from the manufacturer.

WARNING: If faults occur when loading the basic configuration it may no longer be possible to input other configuration parameters

Actual basic configuration:

Date	06.11.03, 16:52
Name	TransNova/Splitter Version 4.0 IP
Description	Basisconfiguration for Firmware-Release: 4.xx.xx WARNING - not compatible to Version 3.x

Whether the upload of a new base configuration requires a system reset depends on the content of the new base configuration.

As there is no other base configuration for the time being it cannot be said whether or not a new base configuration will require a system reset.

As to be seen in the screen shot above NovaTec has not released a new base configuration since 2003.



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### 2.3.2 Operating Parameters/Remote maintenance

The screenshot shows a configuration window with a menu bar (File, View, Configuration data, Encryption, Extras, Licensing, Help) and a toolbar. On the left is a tree view with the following structure:

- NovaTec-System
  - NIP (NovaTec Internet Pathfinder)
  - Operating parameters
    - Basic configuration
    - Remote maintenance
    - System time settings
    - Customer target data
    - Local area options
    - RSA-key Settings
    - SCEP Settings
  - Call home settings
  - Advanced Least Cost Router
  - SMS / VSMSC - Email
  - SIM Server settings
  - CSD general options

The main area displays the 'Operating parameters - Remote maintenance' settings:

- Incoming connections:**
  - Allow remote access via ISDN
  - ISDN telephone numbers that have access for maintenance:
    - Text input field
    - New button
    - Delete button
- Number of remote access:**
  - 55 (input field)
  - Dialing plan: Subscriber (dropdown menu)
- Sub-address:**
  - Out: [input field]
  - In: [input field]
- Allow remote access via TCP/IP
- IP: [input field] New button
- Group mask: 255 . 255 . 255 . 255
- Authorised IP addresses:**
  - Table with 3 columns and 1 row
  - Delete button

The settings on this page are reconfigurable and immediately operative.



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### 2.3.3 Operating parameters/System time settings

The screenshot shows the 'Operating parameters - System time settings' window. The left sidebar contains a tree view with 'System time settings' selected. The main panel is divided into several sections:

- Time configuration:** Includes 'Active options' with checkboxes for ISDN (checked) and Call Home events, Configuration (checked). Below are radio buttons for NTP Server frequency: Daily (selected), Weekly, and Monthly.
- Priority order:** A list box containing 'ISDN' and 'Call Home events, Configuration'.
- NTP Server settings:** A dropdown menu for 'Current selected NTP Server' showing 'pool.ntp.org' and a 'Delete selected NTP Server' button.
- System Timezone:** A dropdown menu for 'System Timezone' showing '(GMT +01:00) Central Europe (CET)' and a 'Current Timezone' label.
- Daylight Saving Time settings:** Includes a checked 'Enable Daylight Saving Time' checkbox. Below are 'Start' and 'End' date and time pickers. Start is set to 'So, 29.03.2009 00:00' and End is set to 'So, 25.10.2009 00:00'.

The settings on this page are reconfigurable and immediately operative.

### 2.3.4 Operating parameters/Customer target data

The screenshot shows the 'Operating parameters - Customer target data' window. The left sidebar contains a tree view with 'Customer target data' selected. The main panel is divided into two sections:

- Customer:** A form with fields for Name (NovaTec), Config (S0\_analog\_631.mdb 15042009), Street, Zip-Code, Town, and Country, all of which are currently empty.
- Target system:** A form with fields for Calling Nr. and Extension, both currently empty.

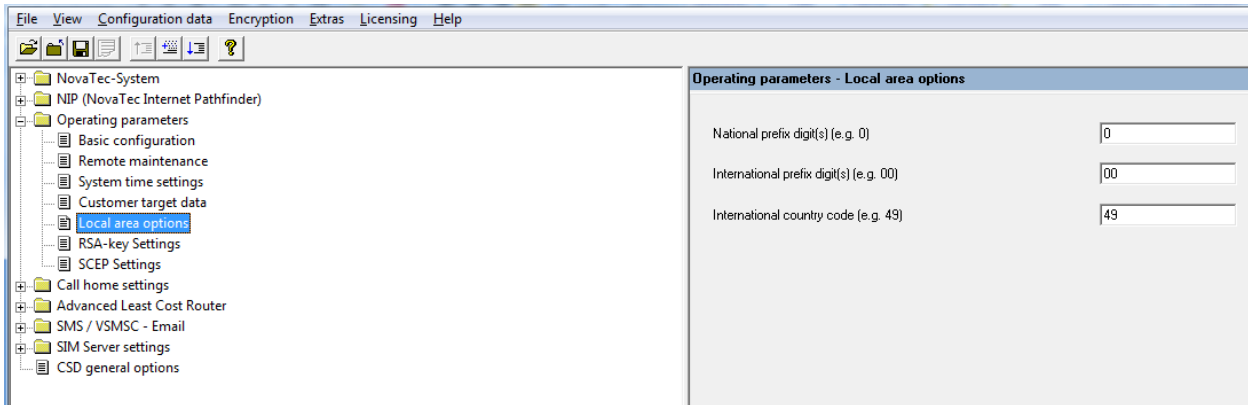
An 'Edit...' button is located at the bottom of the window.

The settings on this page are reconfigurable and immediately operative.



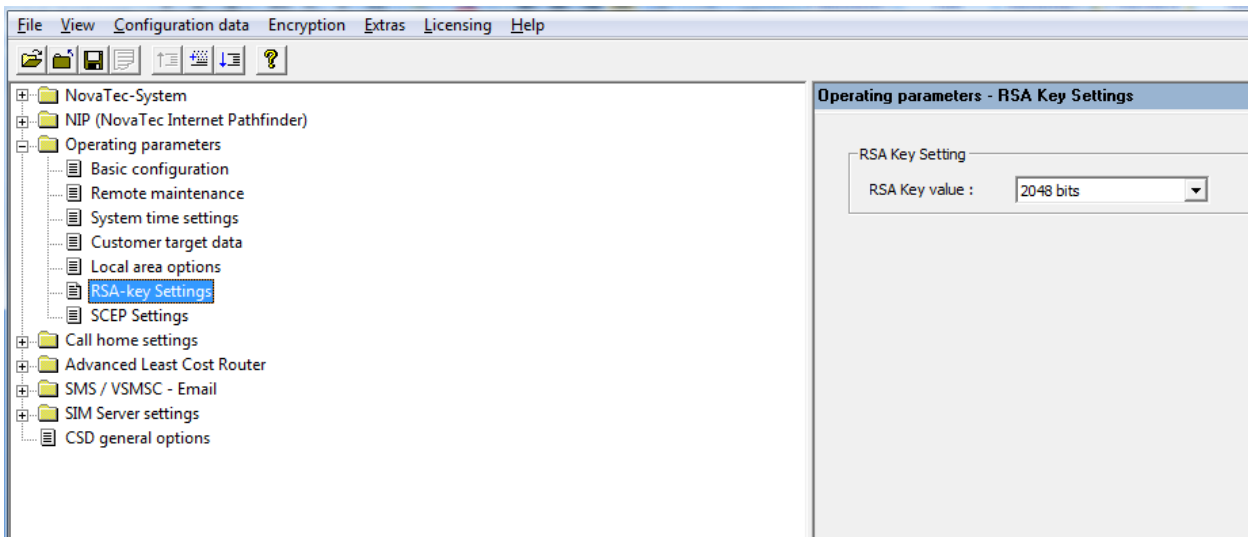
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### 2.3.5 Operating parameters/Local area options



The settings on this page are not reconfigurable. Changes require a system reset.

### 2.3.6 Operating parameters/RSA-key Settings

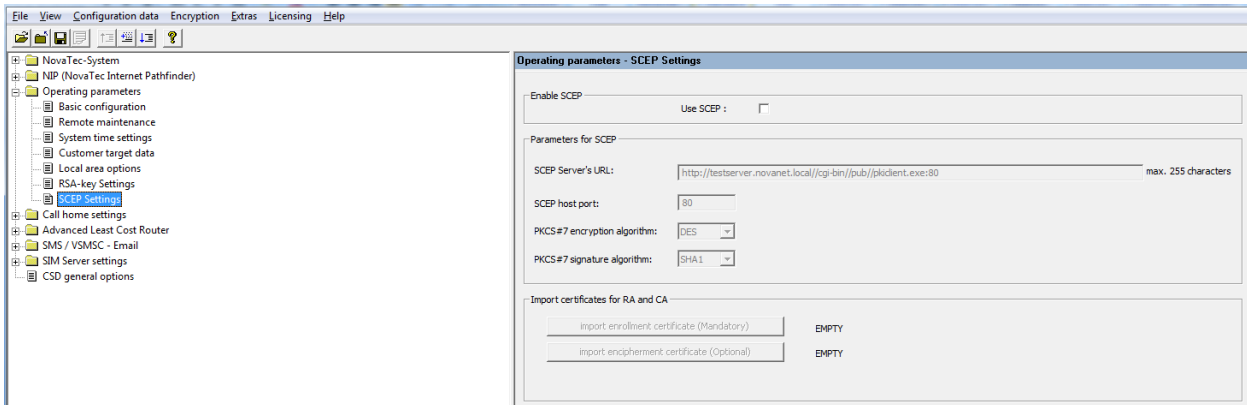


The settings on this page are not reconfigurable. Changes require a system reset.



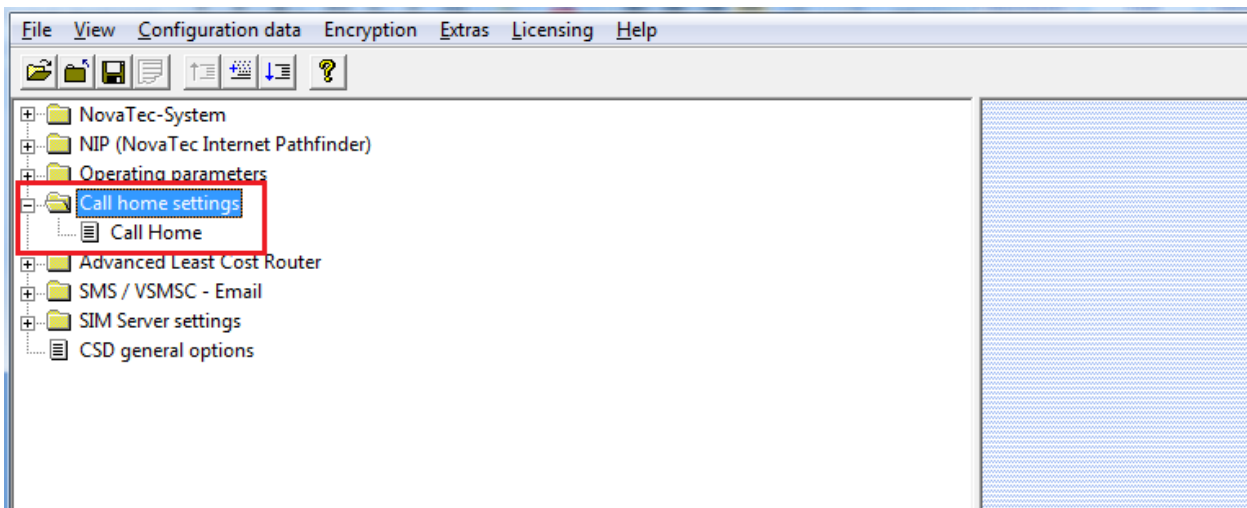
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### 2.3.7 Operating parameters/SCEP Settings



The settings on this page are not reconfigurable. Changes require a system reset.

### 2.4 Call home settings



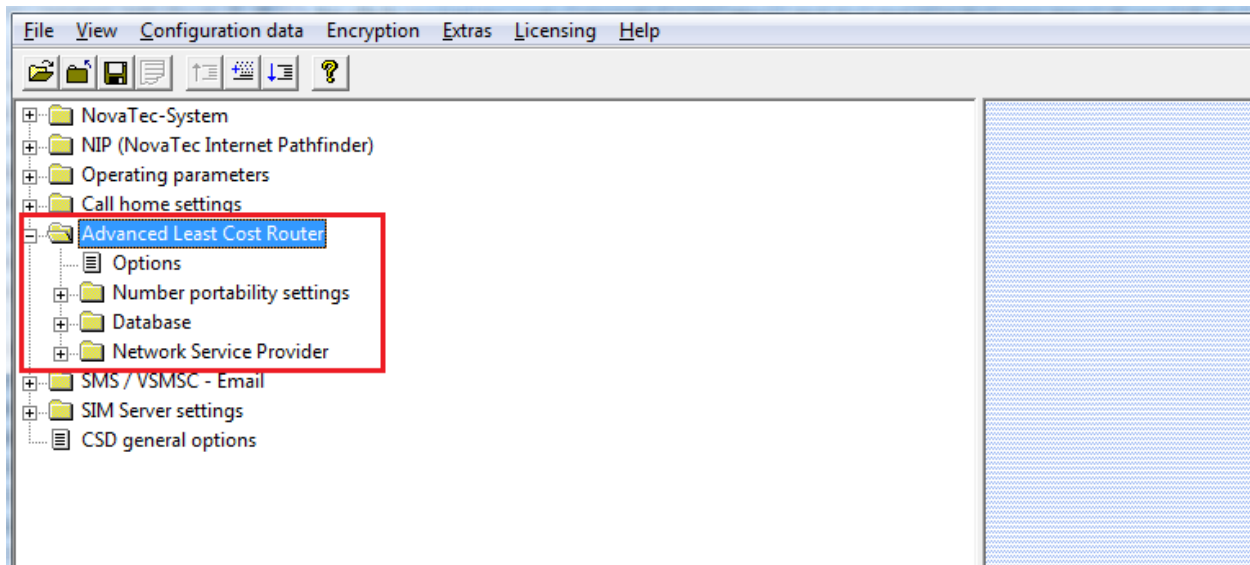
All settings and sub items of „Call home settings“ are reconfigurable and immediately operative.





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## 2.5 Advanced Least Cost Router



All settings and sub items of „Advanced Least Cost Router“ are reconfigurable and immediately operative.

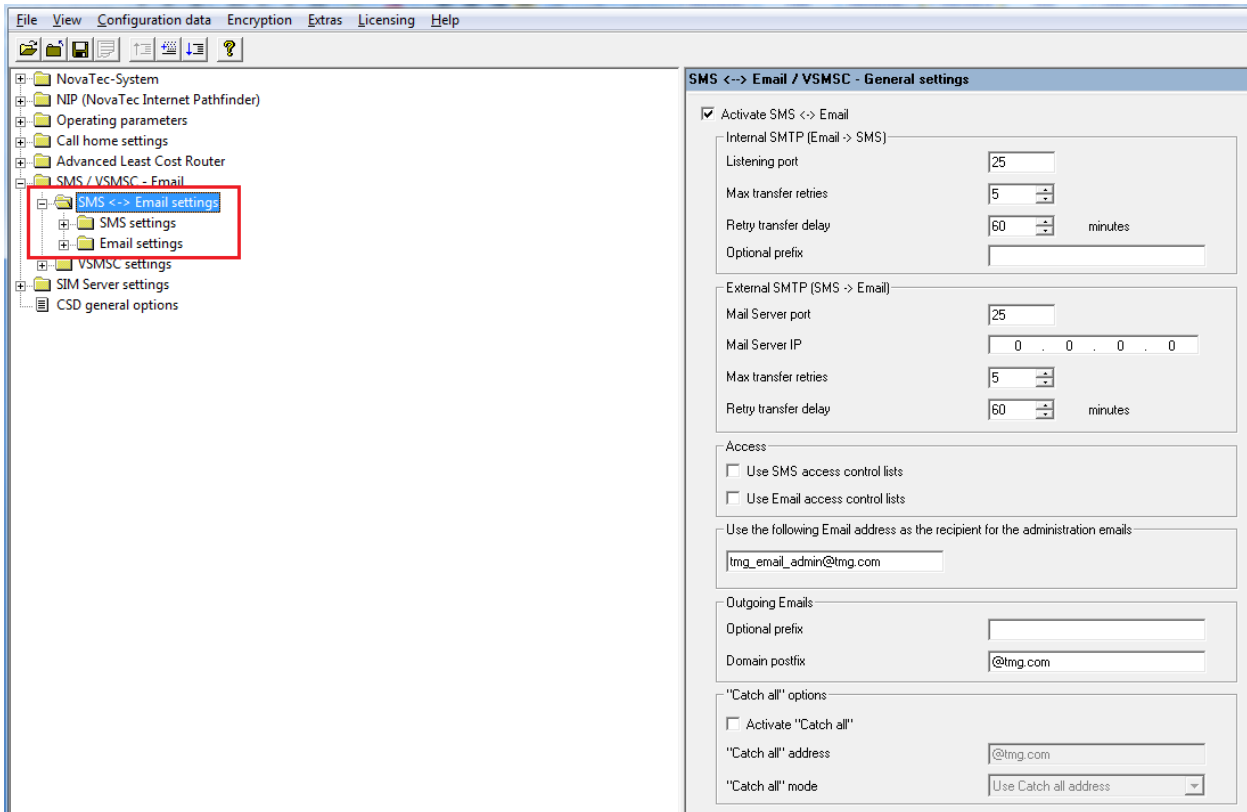
## 2.6 SMS / VSMSC – Email

You cannot change anything on this page.



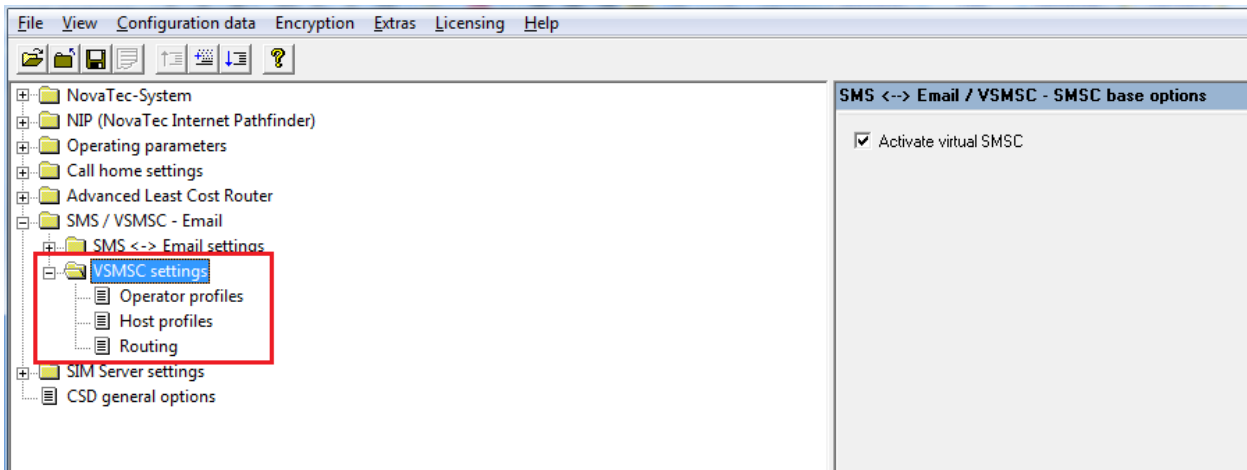
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### 2.6.1 SMS / VSMSC – Email/SMS <-> Email settings



All settings and sub items of „SMS <-> Email settings“ are reconfigurable and immediately operative.

### 2.6.2 SMS / VSMSC – Email/VSMSC settings



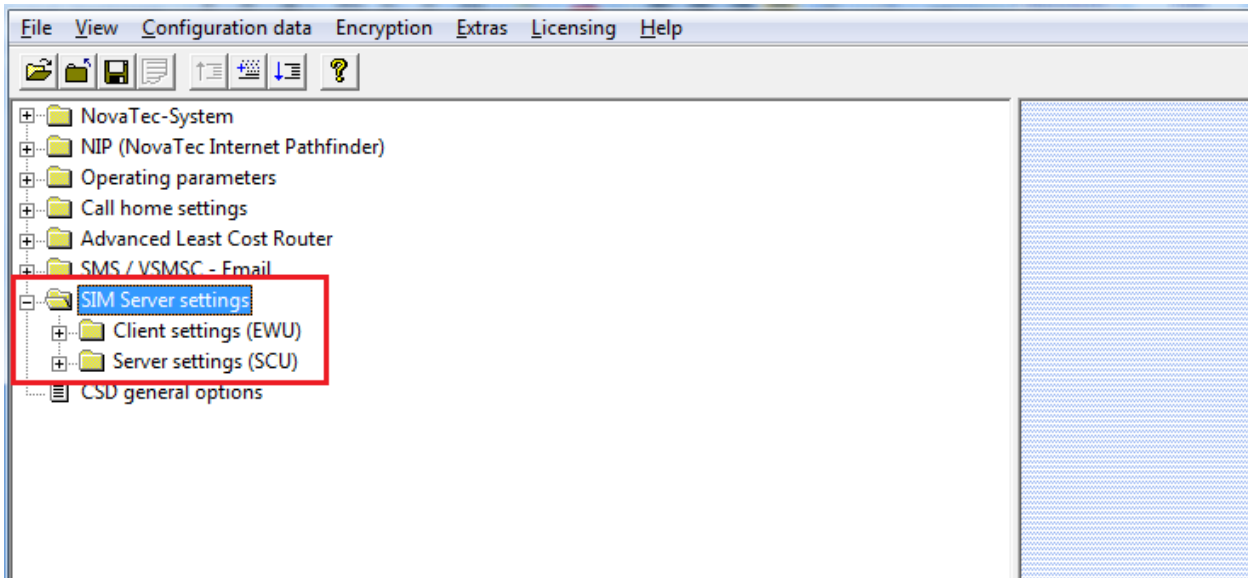
None of the settings and sub items of „VSMSC settings“ are reconfigurable.

All changes to „VSMSC settings“, „Operator profiles“, „Host profiles“ and „Routing“ require a system reset to be adopted.



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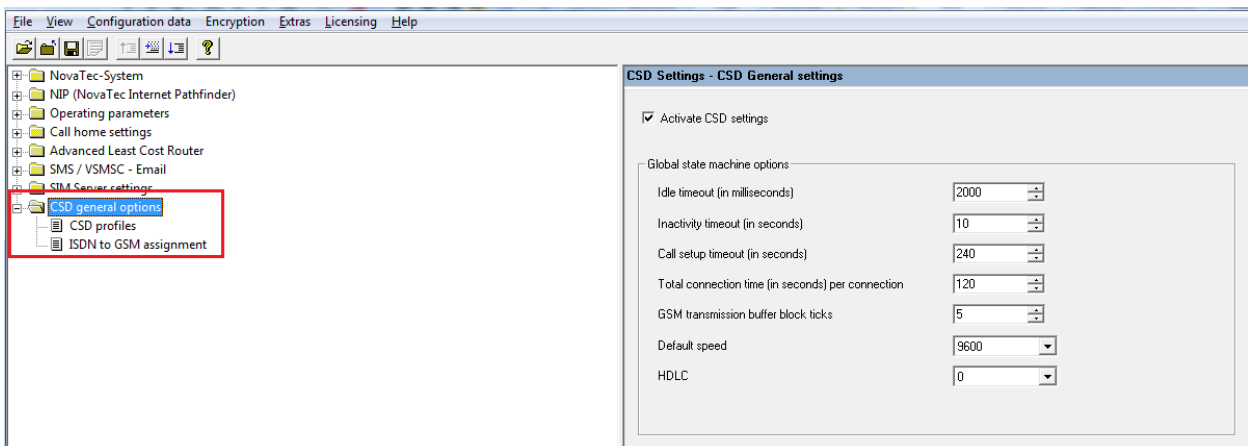
## 2.7 SIM Server settings



None of the settings and sub items of „SIM Server settings“ are reconfigurable.

All changes to „SIM Server settings“, „Client settings (EWU)“ and „Server settings (SCU)“ require a system reset to be adopted.

## 2.8 CSD general options



All settings and sub items of „CSD general options“ are reconfigurable and immediately operative.