We change the shape of the world

Handbook

Reconfiguration of NovaTec gateways

Version 1.0 from Mai 27th, 2011

This document is subject to changes.

Contents

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

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

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 isstated as not reconfigurable.

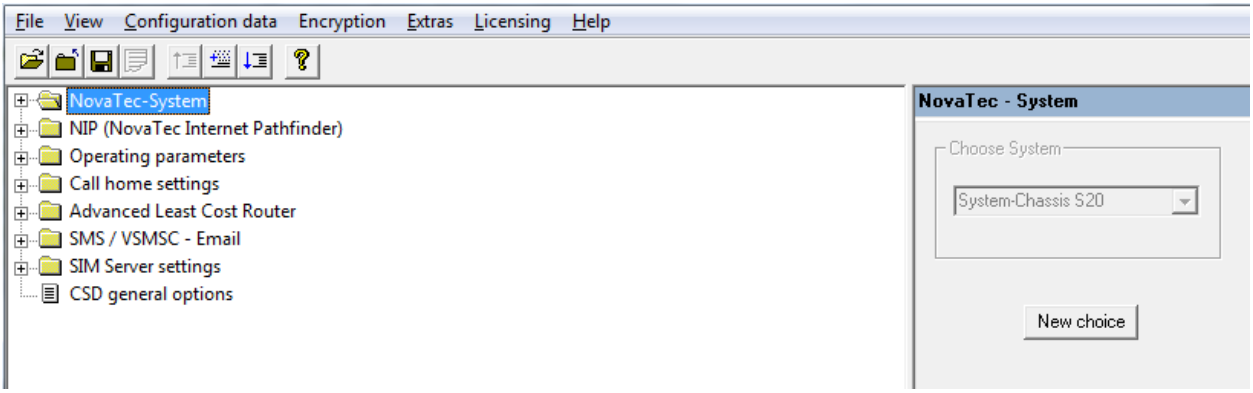
1.6 Compendium

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

2 Reconfiguration

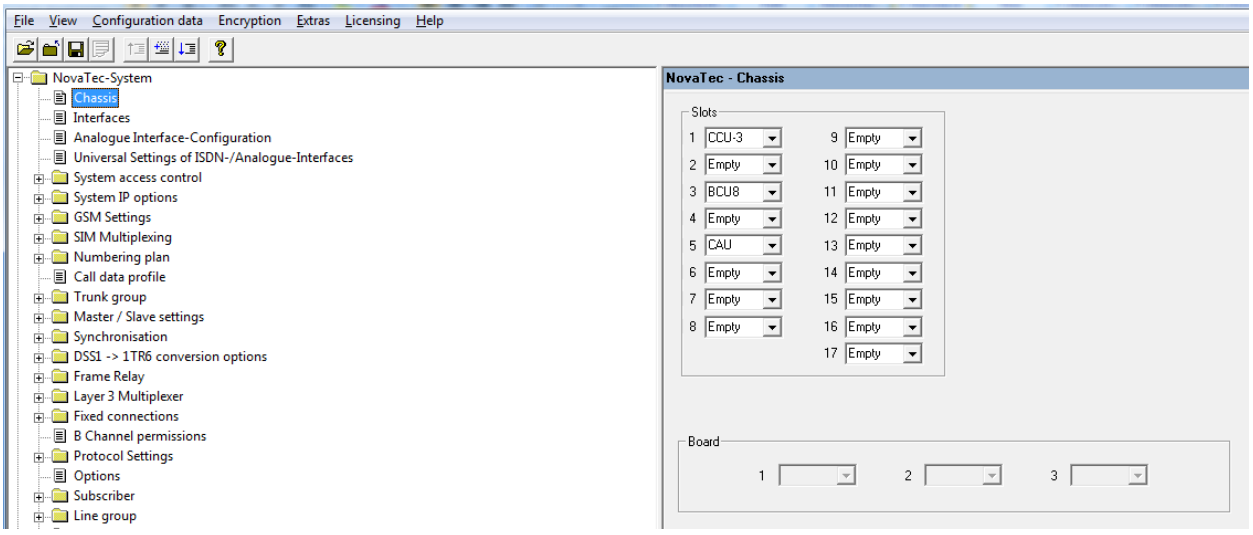
In the following subsections one node of the navigation menu on the left hand side of the main window of the NovaTec configuration software at a time is described. In most cases either all of the settings are reconfigurable or none at all. In the exceptions the reconfigurable and not reconfigurable settings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

2.1 NovaTec-System



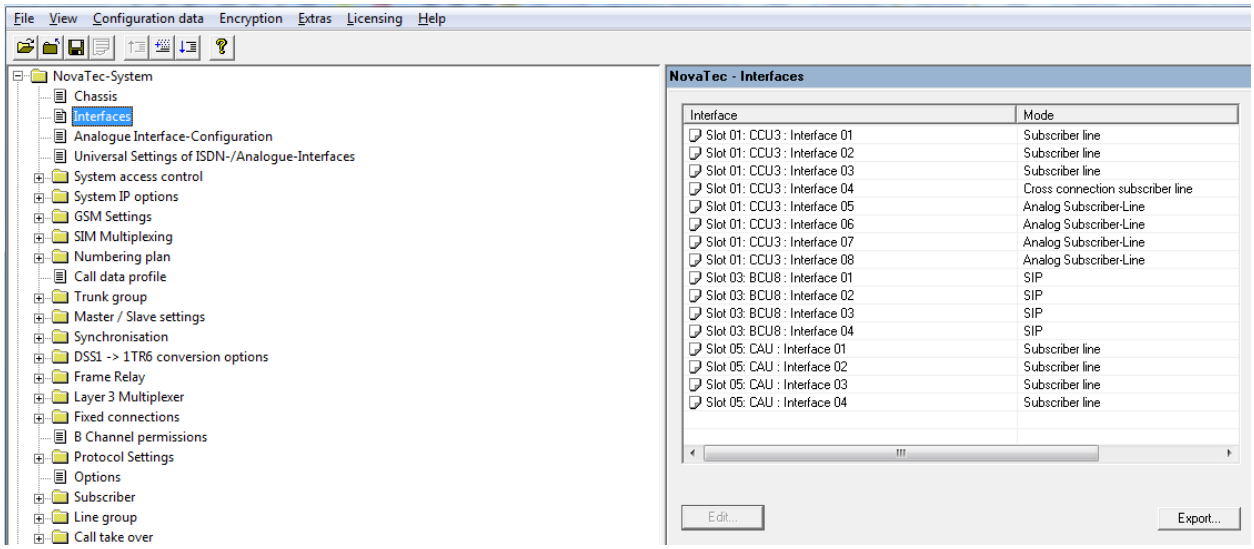
On this page no settings are reconfigurable. Changes require a system reset.

2.1.1 NovaTec-System/Chassis



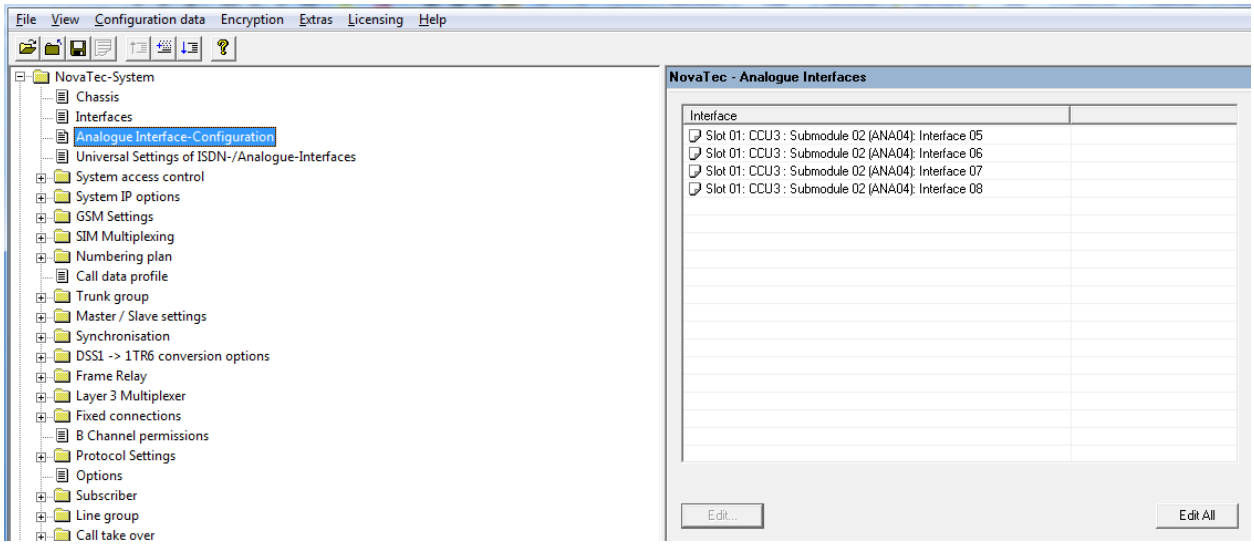
On this page no settings are reconfigurable. Changes require a system reset.

2.1.2 NovaTec-System/Interfaces



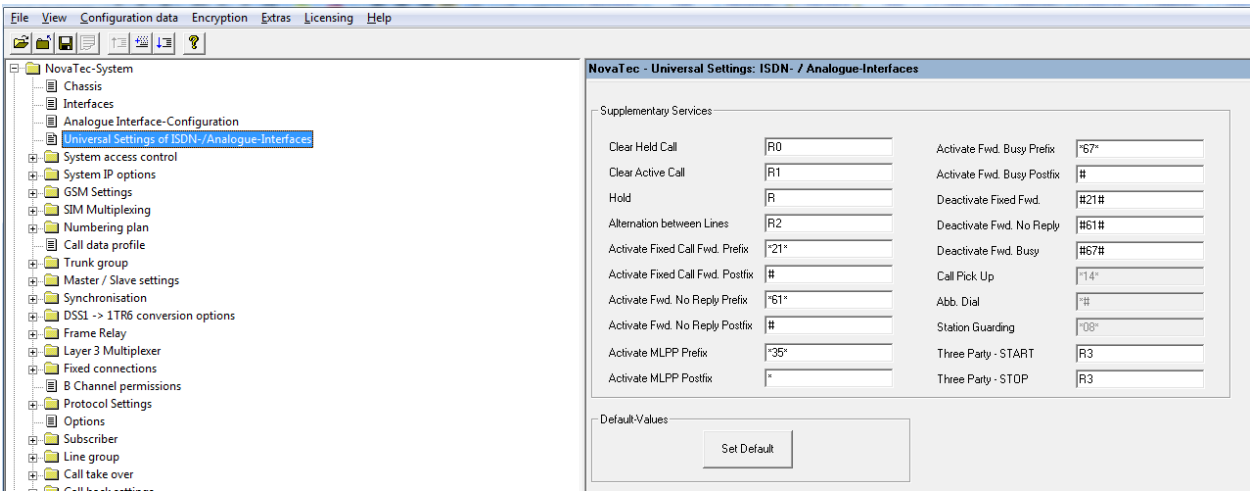
On this page no settings are reconfigurable. Changes require a system reset.

2.1.3 NovaTec-System/Analogue Interface-Configuration



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

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“.

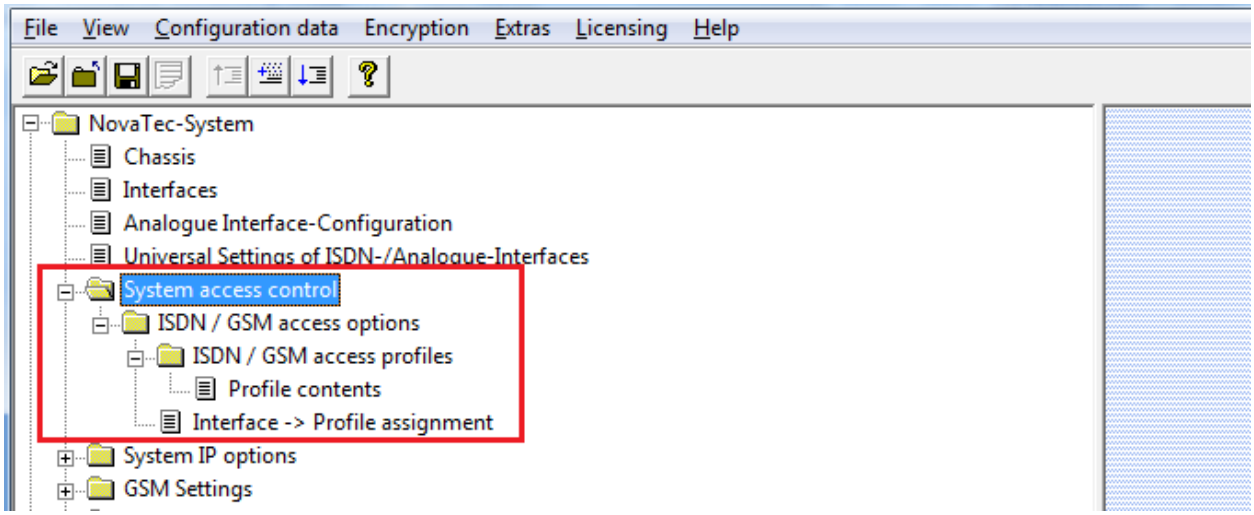
2. During the dialing process the administrator transfers a new configuration to the target system. In this configuration the dialling code for a fixed call diversion has been changed from “*21*” to “*31*”.

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.

2.1.5 NovaTec-System/System access control



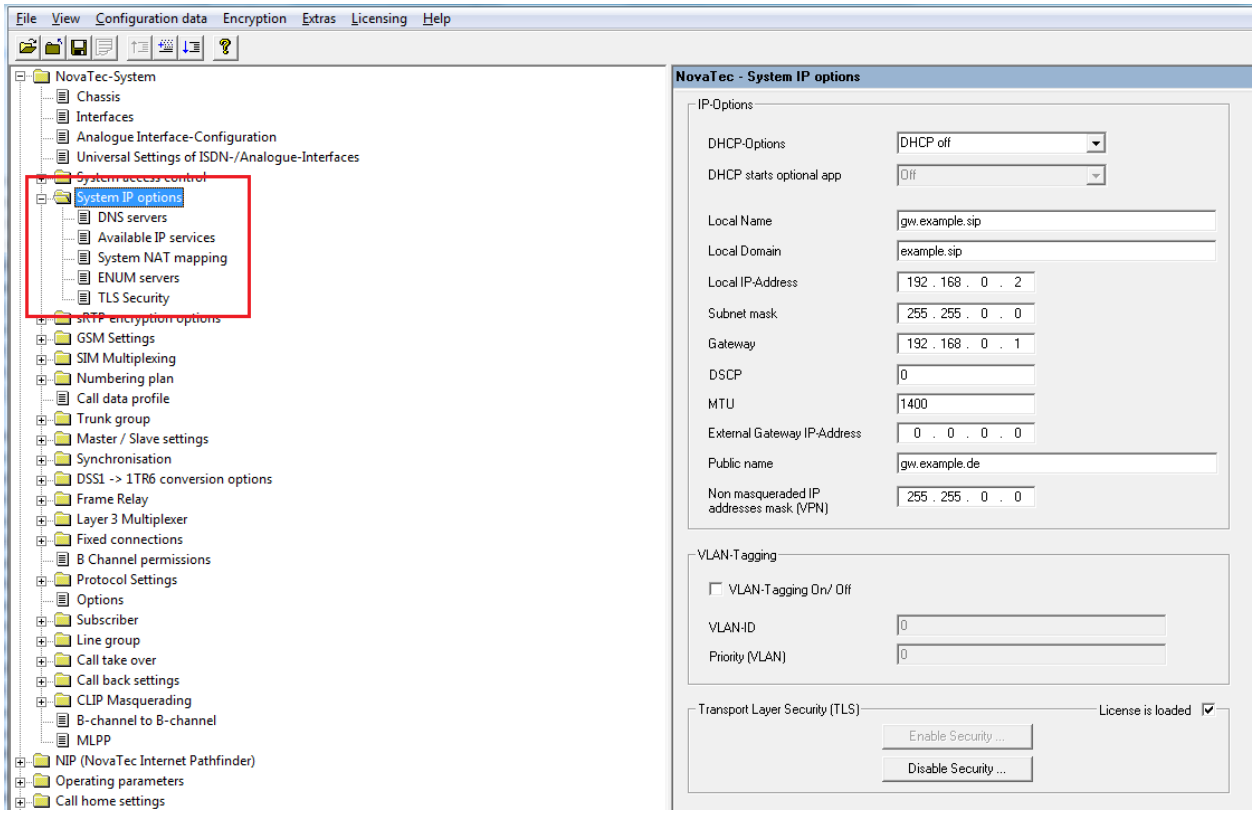
All settings and sub items of „System access control“ are reconfigurable and immediately operative.

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.

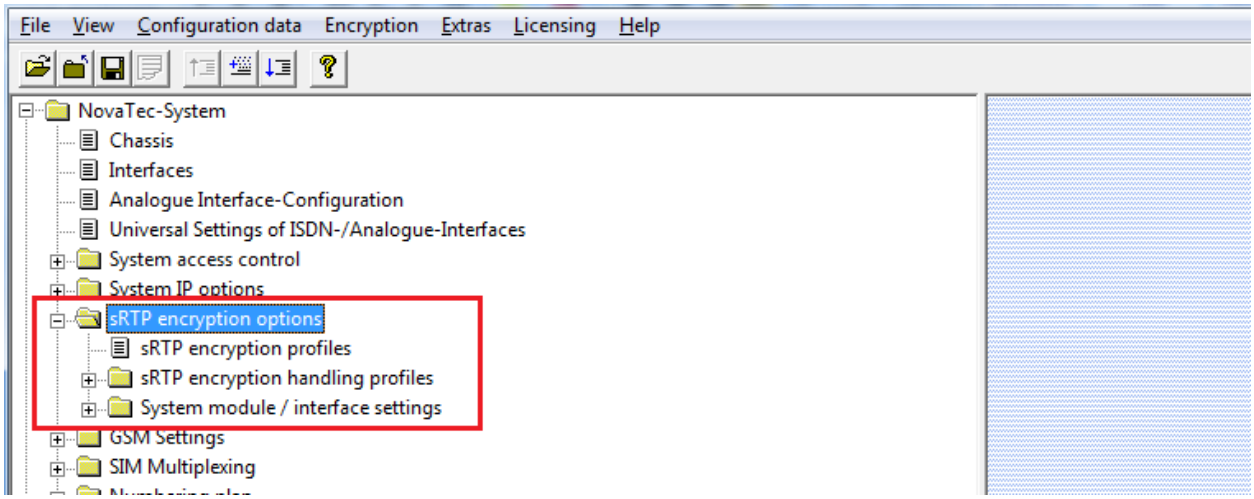
2.1.6 NovaTec-System/System IP options



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.

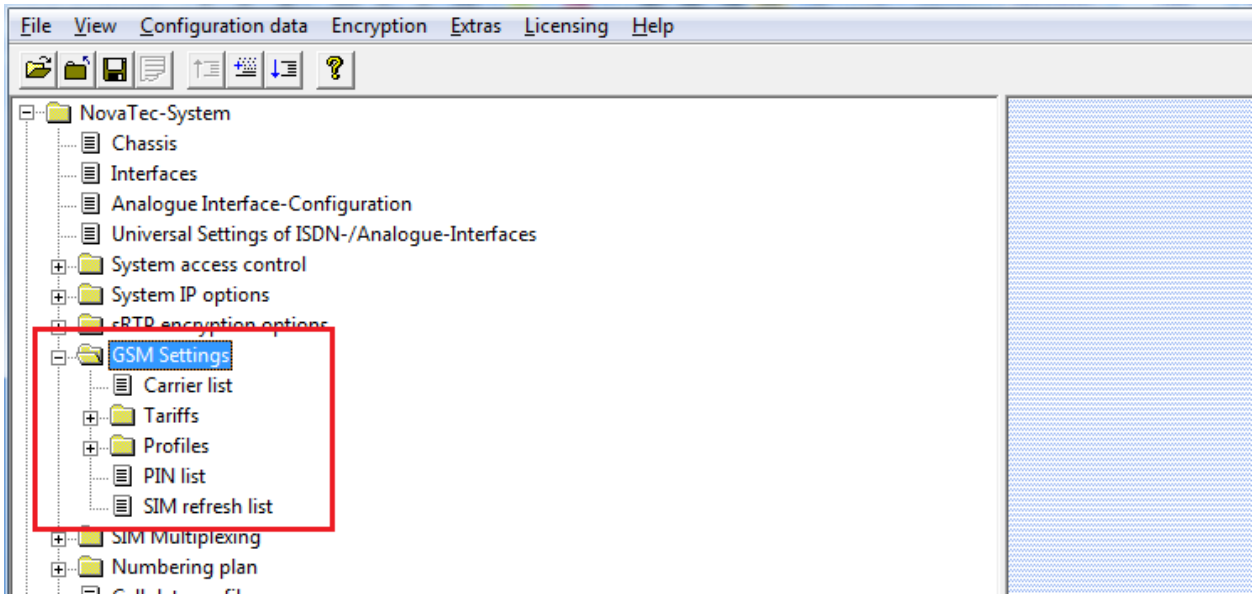
2.1.7 NovaTec-System/sRTP encryption options



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

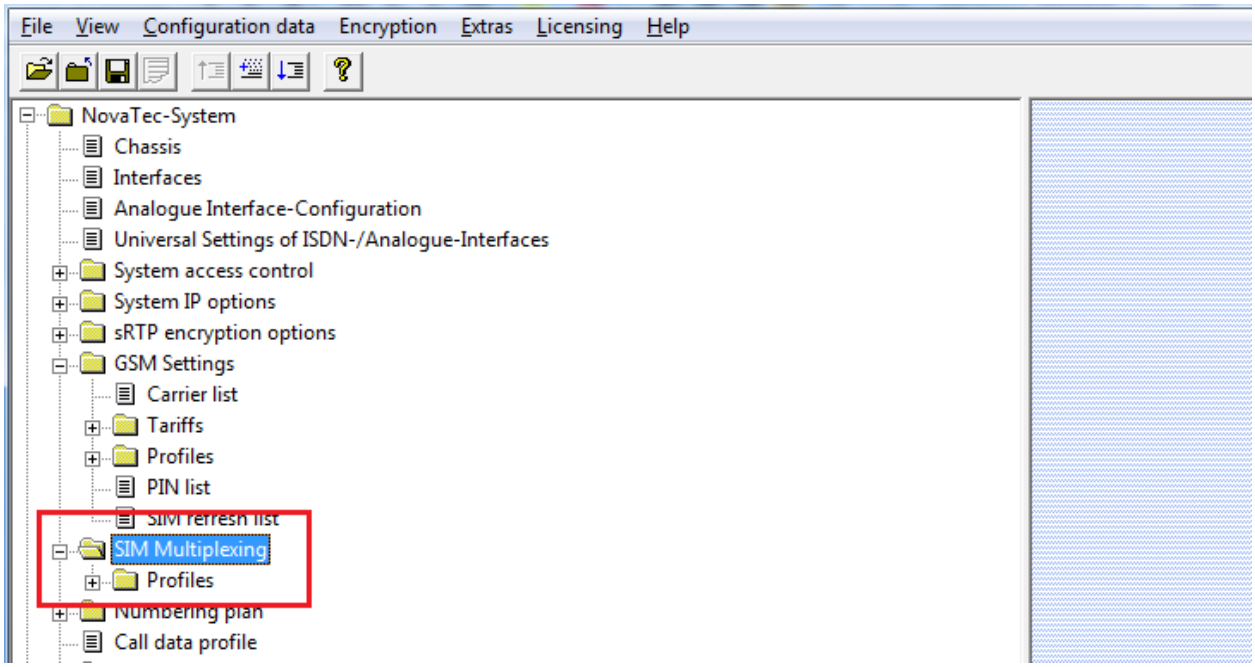
All changes in „sRTP encryption options", „sRTP encryption profiles", „sRTP encryption handling profiles" and „System module / interface settings" require a restart to come into effect.

2.1.8 NovaTec-System/GSM Settings



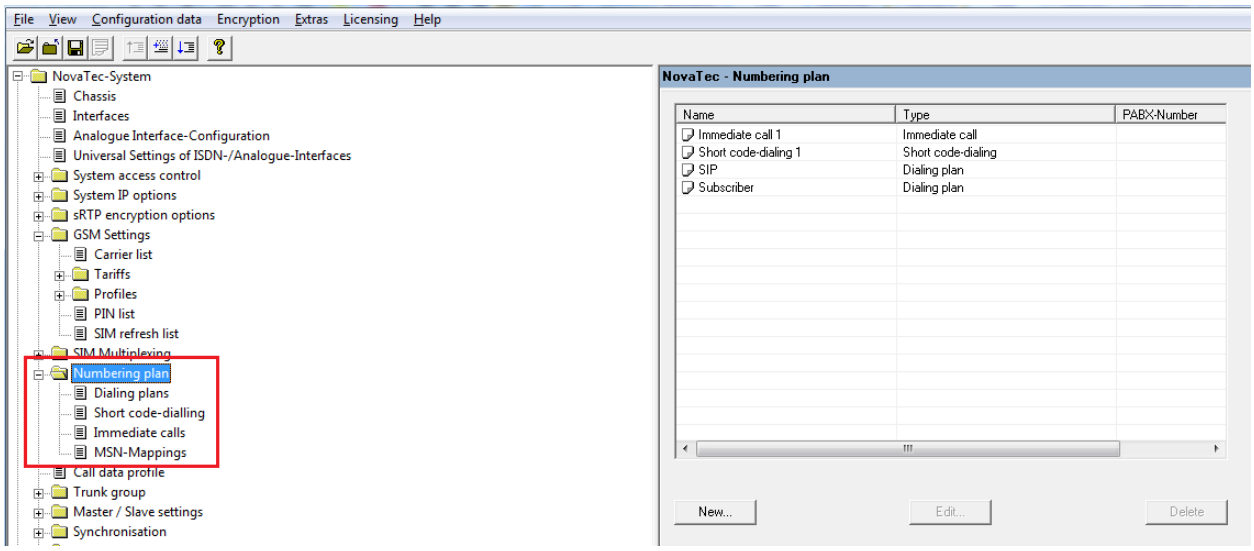
All settings and sub items of „GSM settings" are reconfigurable and immediately operative.

2.1.9 NovaTec-System/SIM Multiplexing



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

2.1.10 NovaTec-System/Numbering plan



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

A subscriber dials a destination number which is no longer valid after the reconfiguration and receives an appropriate failure report after the reconfiguration when dialling the first digit.

Example:

1. A subscriber wants to call subscriber number „123456“ and begins to dial „123“.

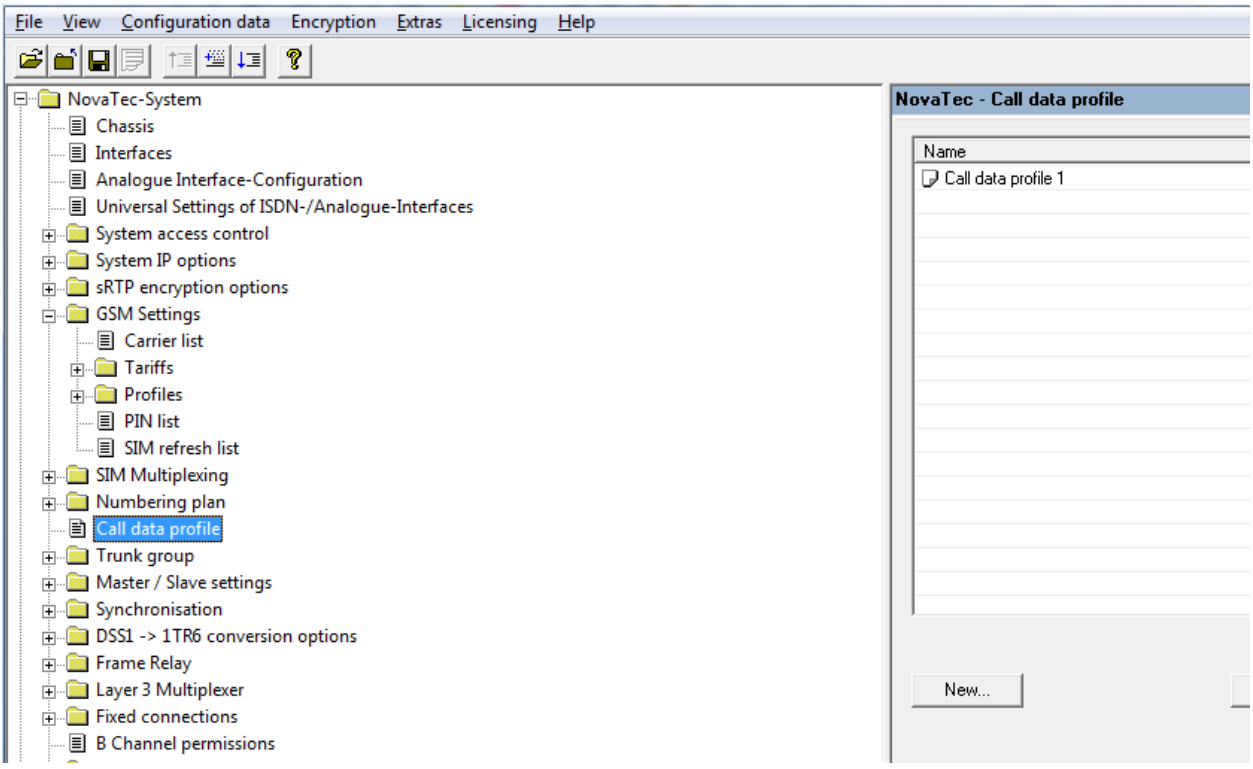
2. During the dialing process the administrator transfers a new configuration to the target system. In this configuration the number „123456“ has been deleted from the numbering plan.

3. The target system adopts the new settings immediately.

4. The subscriber has not yet continued to dial. The call state remains unchanged.

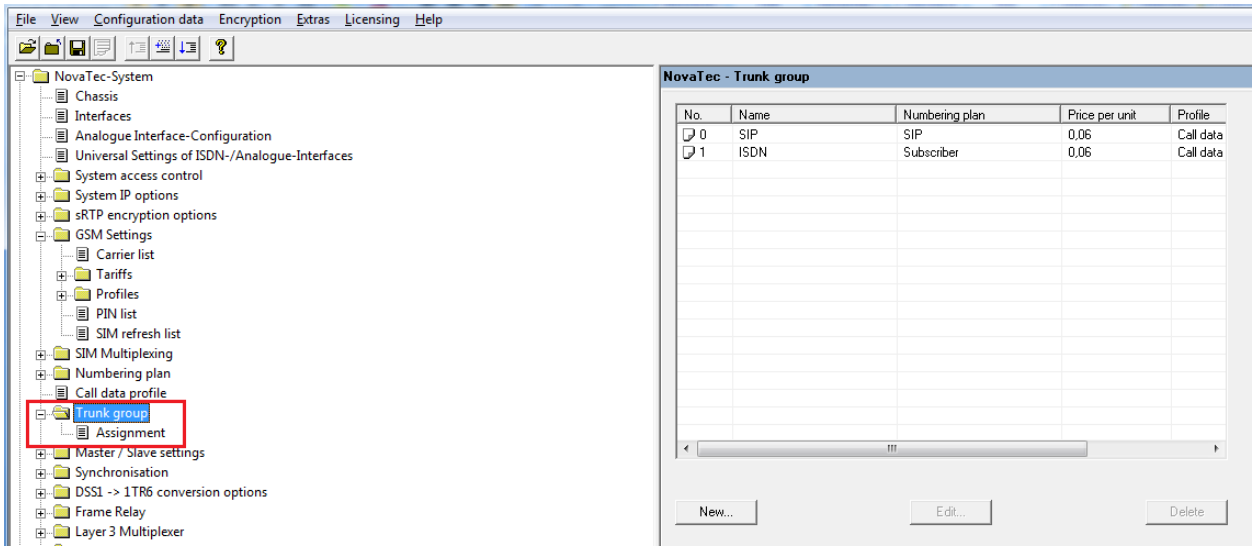
5. The subscriber continues to dial with digit „4“. The call is now rejected as the current dialled number “1234” is no longer included in the numbering plan.

2.1.11 NovaTec-System/Call data profile



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

2.1.12 NovaTec-System/Trunk group



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:

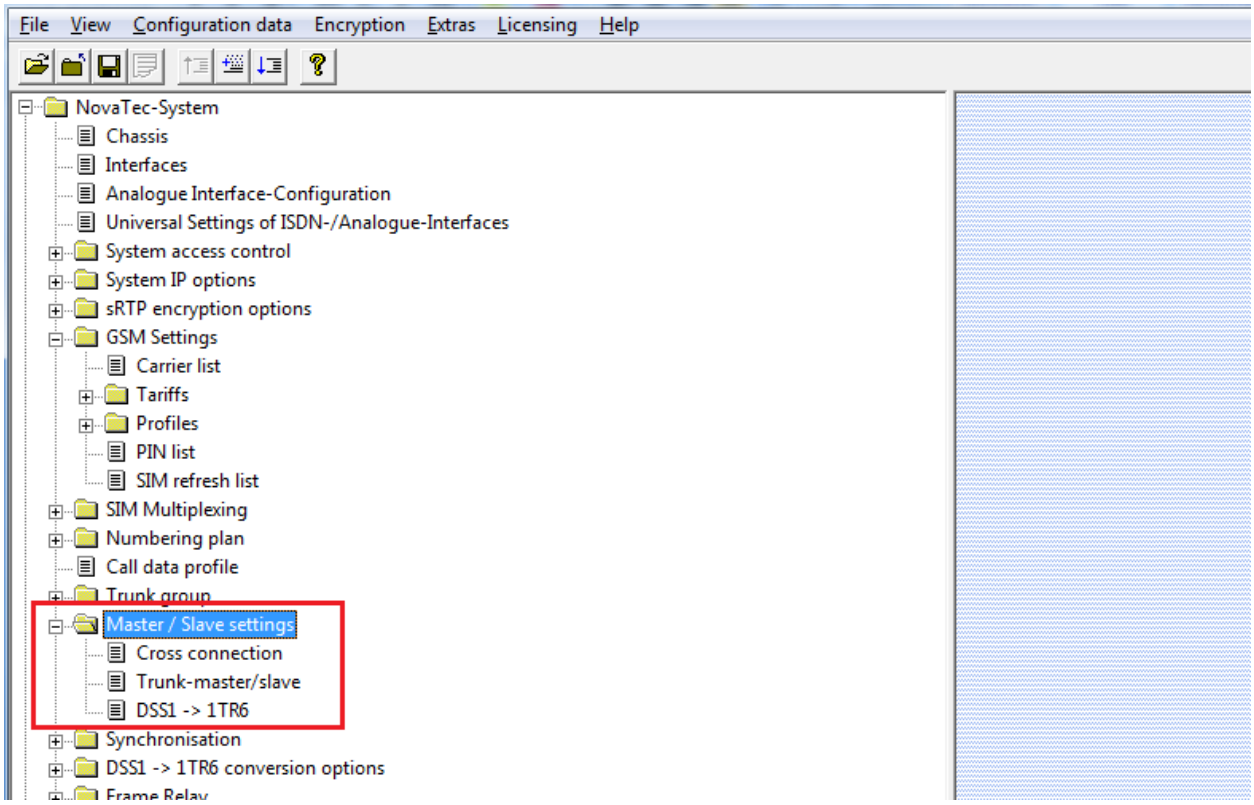
1. A subscriber begins to build up a call via the trunk group „Test“. The interfaces A and B are dedicated to the trunk group „Test“.

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.

2.1.13 NovaTec-System/Master / Slave settings



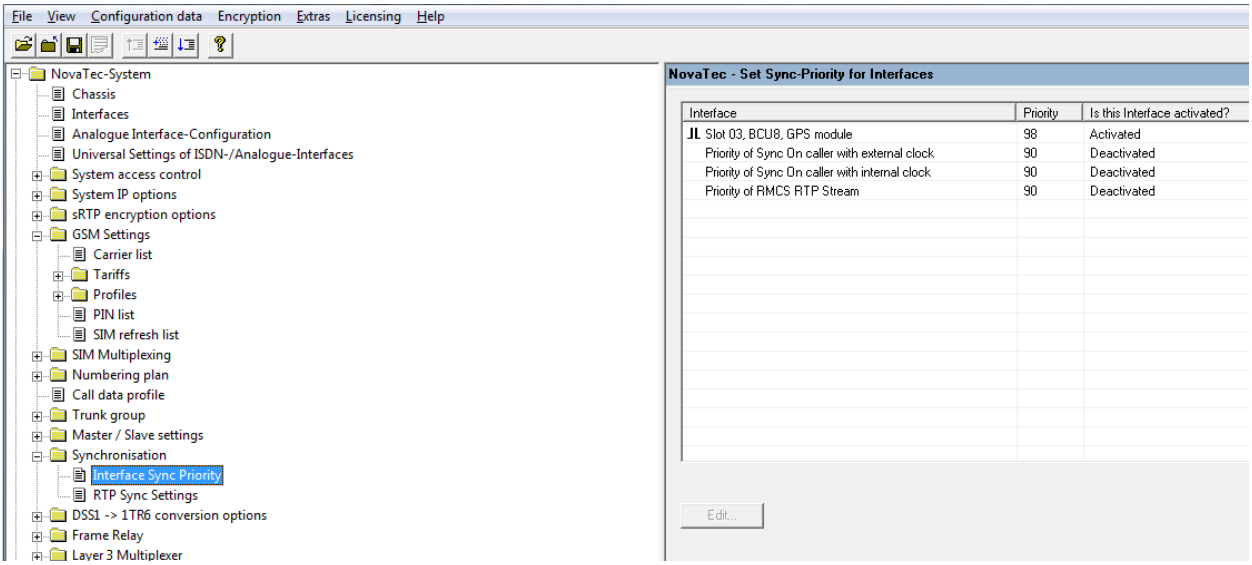
None of the settings and sub items of „Master / Slave settings“ are reconfigurable.

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

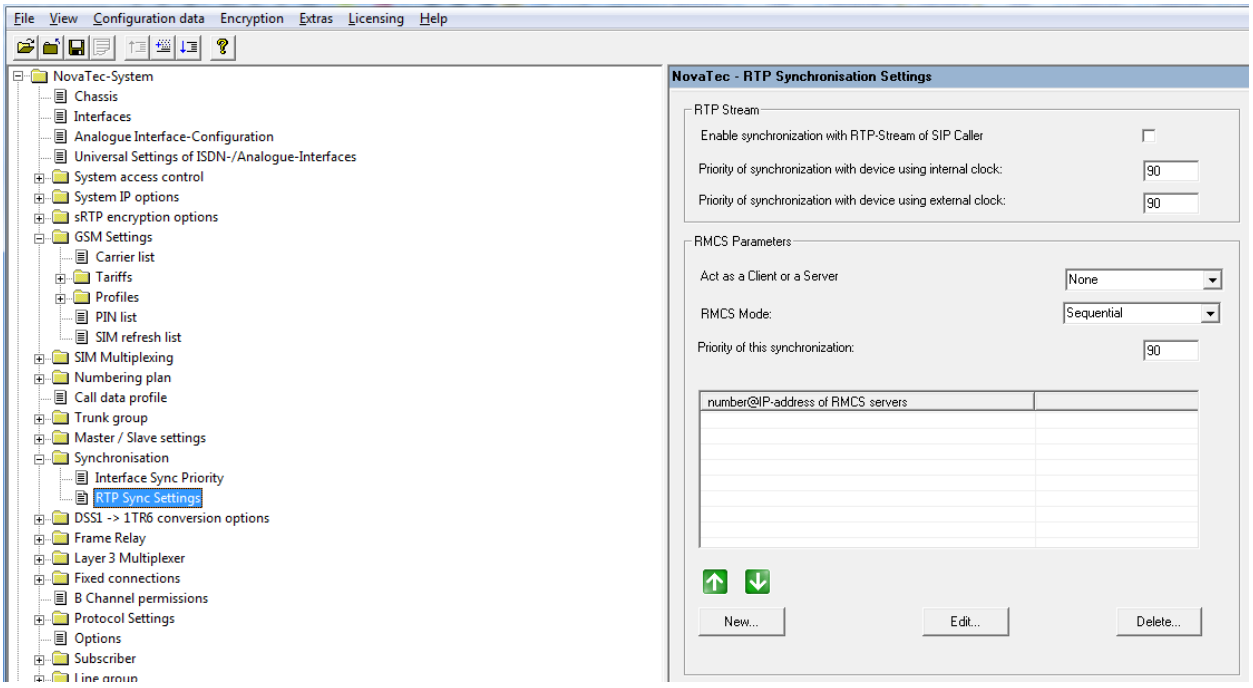
No settings can be made in „NovaTec-System/Synchronisation“.

2.1.14.1 NovaTec-System/Synchronisation/Interface Sync Priority



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

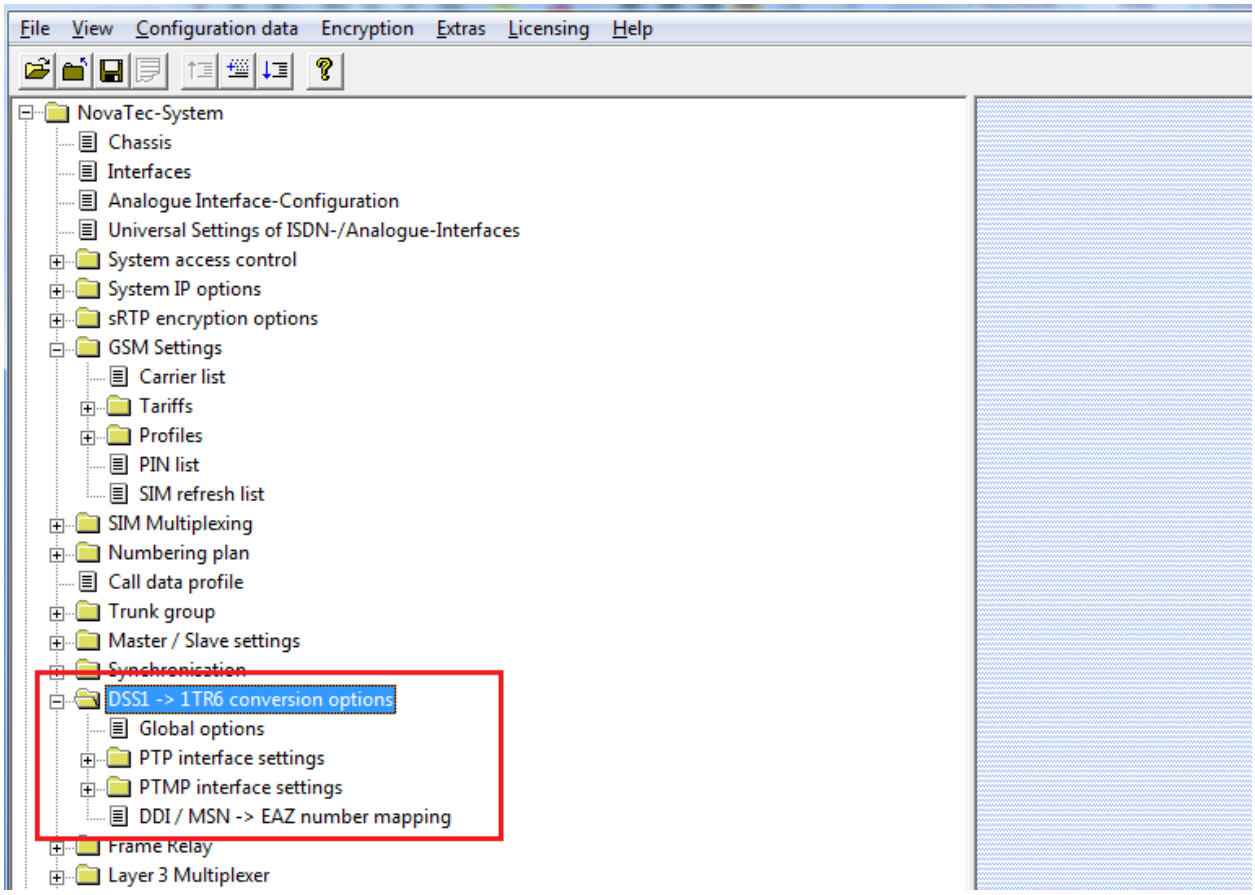
2.1.14.2 NovaTec-System/Synchronization/RTP Sync Settings



The settings on this page are reconfigurable and immediately operative.

Should a RMCS server be deleted existing calls to this server remain active but no new calls are build up to the deleted server.

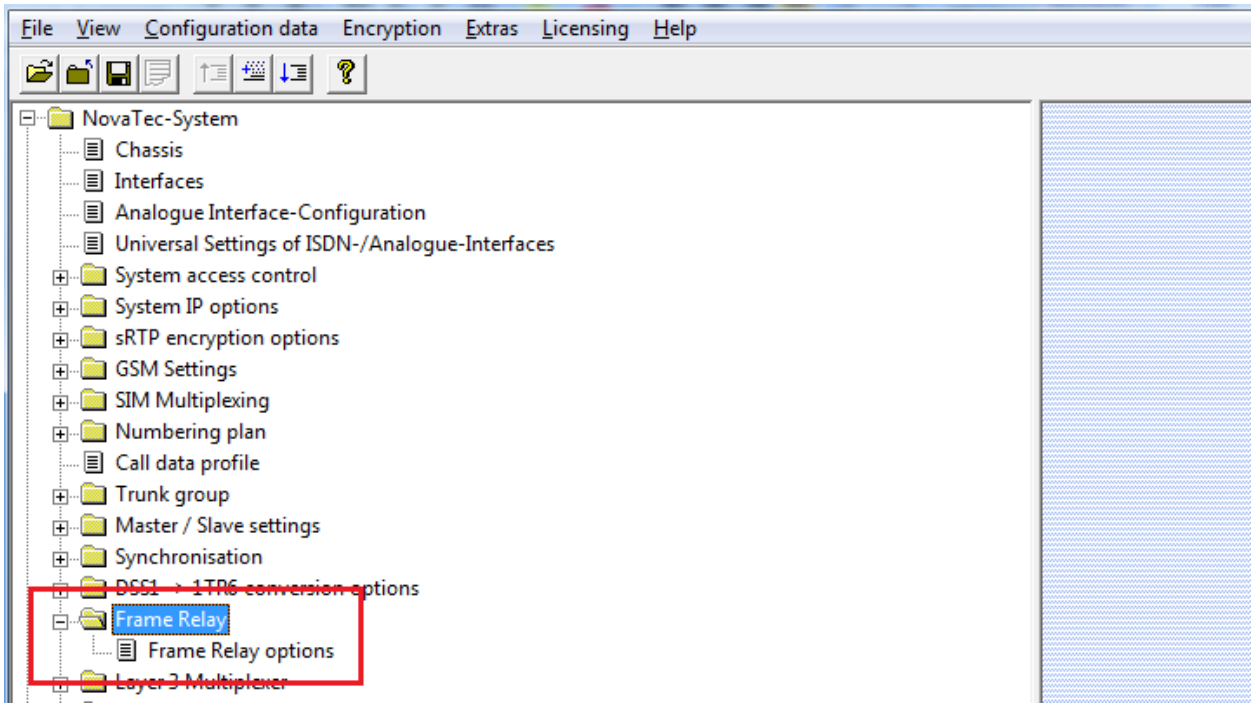
2.1.15 NovaTec-System/DSS1 -> 1TR6 conversion options



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.

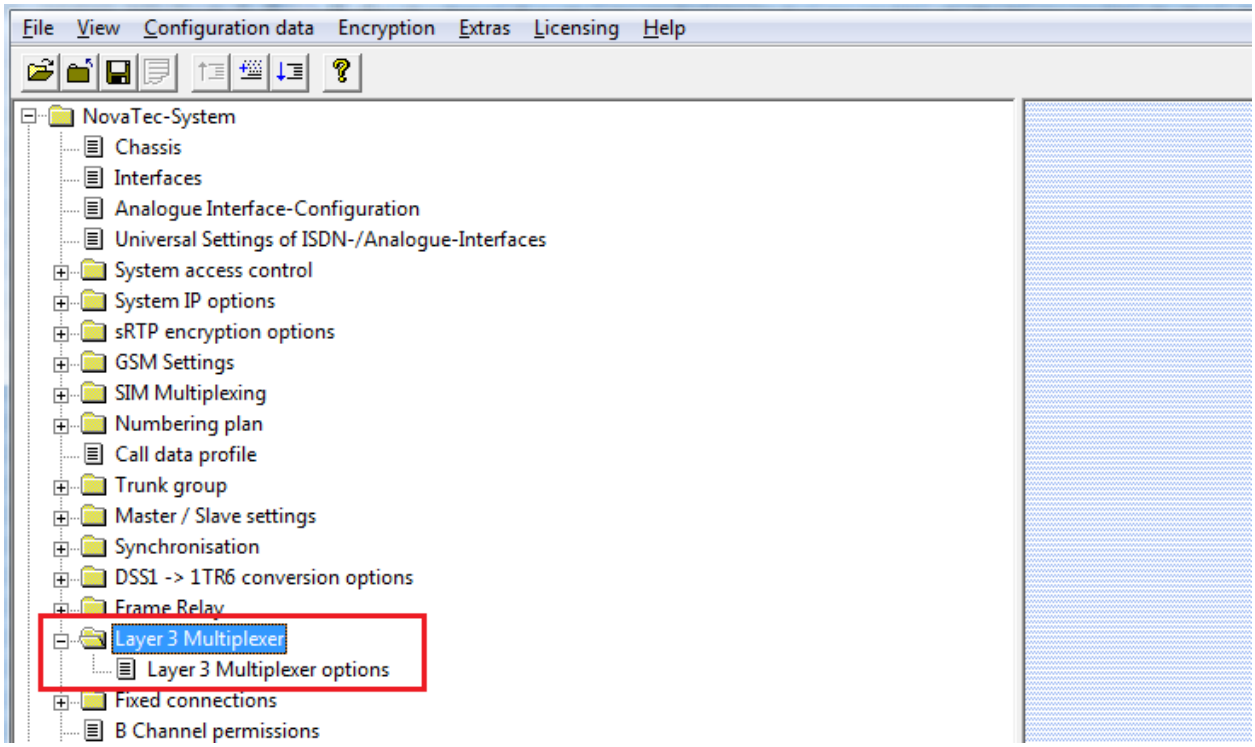
2.1.16 NovaTec-System/Frame Relay



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.

2.1.17 NovaTec-System/Layer 3 Multiplexer

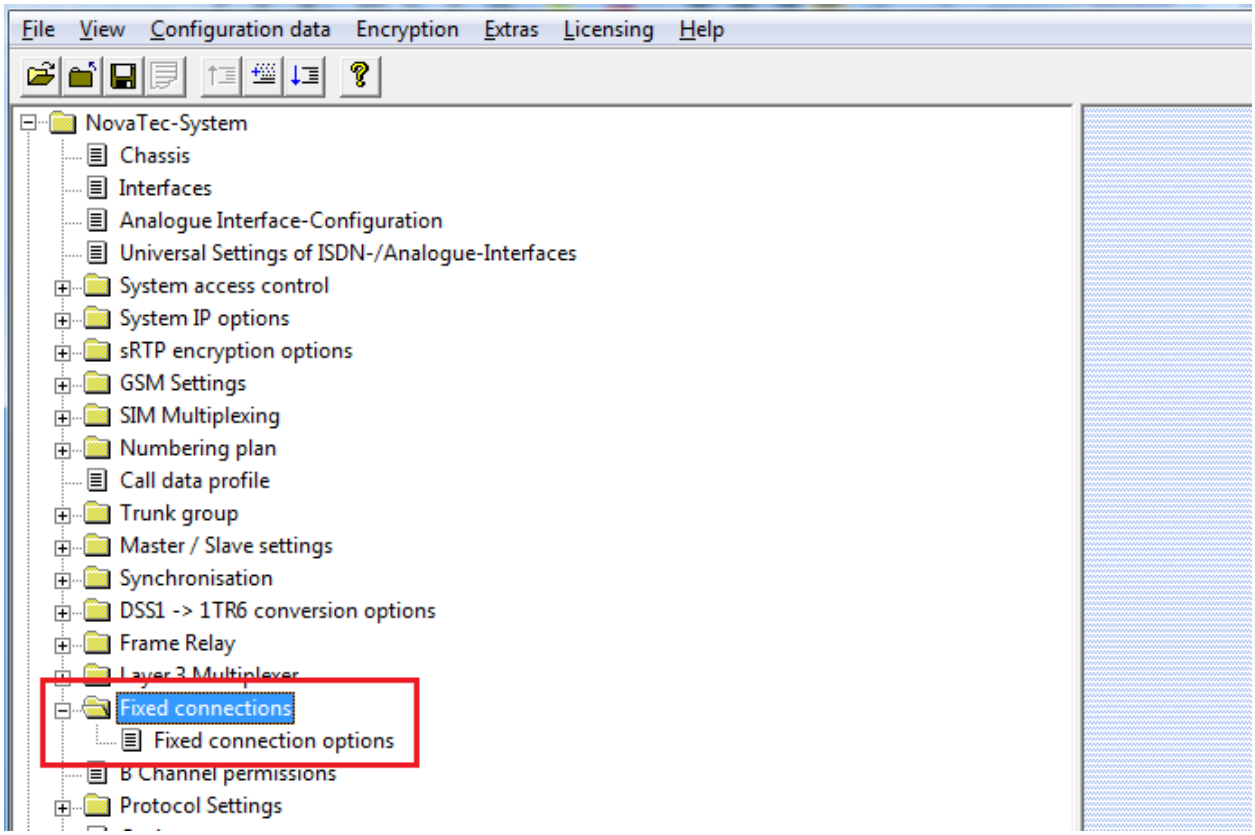


None of the settings and sub items of „Layer 3 Multiplexer“ are reconfigurable.

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.

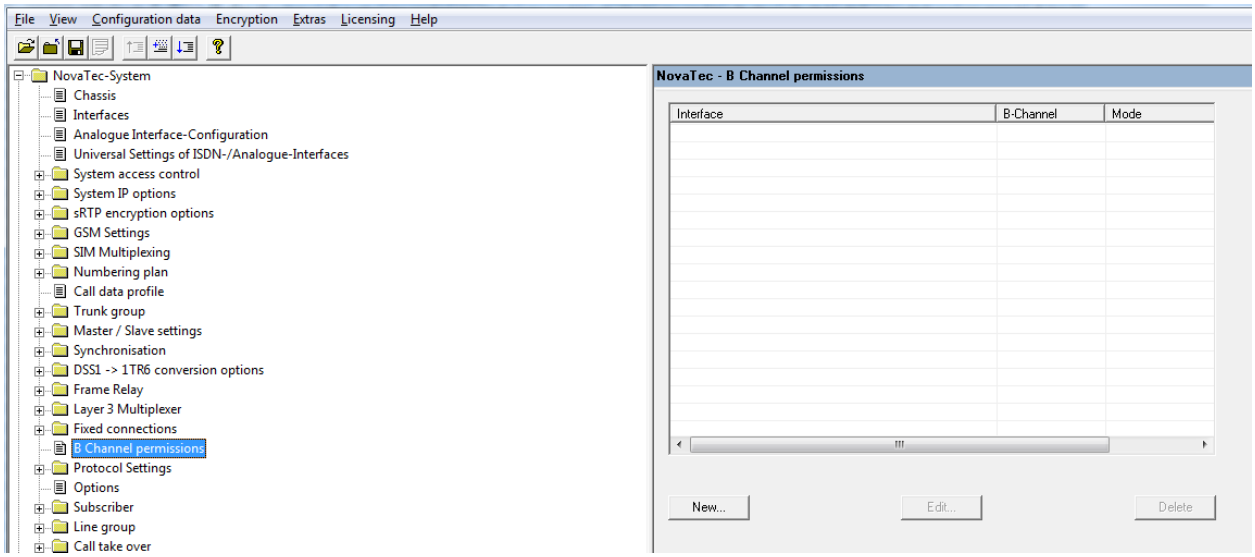
2.1.18 NovaTec-System/Fixed connections



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

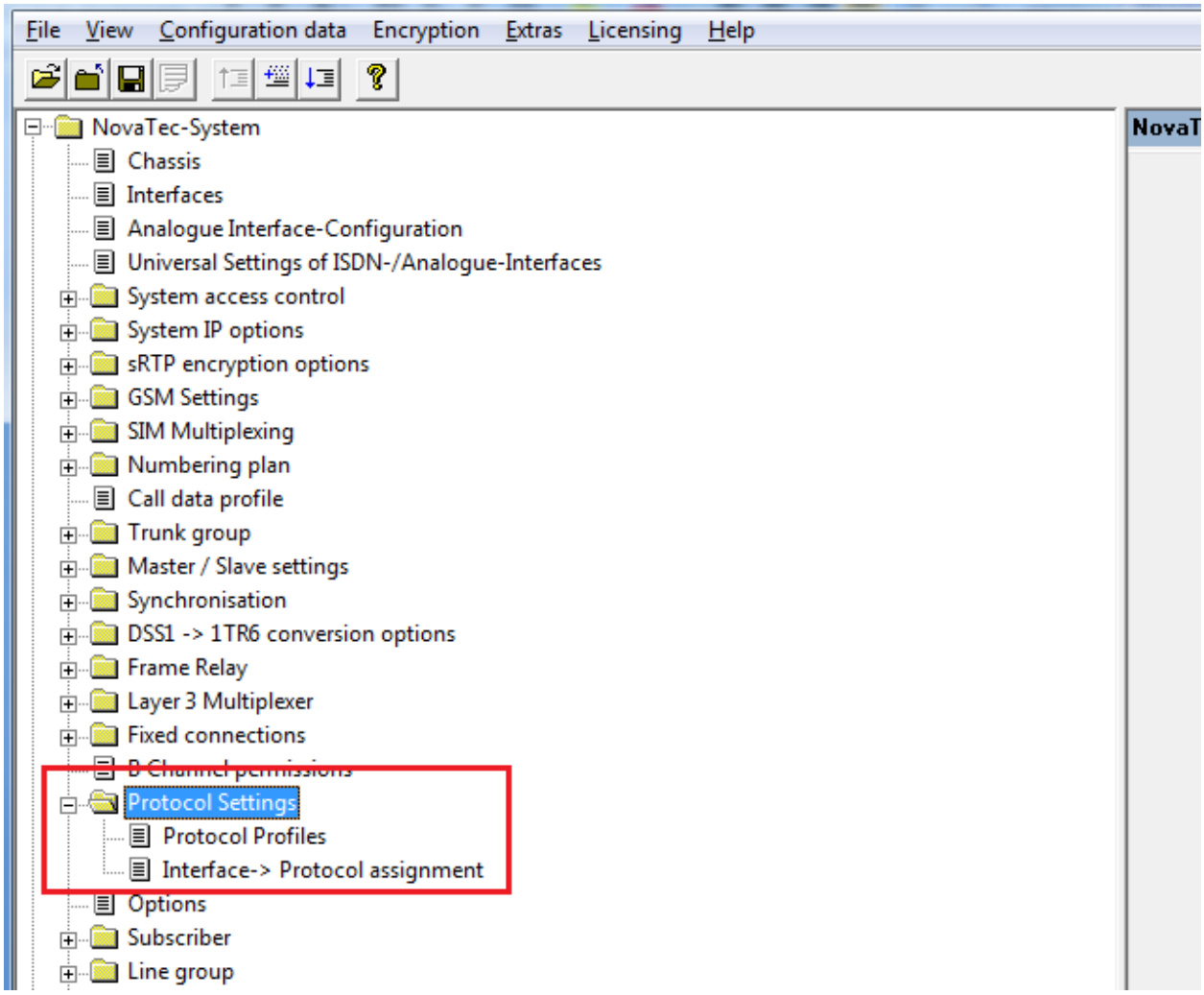
All changes on the pages „Fixed connections“ and „Fixed connections options“ require a system reset to be adopted.

2.1.19 NovaTec-System/B Channel permissions



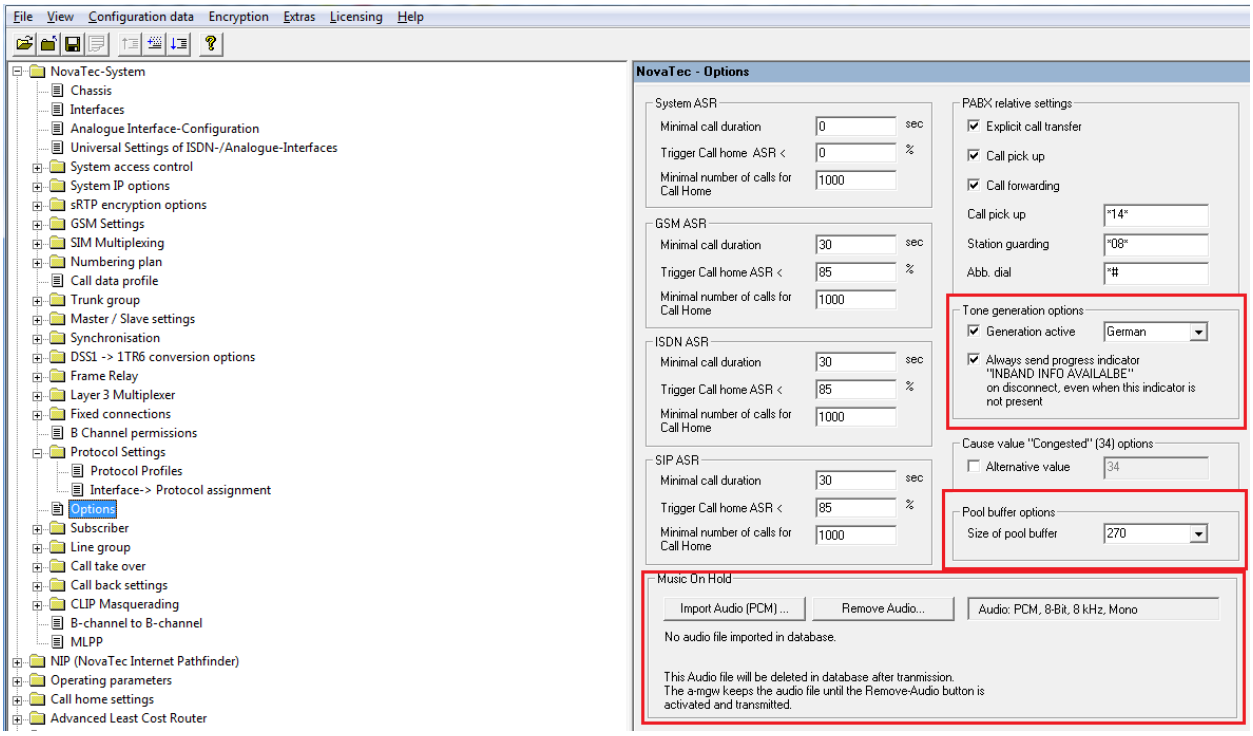
The settings on this page are not reconfigurable. Changes require a system reset.

2.1.20 NovaTec-System/Protocol Settings



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

2.1.21 NovaTec-System/Options



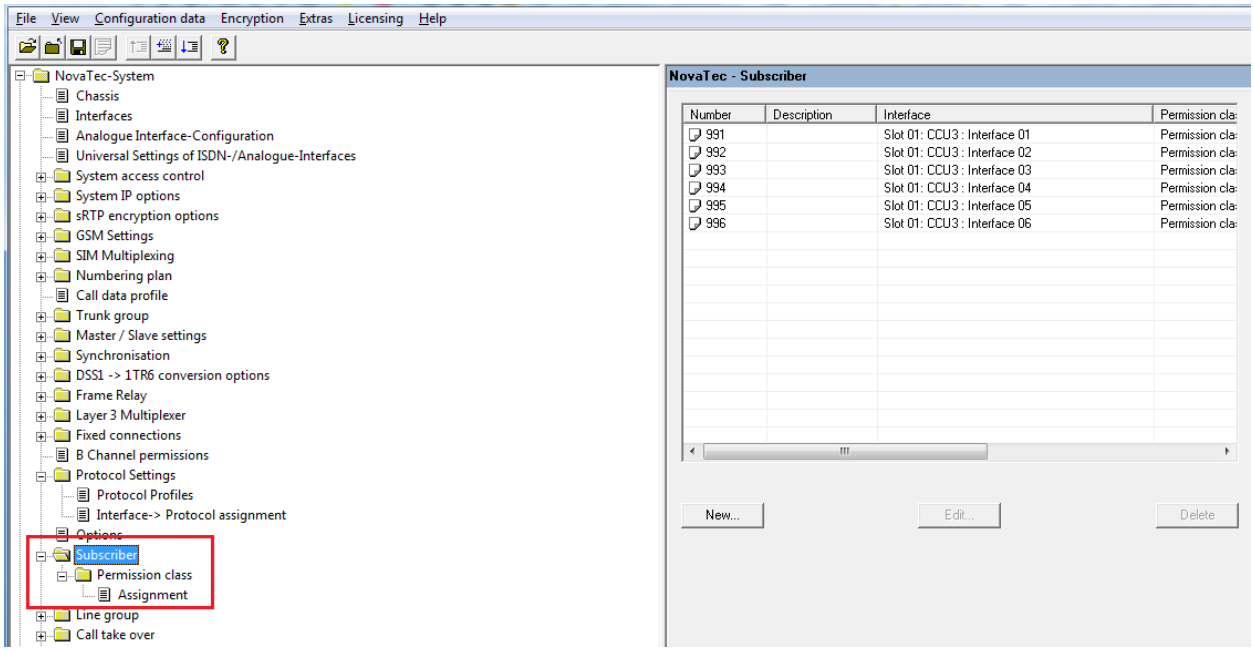
The settings boarded in red on this page are not reconfigurable. Changes require a system reset.

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

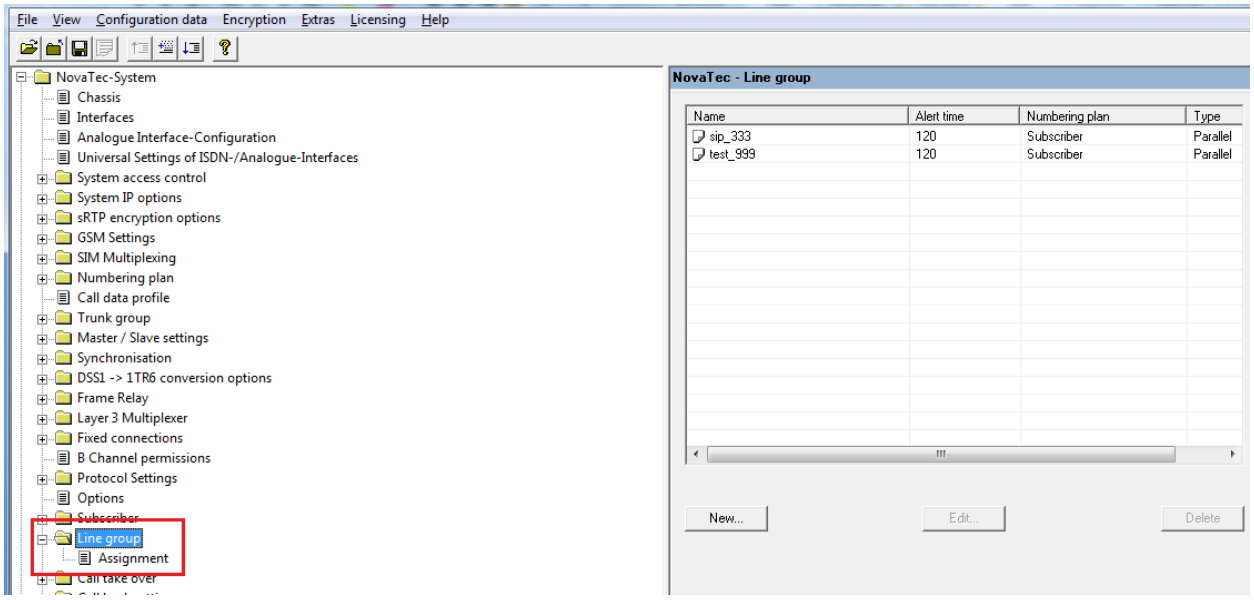
2.1.22 NovaTec-System/Subscriber



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

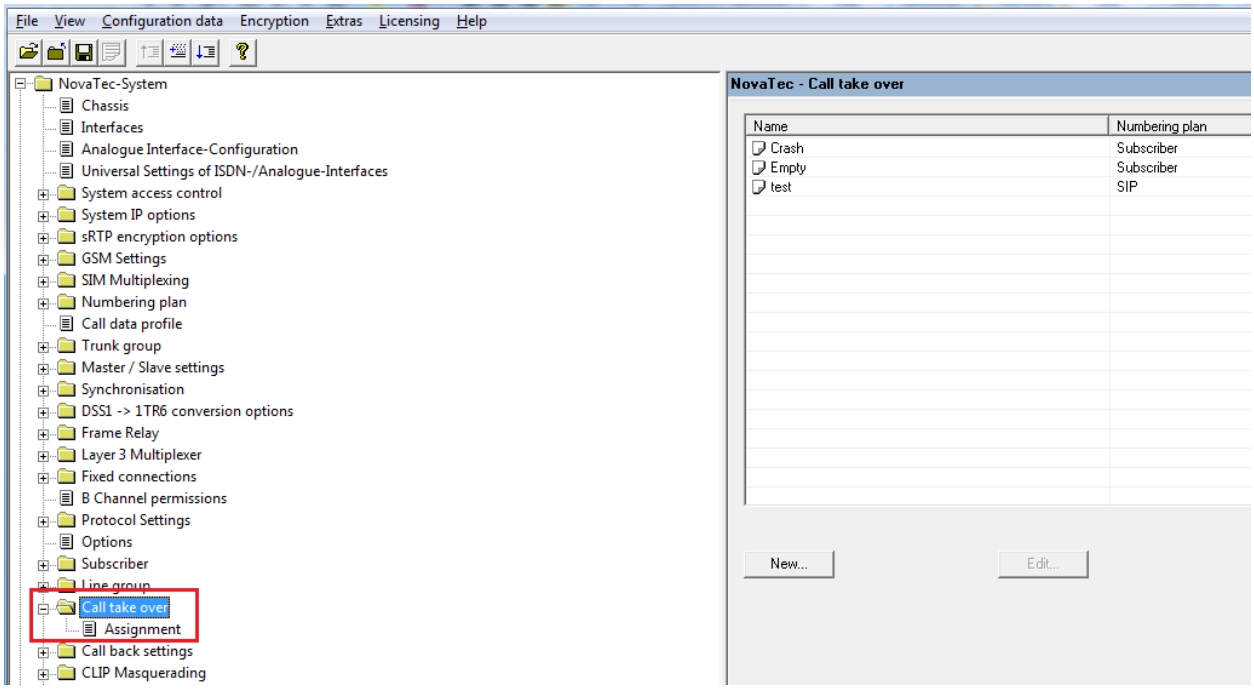
If a subscriber is deleted calls build up before the reconfiguration remain active. After the reconfiguration the deleted subscriber cannot build up new calls.

2.1.23 NovaTec-System/Line group



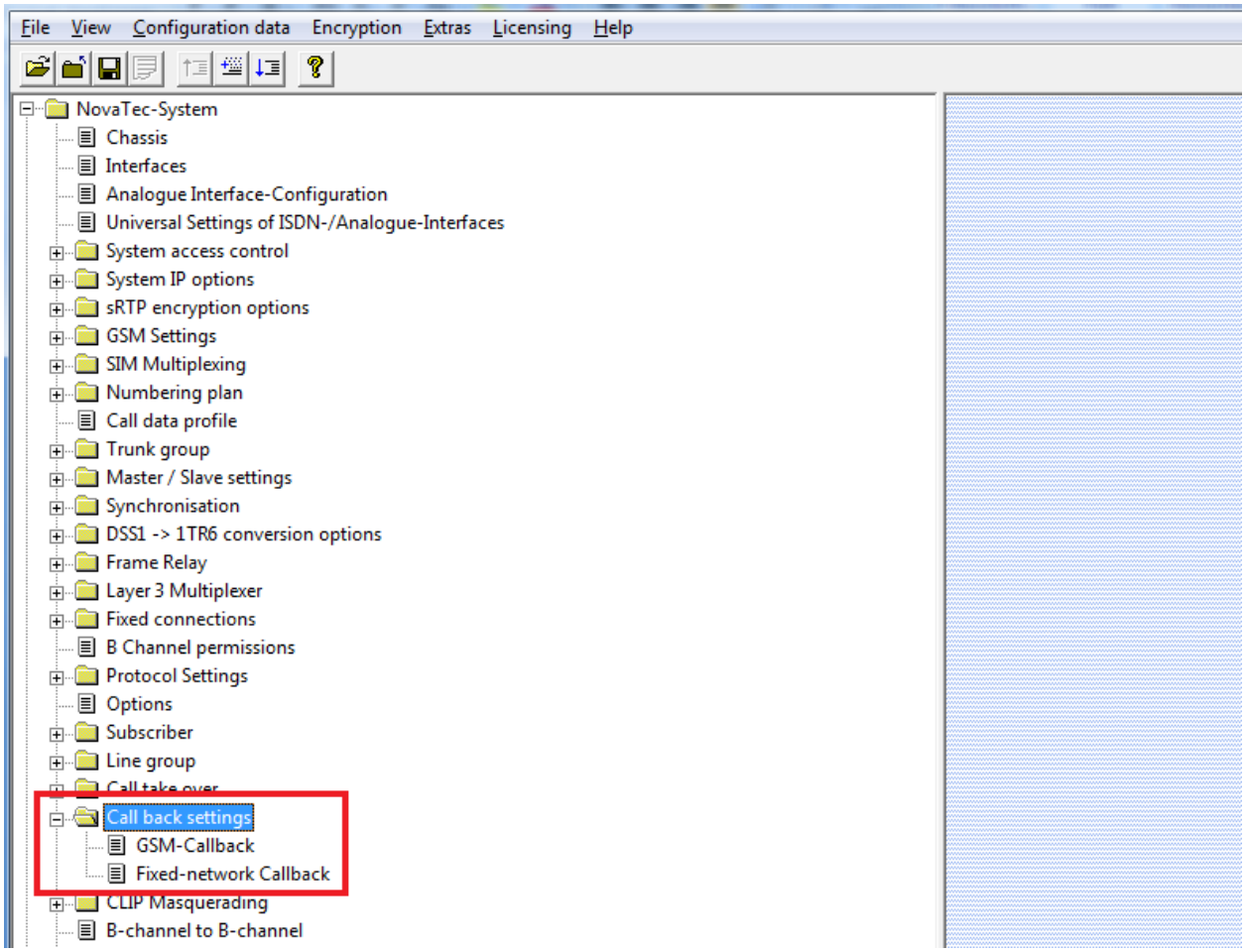
All settings and sub items of „Line group“ are reconfigurable and immediately operative.

2.1.24 NovaTec-System/Call take over



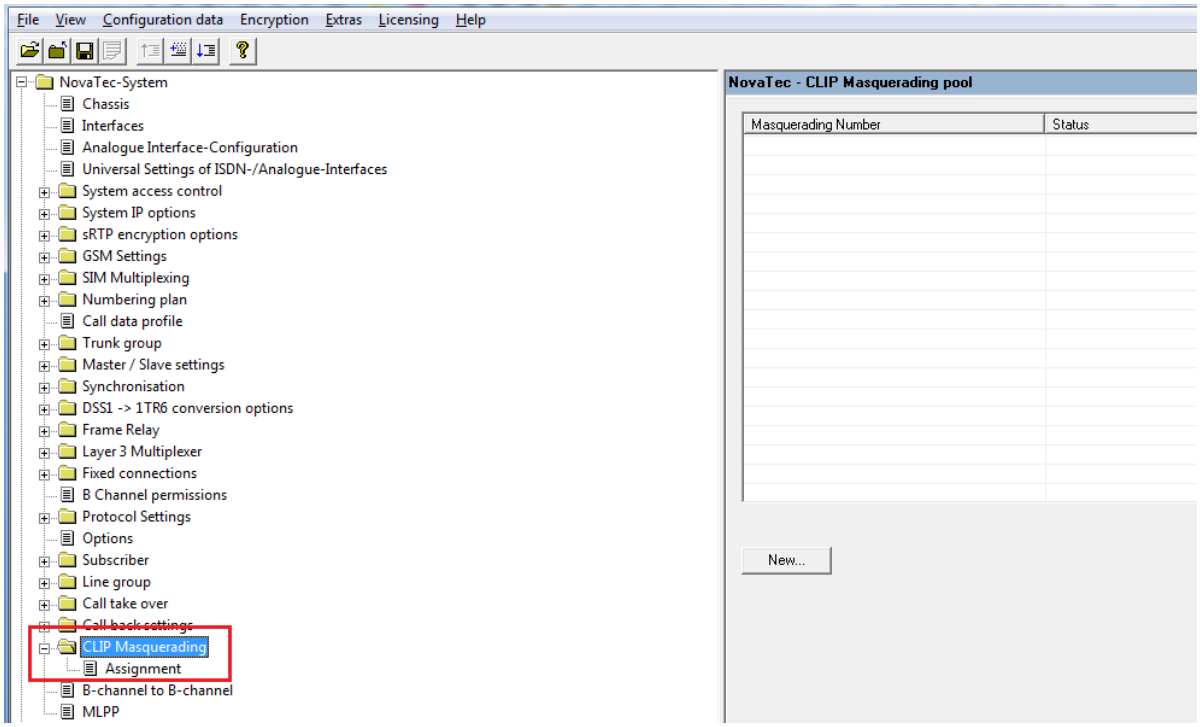
All settings and sub items of „Call take over“ are reconfigurable and immediately operative.

2.1.25 NovaTec-System/Call back settings



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

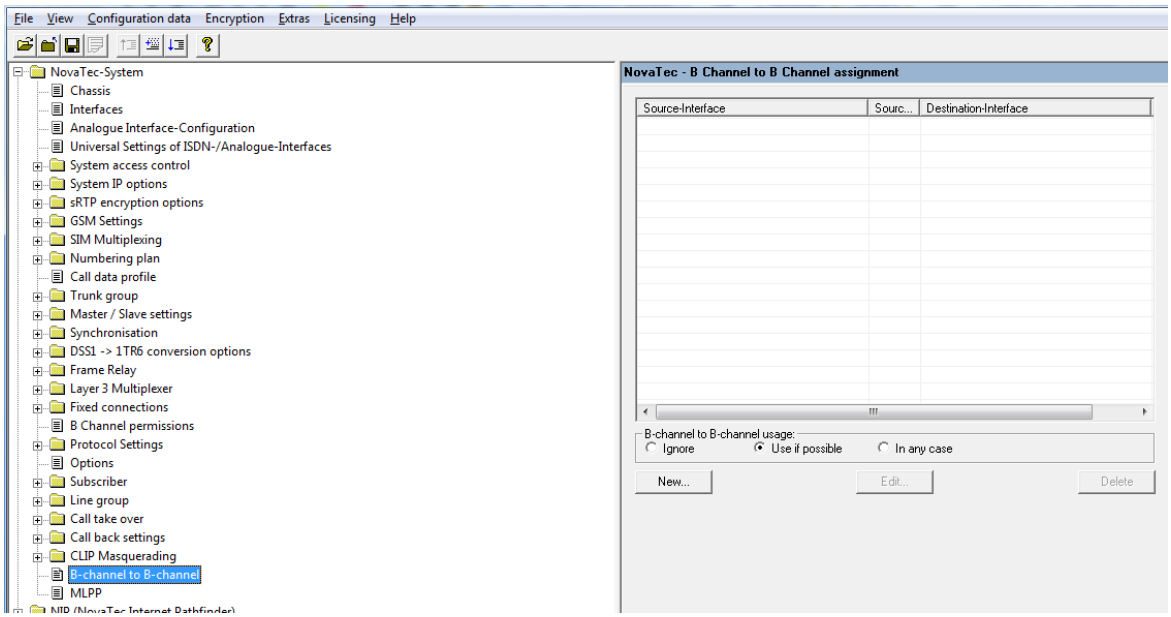
2.1.26 NovaTec-System/CLIP Masquerading



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

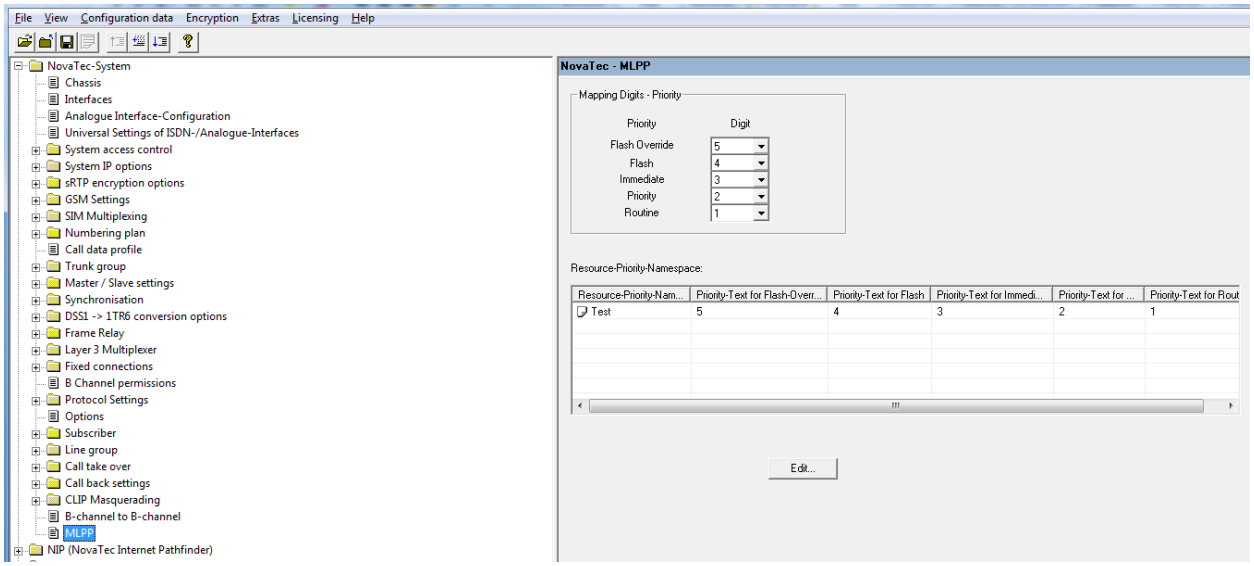
All changes to „CLIP Masquerading“ and „Assignment“ require a system reset to be adopted.

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



The settings on this page are reconfigurable and immediately operative.

2.1.28 NovaTec-System/MLPP

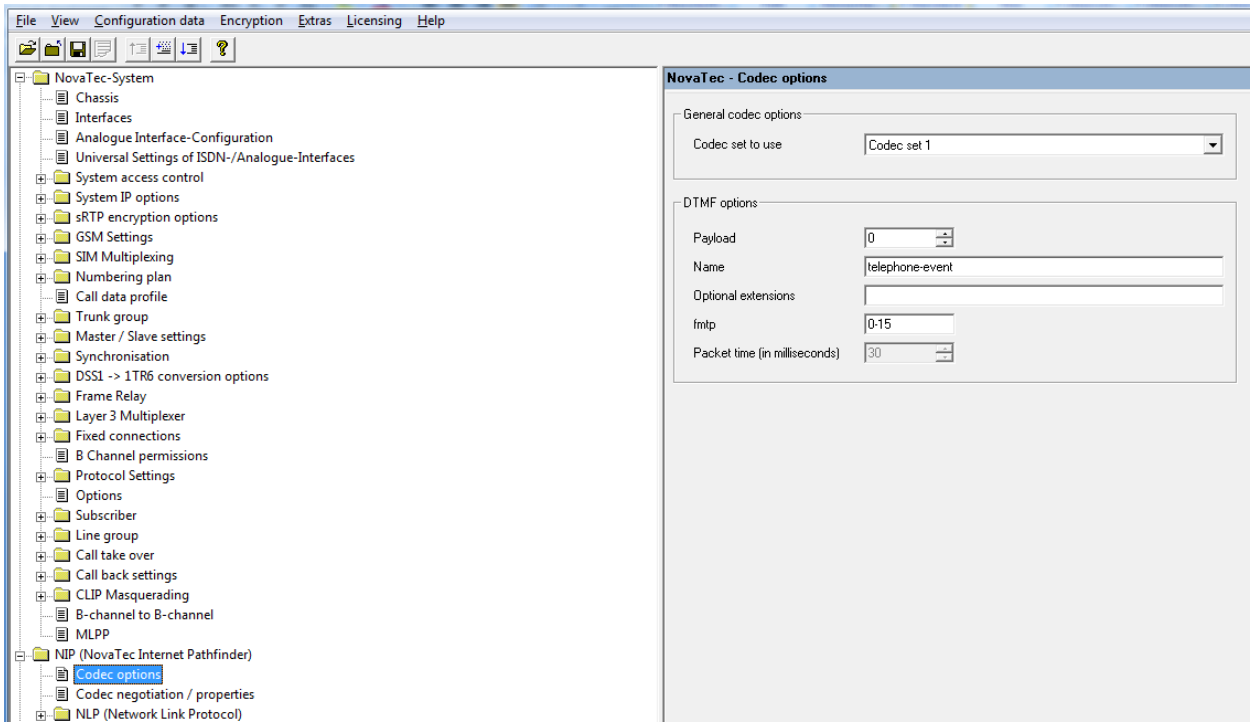


The settings on this page are reconfigurable and immediately operative.

2.2 NIP (NovaTec Internet Pathfinder)

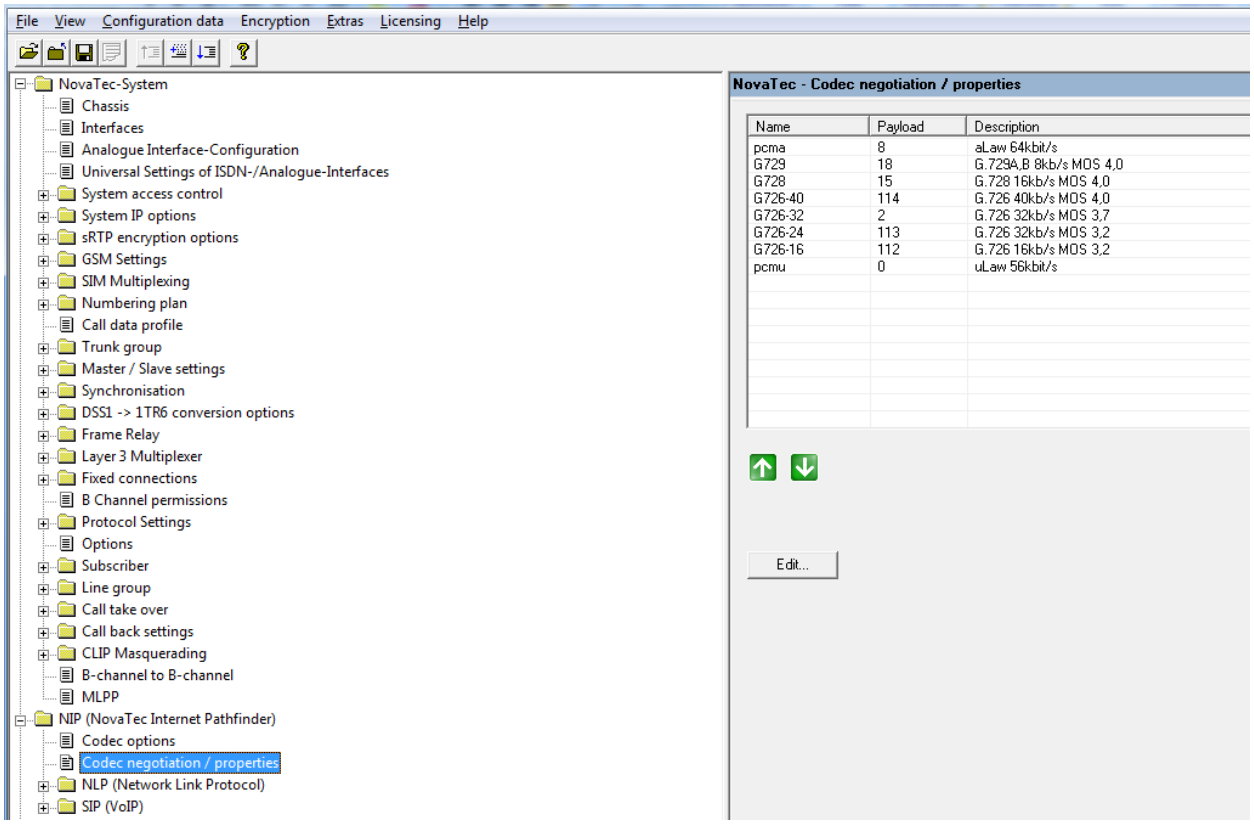
No settings can be adjusted on this page.

2.2.1 NIP (NovaTec Internet Pathfinder)/Codec options



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

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

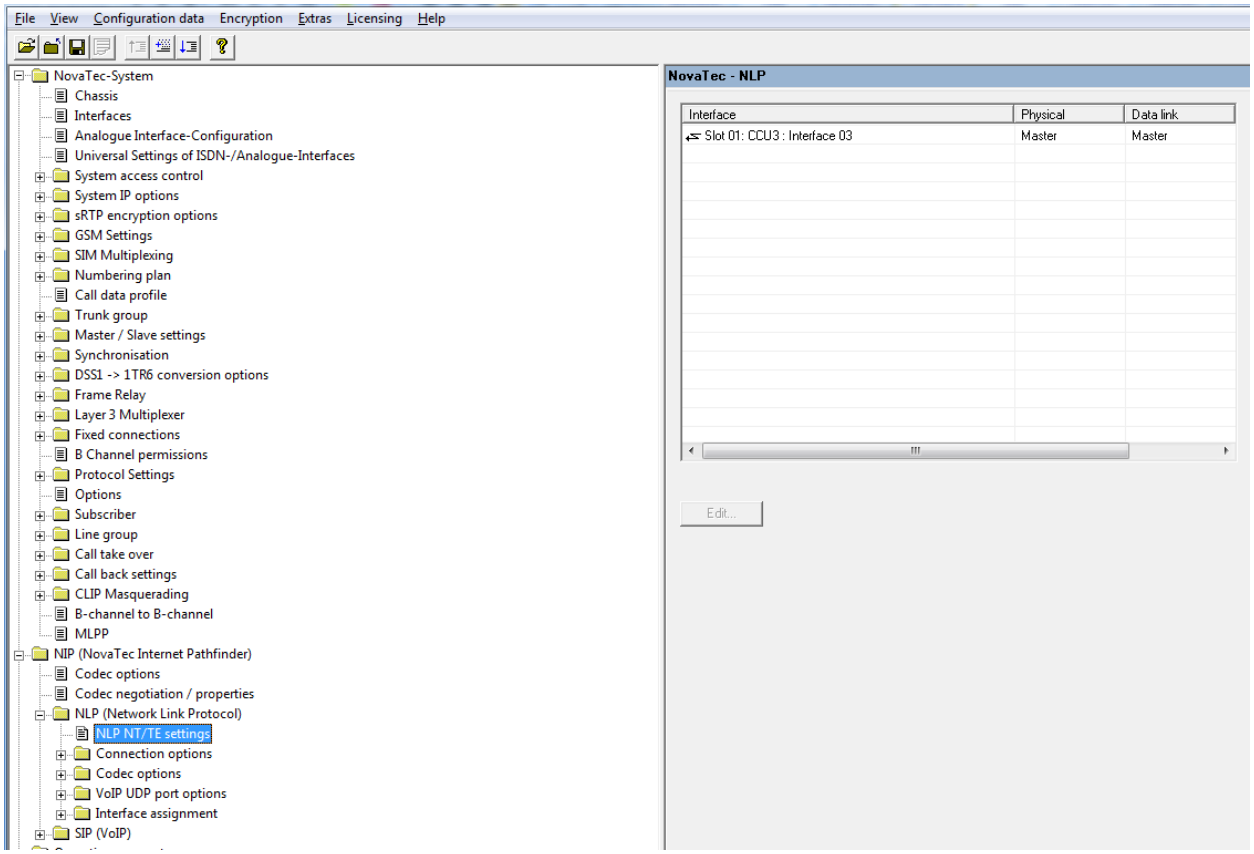


The settings on this page are not reconfigurable. Changes require a system reset.

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

You cannot change anything on this page.

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

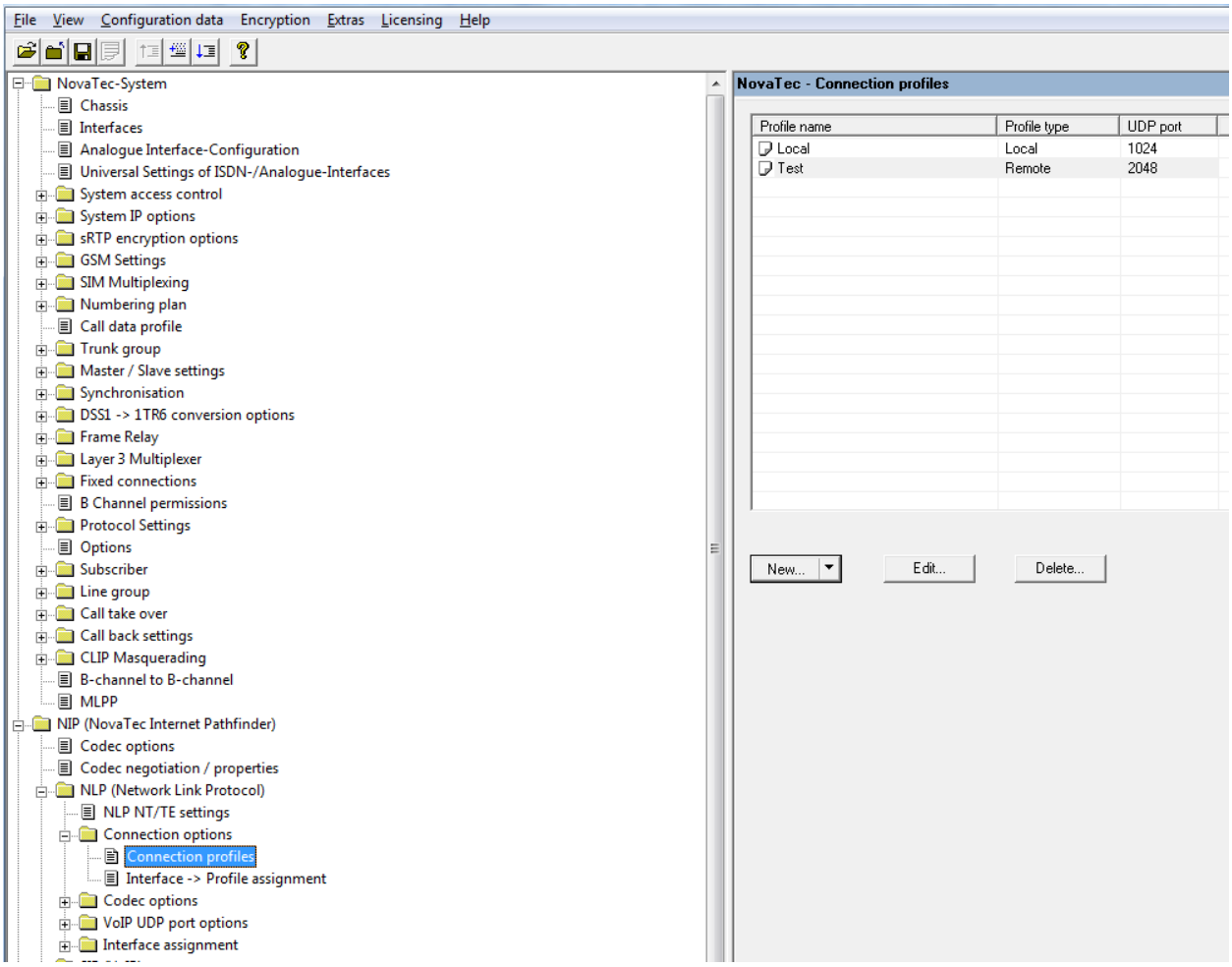


The settings on this page are not reconfigurable. Changes require a system reset.

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

You cannot change any settings on this page.

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

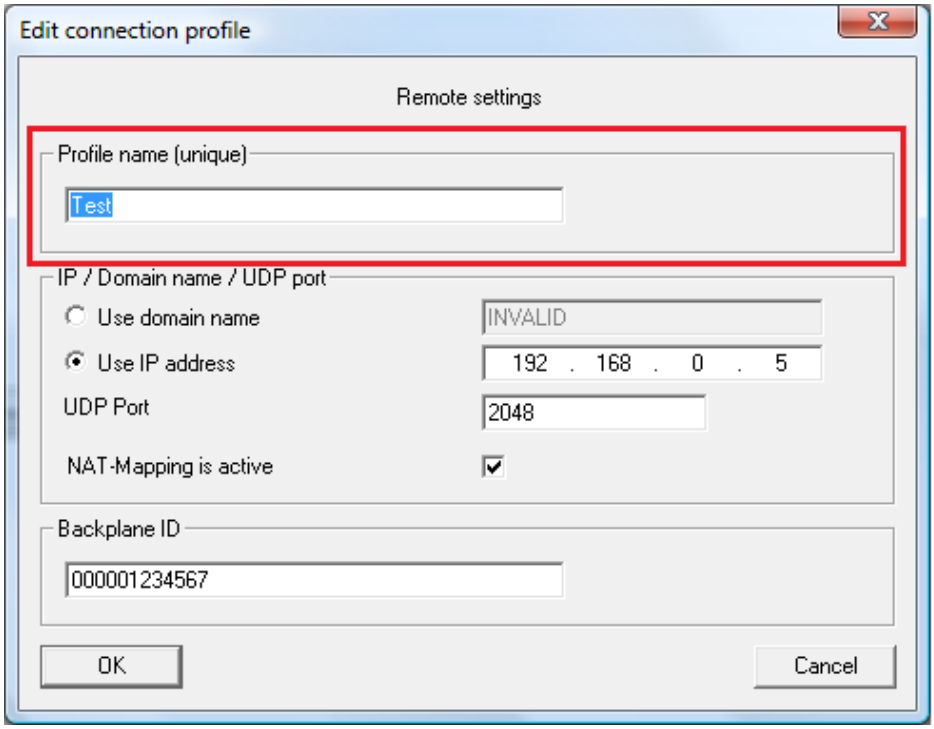


In the „Connection profiles“ you have to distinguish between a „Local Profile“ and a „Remote profile“.

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“:

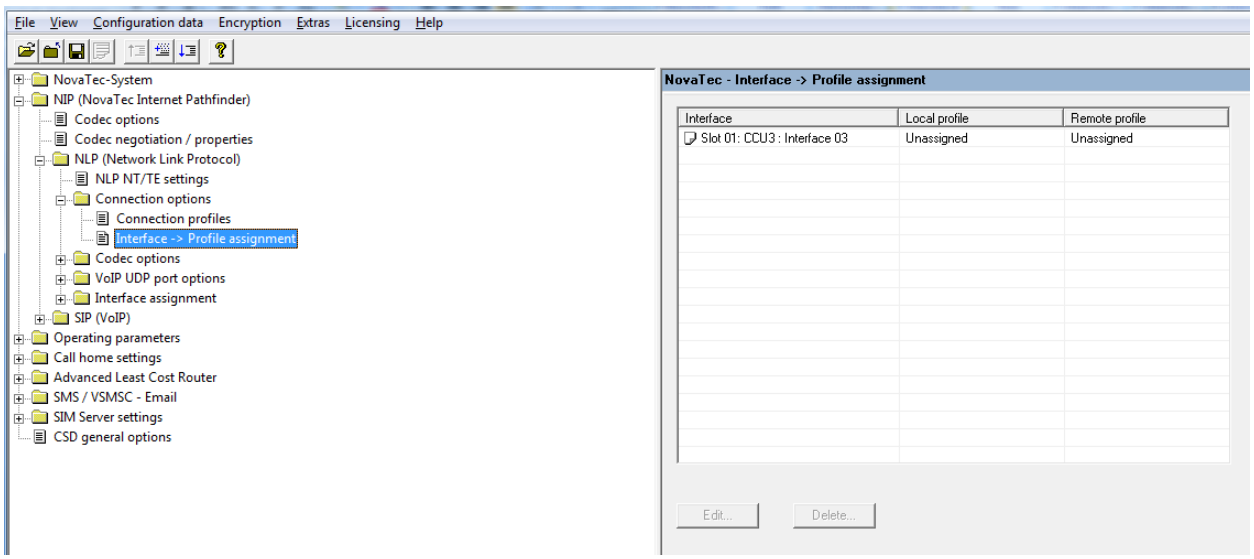
(See dialogue „Edit connection profile“ on next page)



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

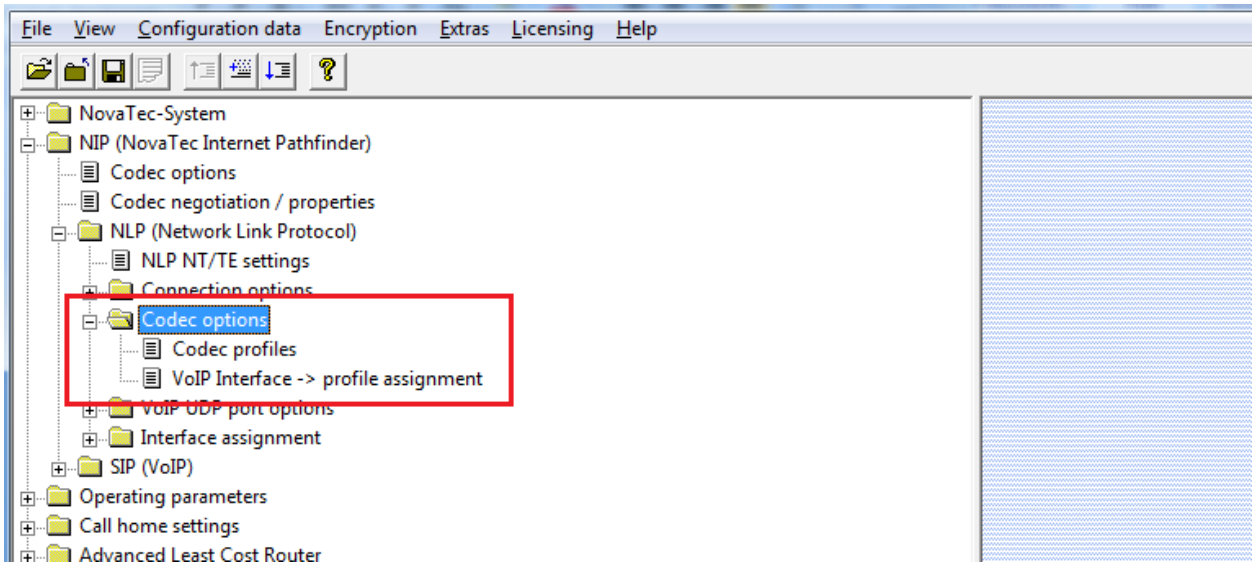
All other parameters of a „Remote Profile“ are reconfigurable.

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.

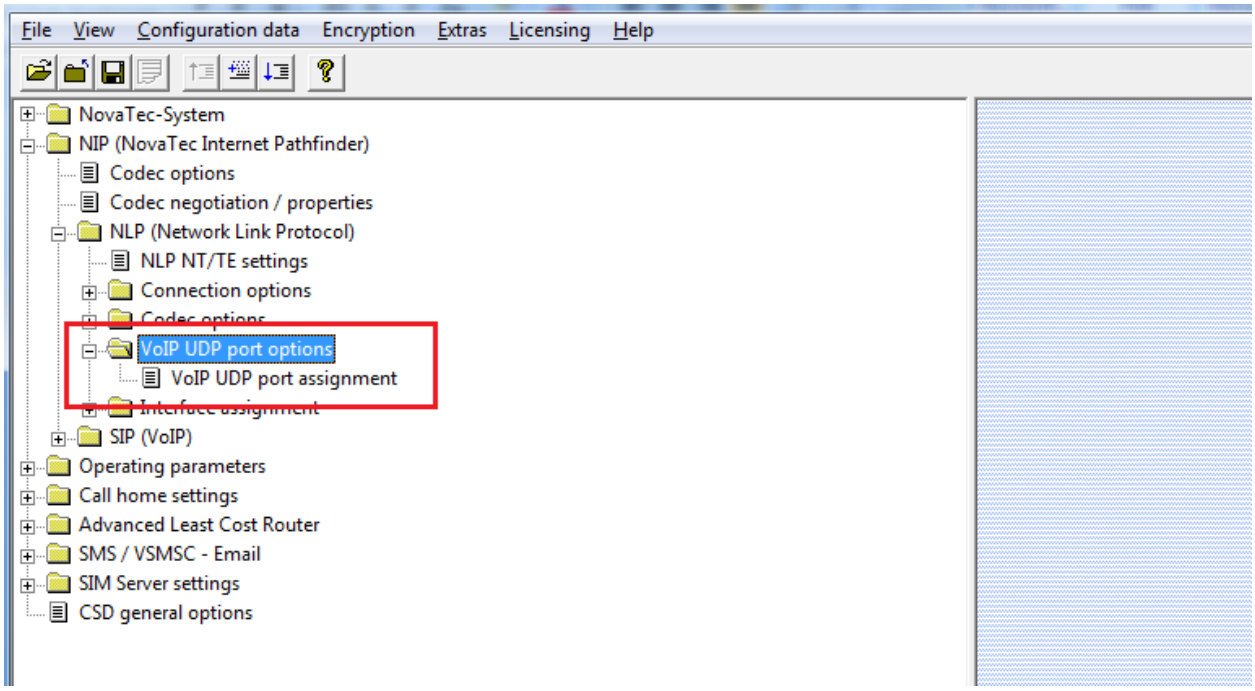
2.2.3.3 NIP (NovaTec Internet Pathfinder)/NLP (Network Link Protocol)/Codec options



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.

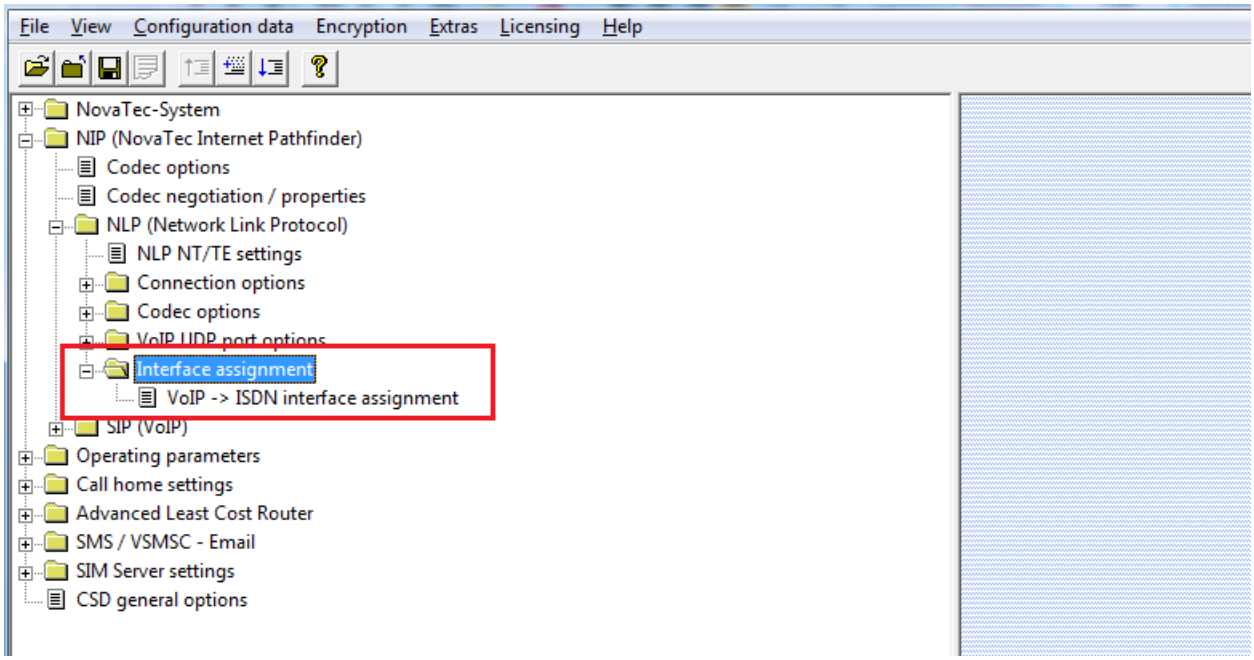
2.2.3.3.1 NIP (NovaTec Internet Pathfinder)/NLP (Network Link Protocol)/VoIP UDP port options



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.

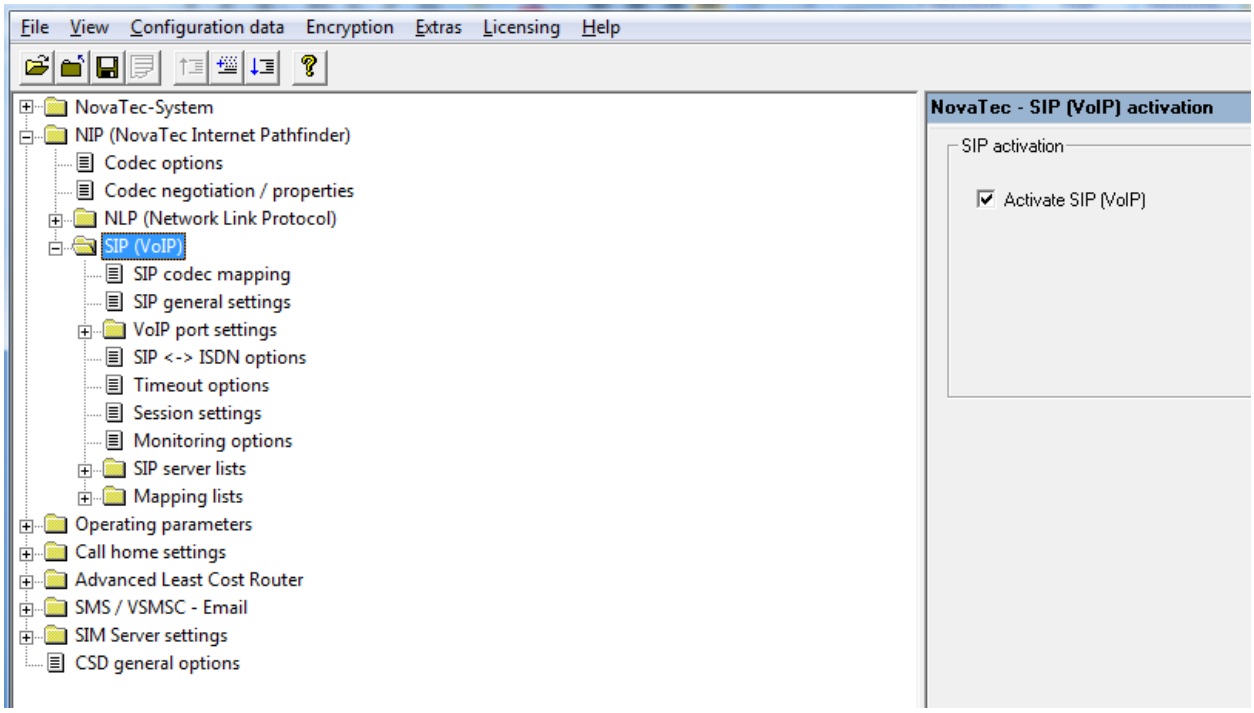
2.2.3.4 NIP (NovaTec Internet Pathfinder)/NLP (Network Link Protocol)/Interface assignment



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

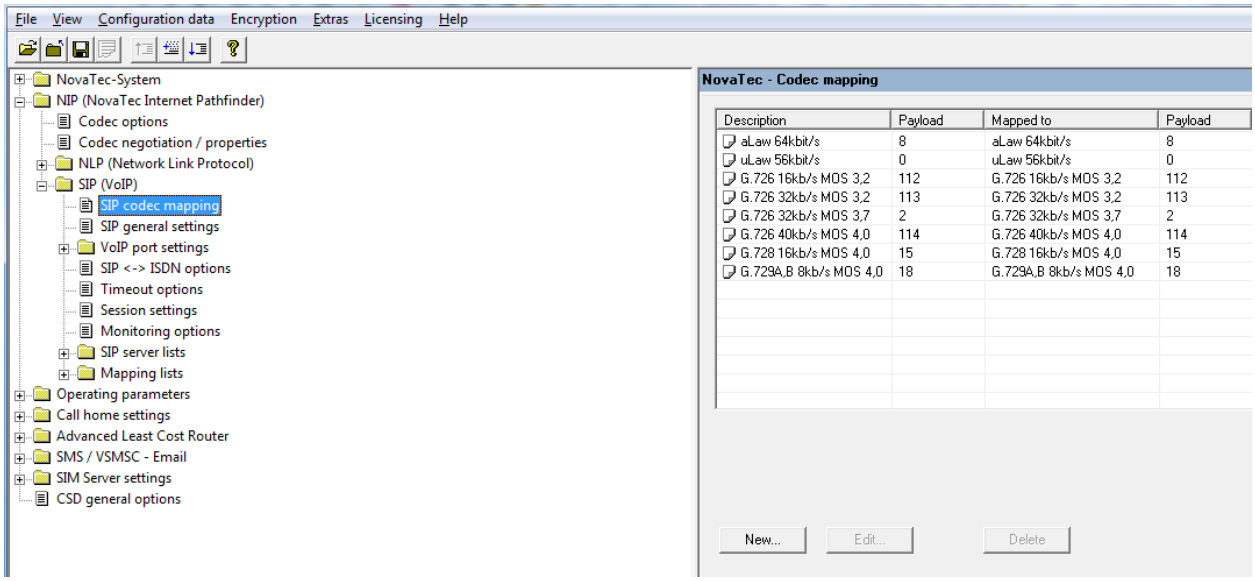
All changes to „Interface assignment“ and „VoIP -> ISDN interface assignment“ require a system reset to be adopted.

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



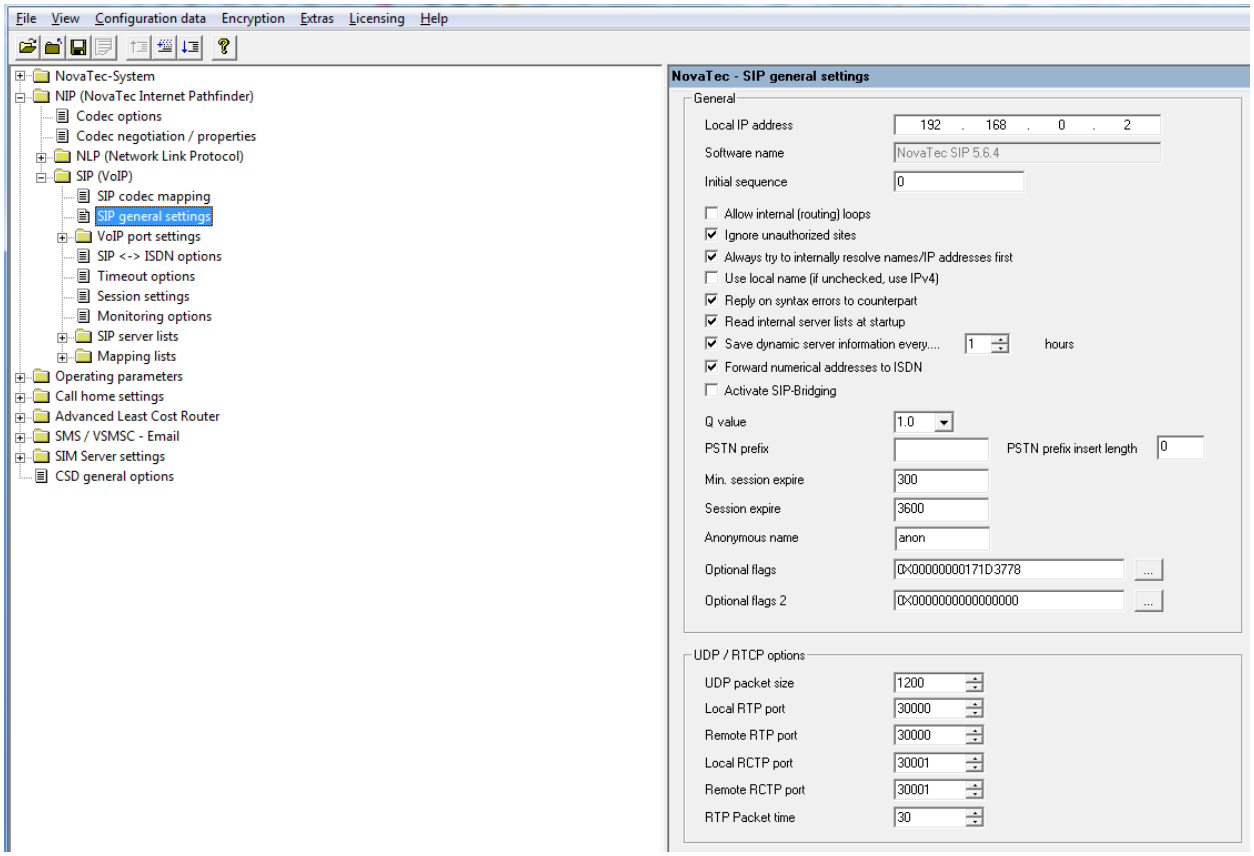
The settings on this page are not reconfigurable. Changes require a system reset.

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



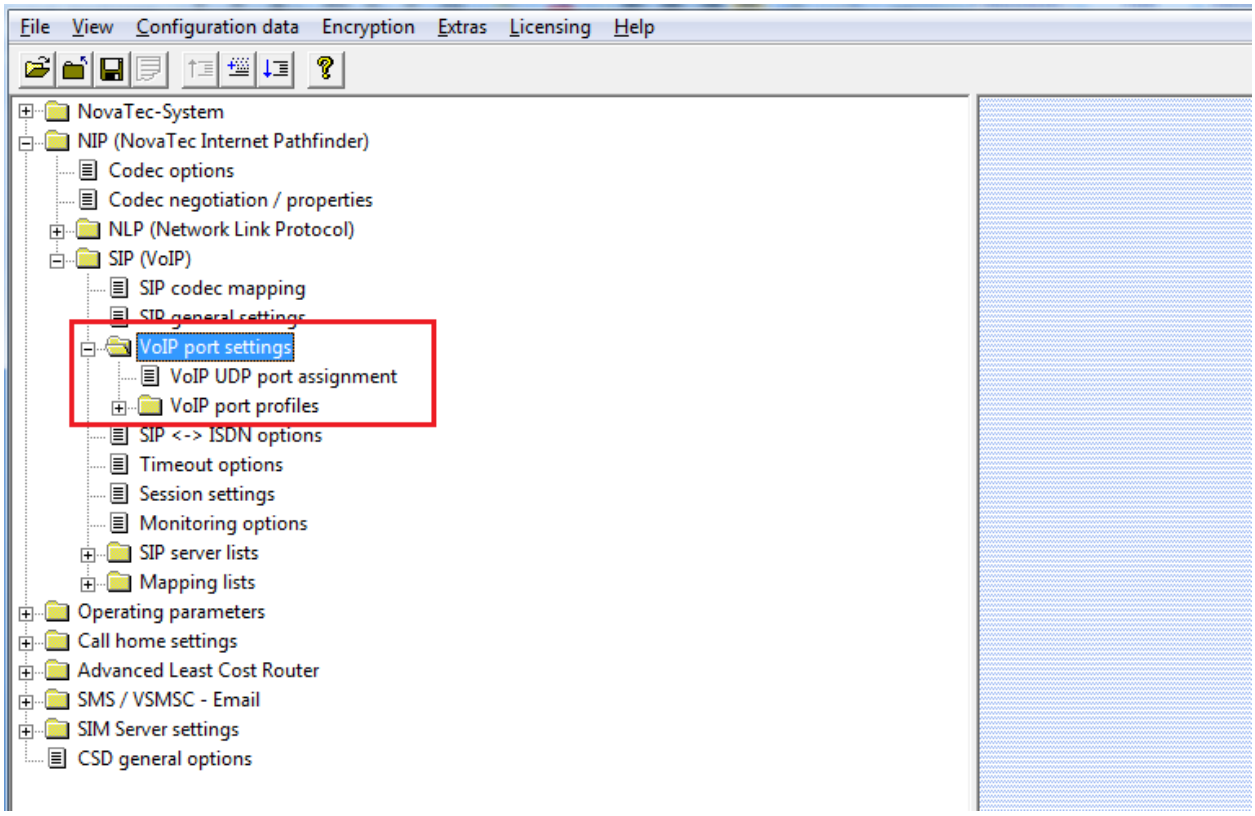
The settings on this page are not reconfigurable. Changes require a system reset.

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



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

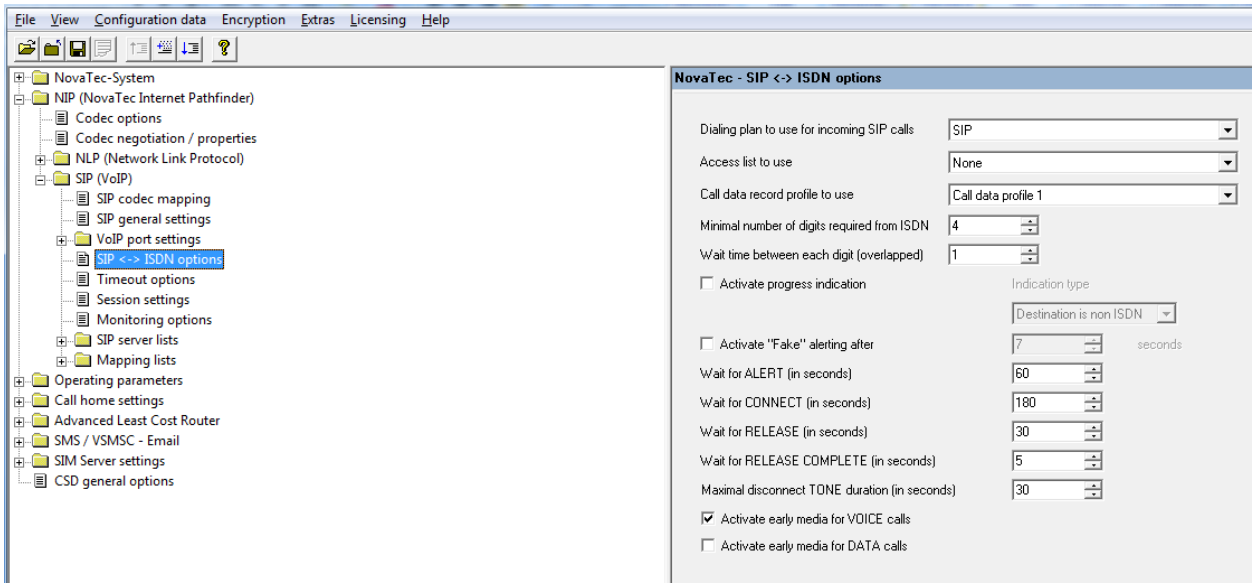
2.2.4.3 NIP (NovaTec Internet Pathfinder)/SIP (VoIP)/VoIP port settings



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

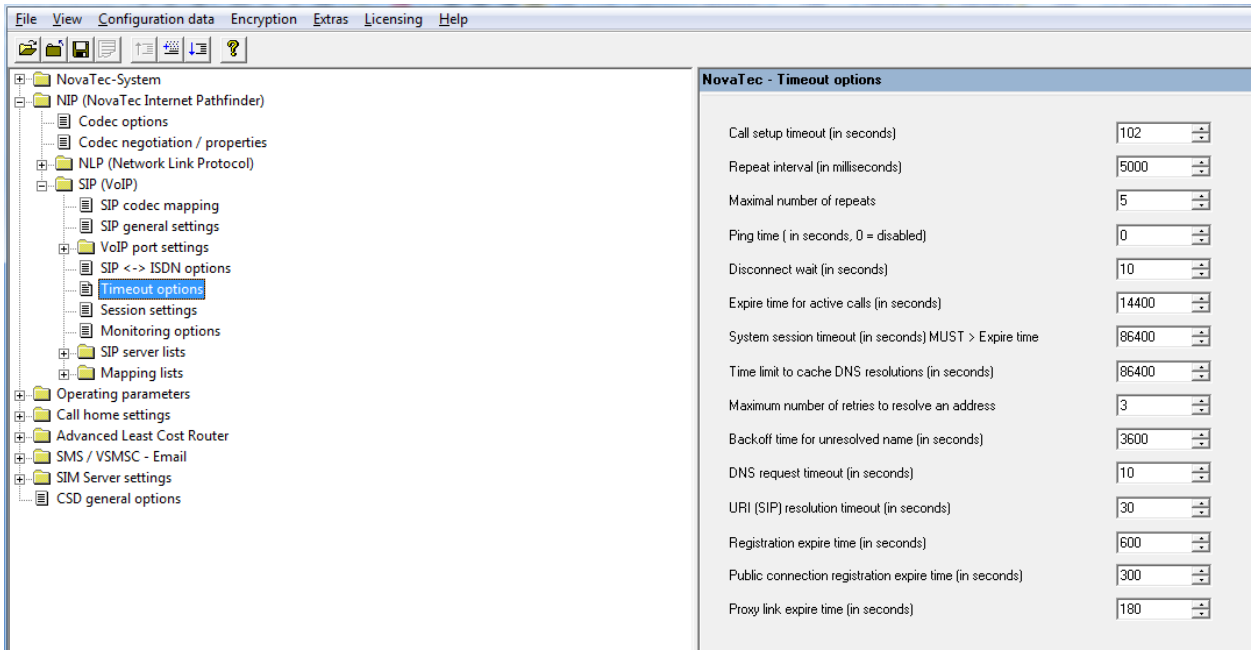
All changes of the pages „VoIP port settings“, „VoIP UDP port assignment“ and „VoIP port profiles“ require a system reset to be adopted.

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



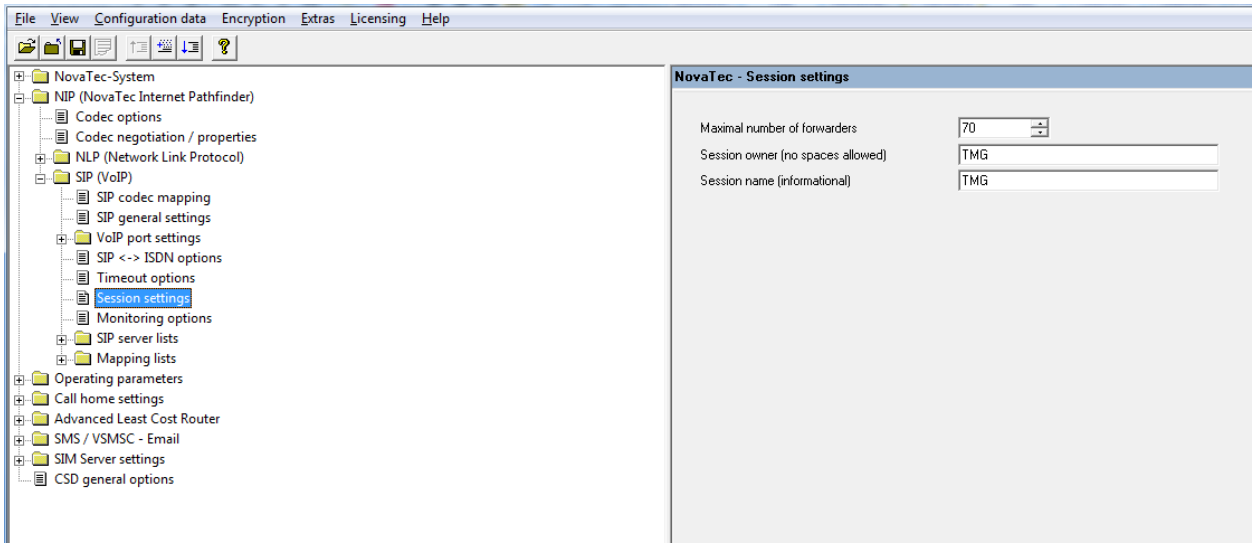
The settings on this page are reconfigurable and immediately operative.

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



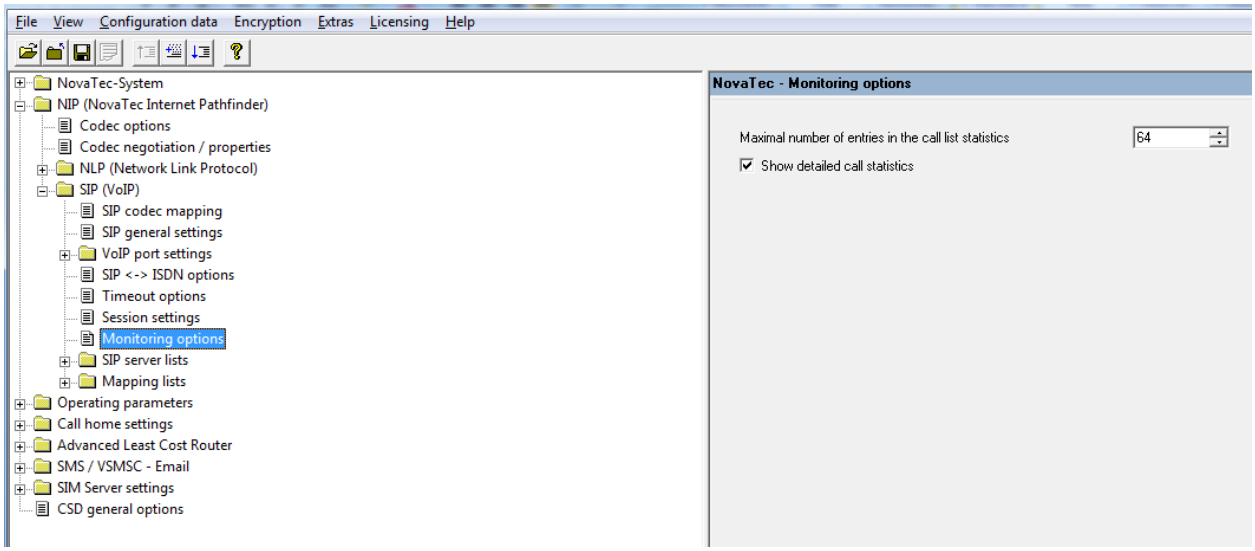
The settings on this page are not reconfigurable. Changes require a system reset.

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



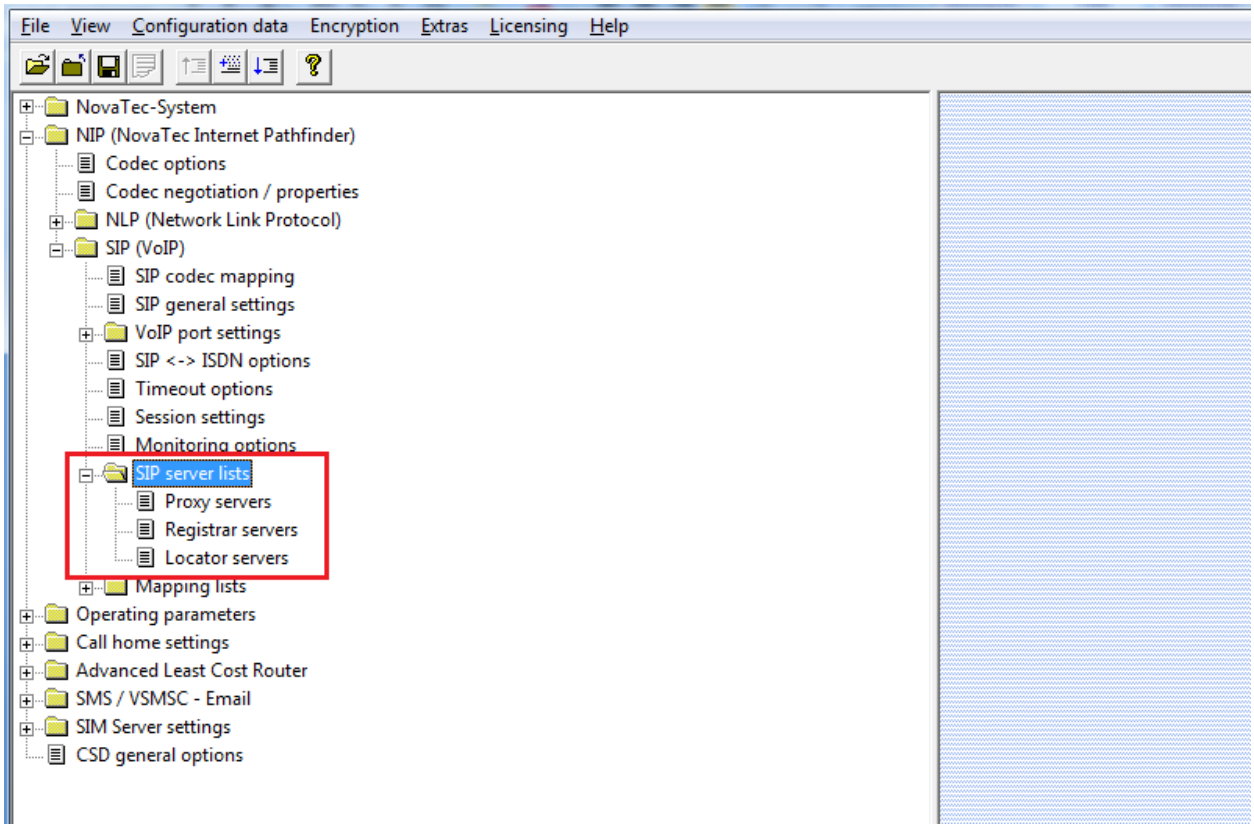
The settings on this page are not reconfigurable. Changes require a system reset.

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.

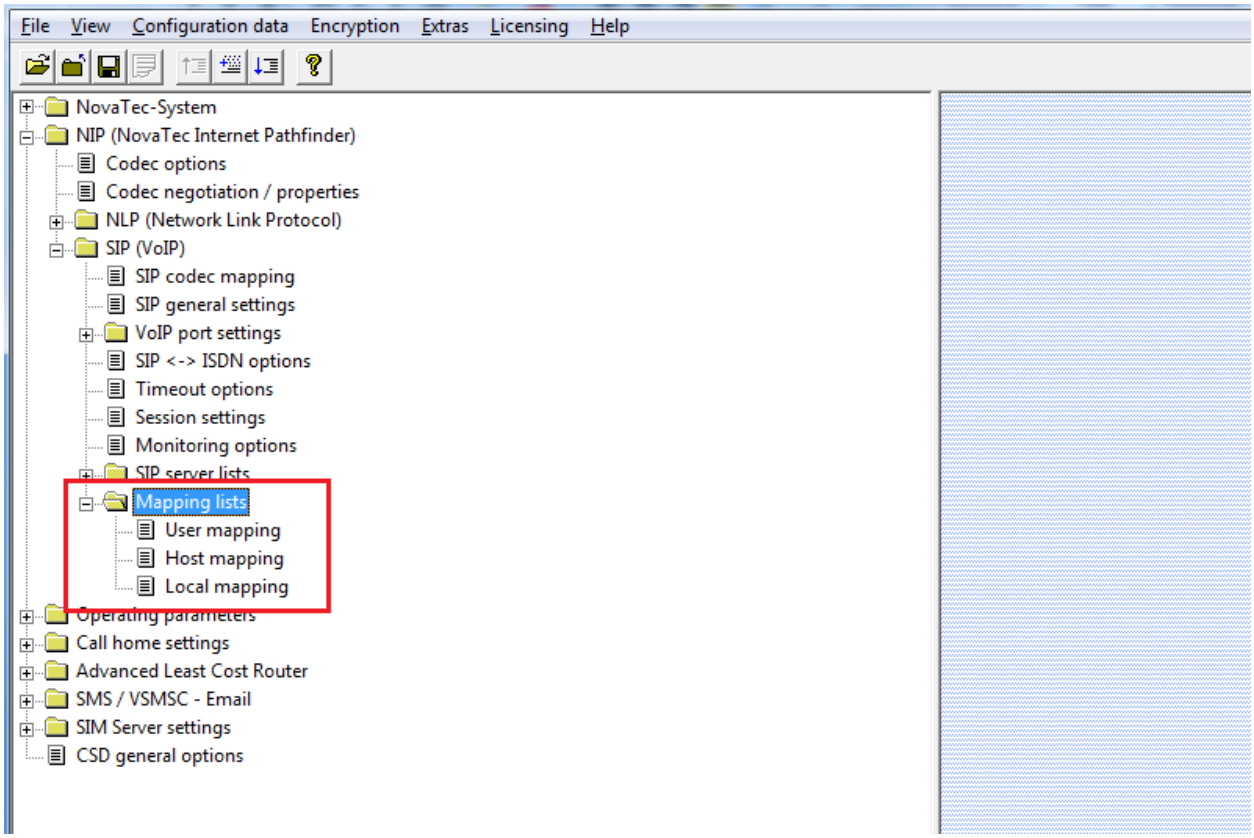
2.2.4.8 NIP (NovaTec Internet Pathfinder)/SIP (VoIP)/SIP server lists



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.

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



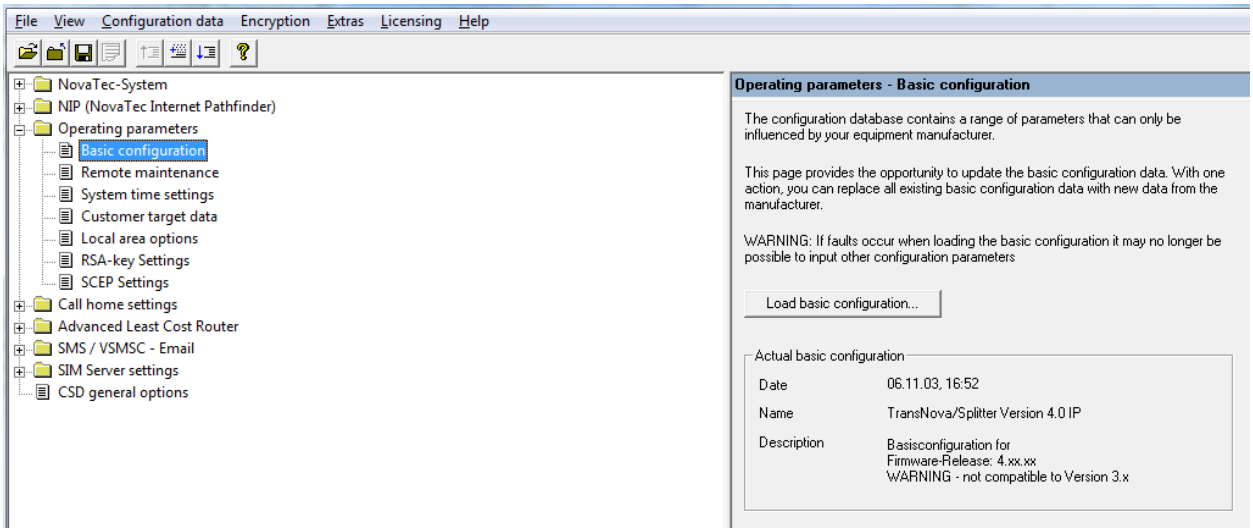
None of the settings and sub items of „Mapping lists“ are reconfigurable.

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.

2.3.1 Operating Parameters/Basic configuration

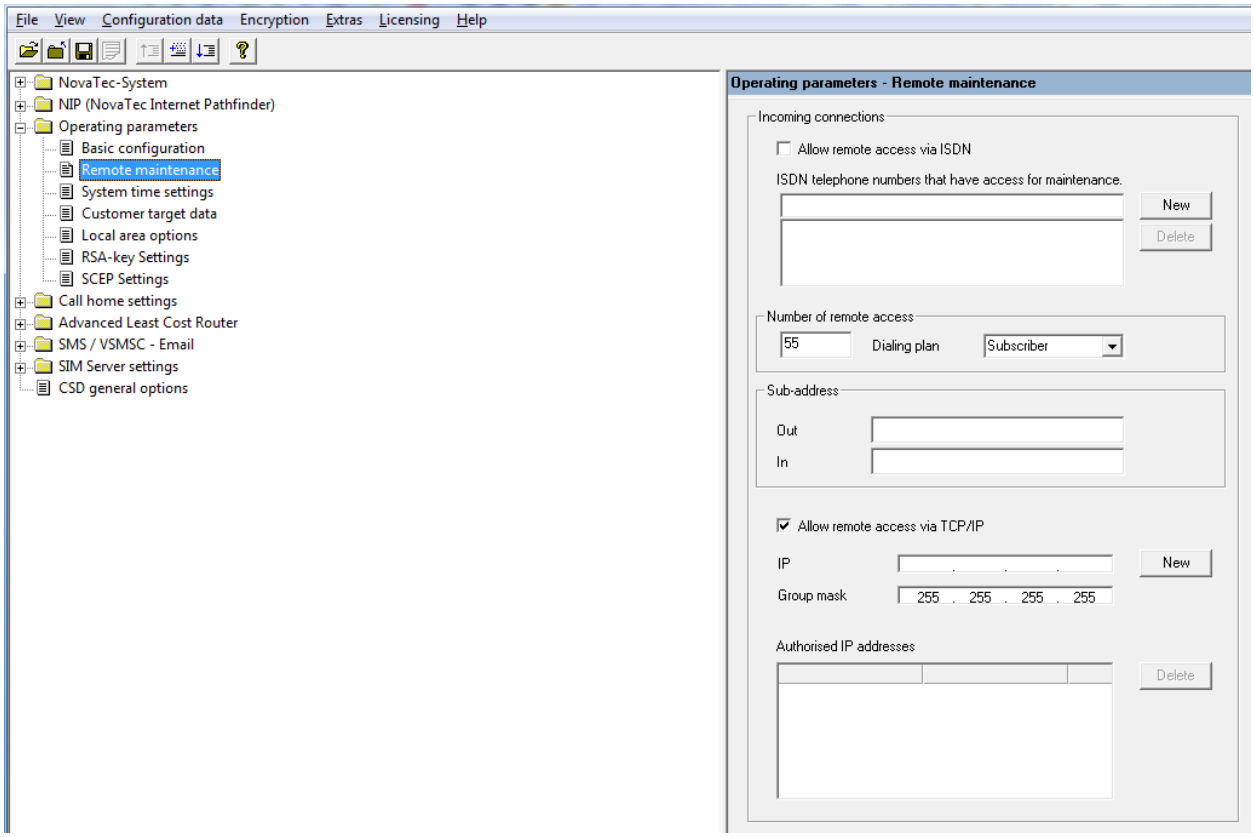


Whether the upload of a new base configuration requires a system reset depends on the content of the new base configuration.

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.

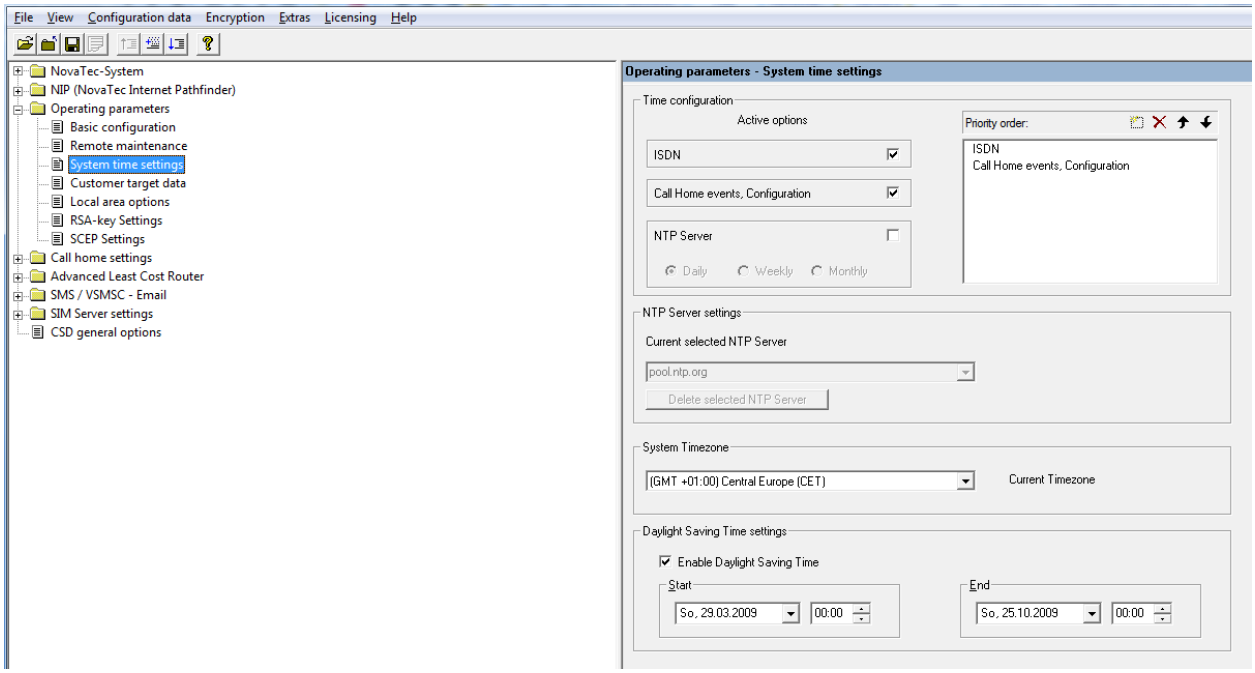
As to be seen in the screen shot above NovaTec has not released a new base configuration since 2003.

2.3.2 Operating Parameters/Remote maintenance



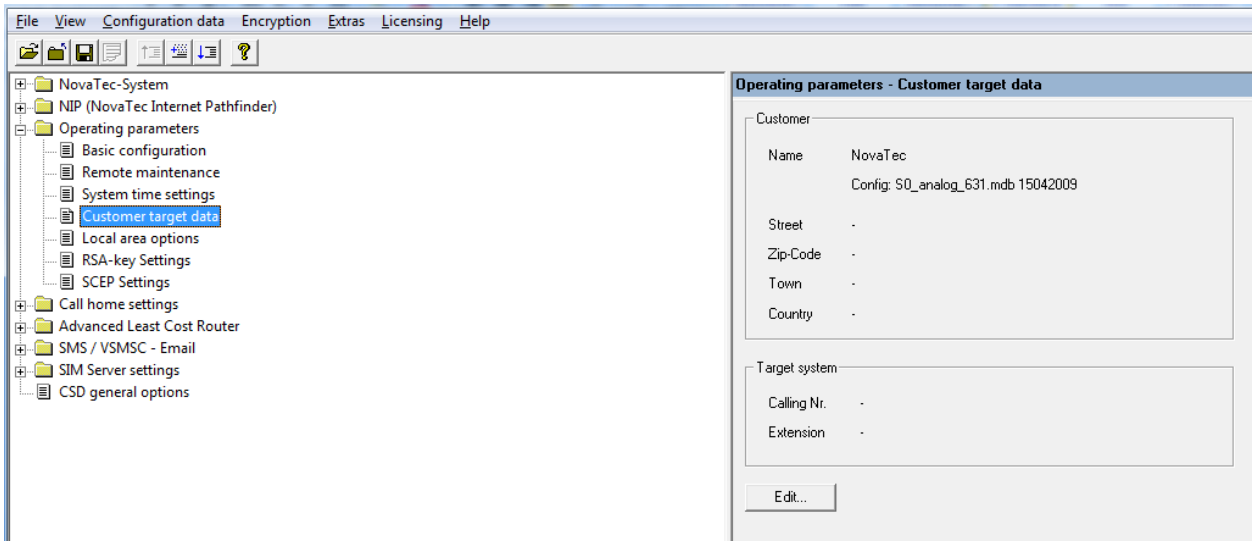
The settings on this page are reconfigurable and immediately operative.

2.3.3 Operating parameters/System time settings



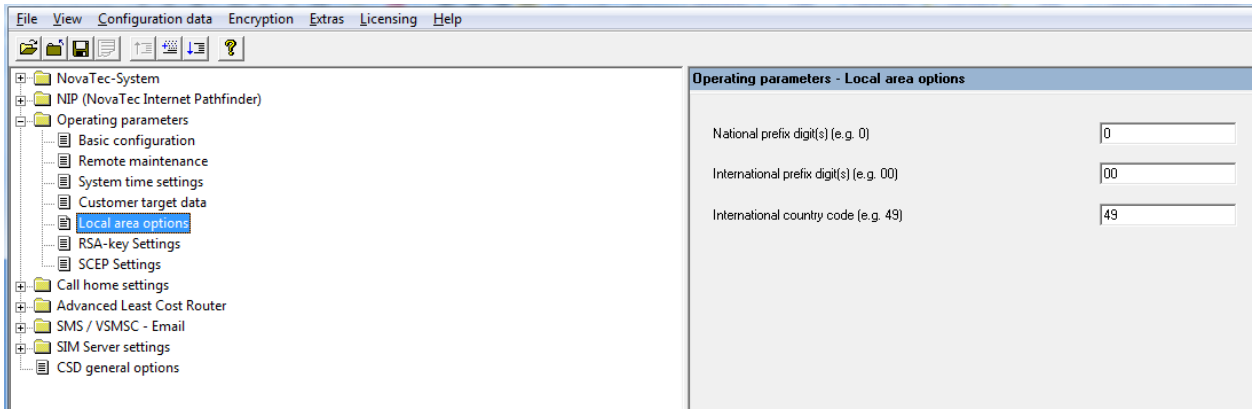
The settings on this page are reconfigurable and immediately operative.

2.3.4 Operating parameters/Customer target data



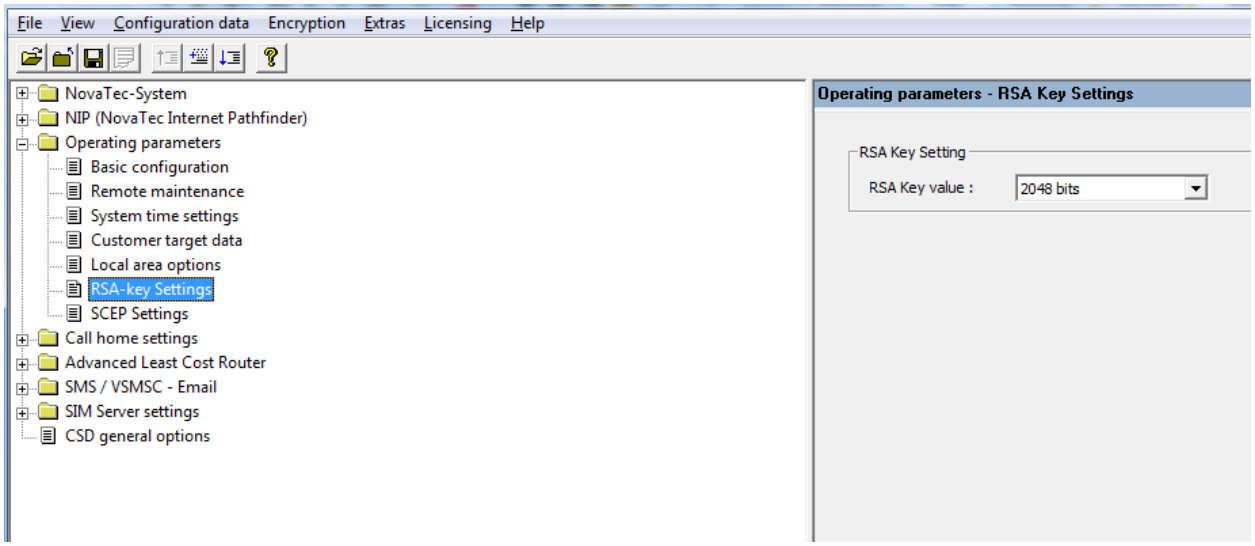
The settings on this page are reconfigurable and immediately operative.

2.3.5 Operating parameters/Local area options



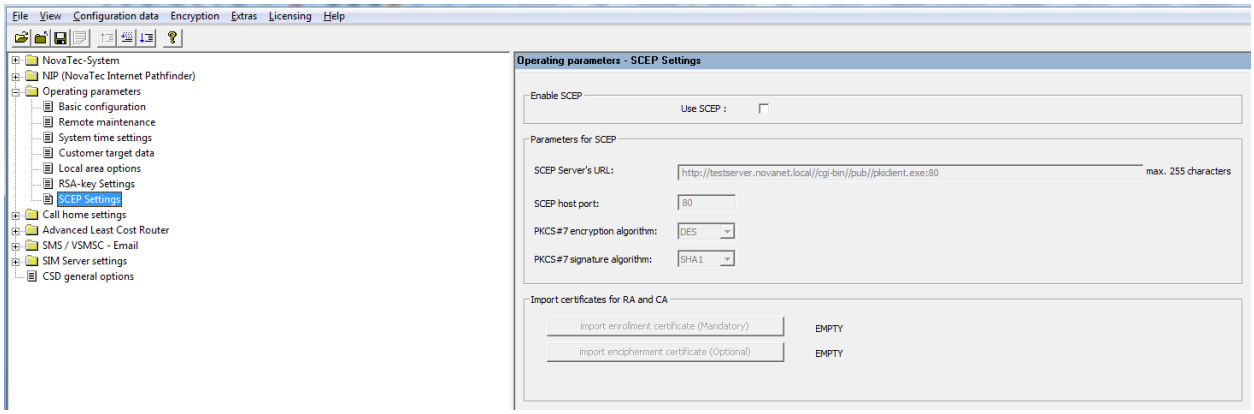
The settings on this page are not reconfigurable. Changes require a system reset.

2.3.6 Operating parameters/RSA-key Settings



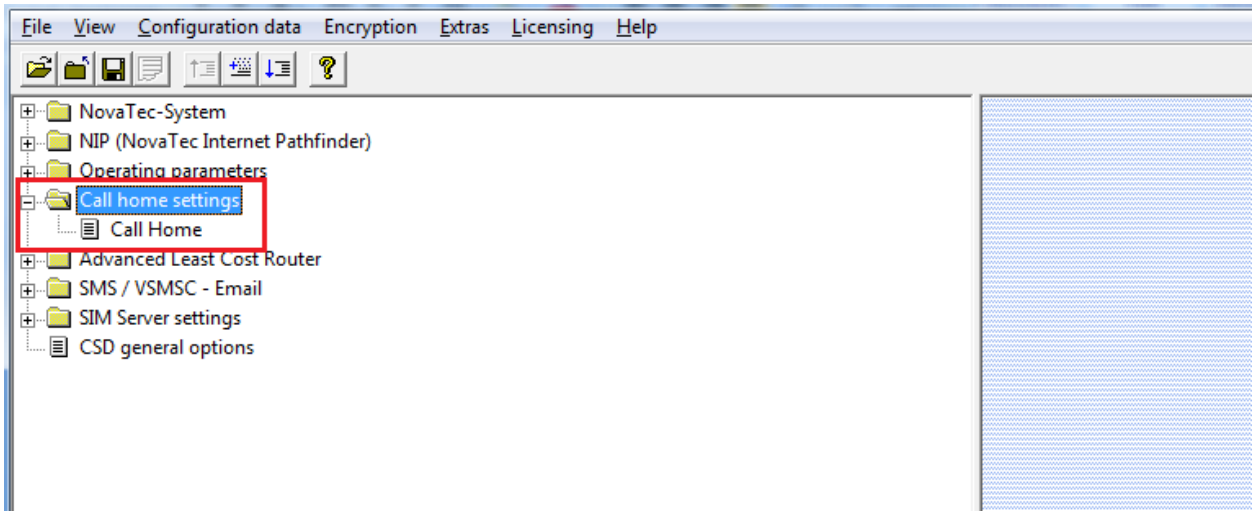
The settings on this page are not reconfigurable. Changes require a system reset.

2.3.7 Operating parameters/SCEP Settings



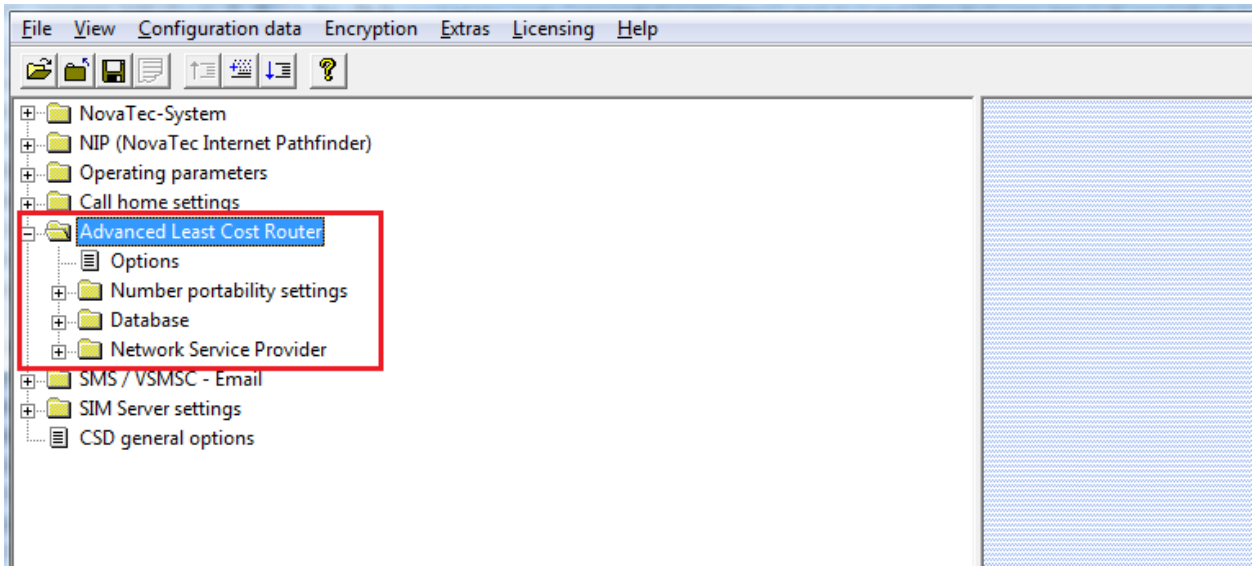
The settings on this page are not reconfigurable. Changes require a system reset.

2.4 Call home settings



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

2.5 Advanced Least Cost Router

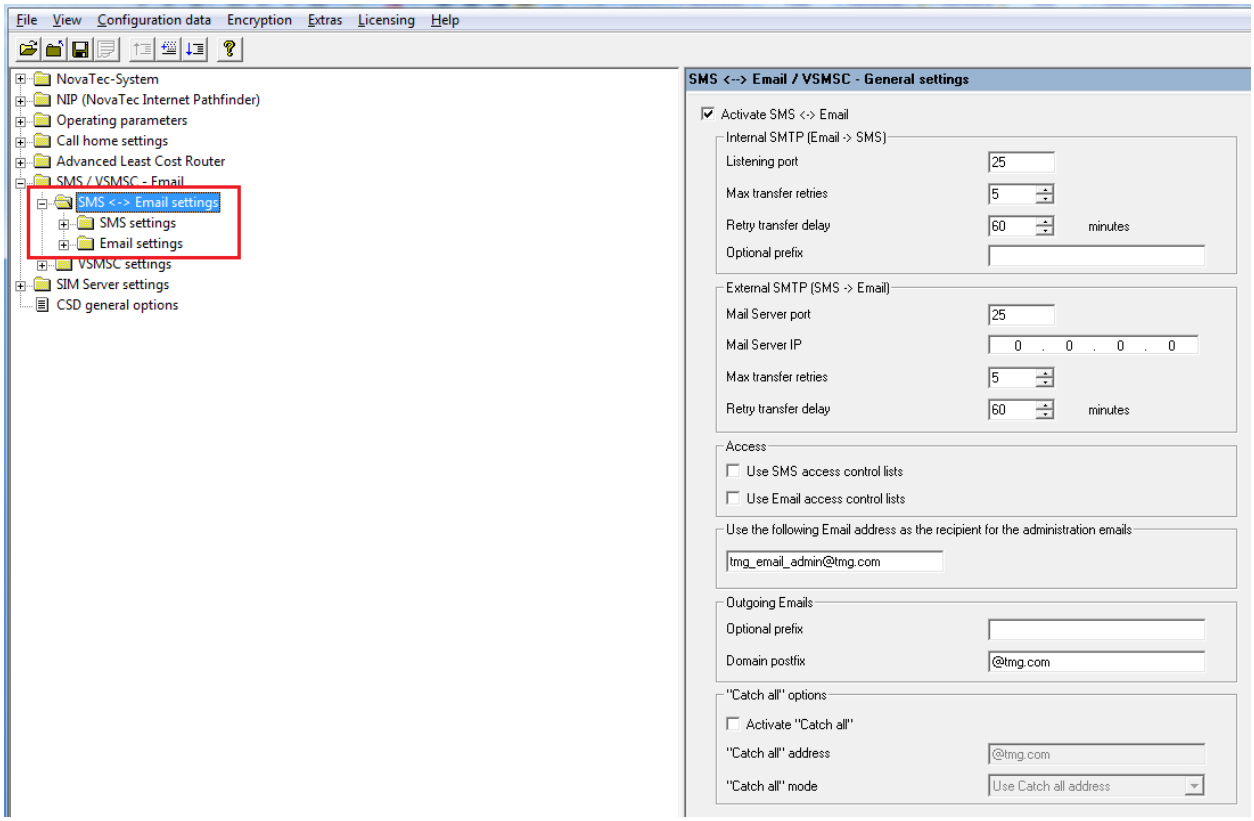


All settings and sub items of „Advanced Least Cost Router“ are reconfigurable and immediately operative.

2.6 SMS / VSMSC – Email

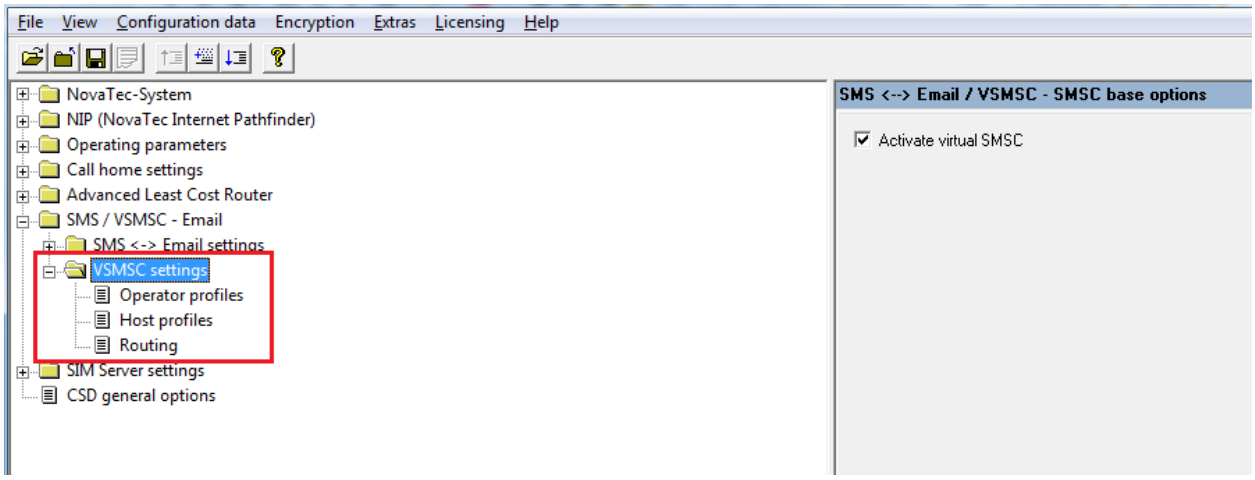
You cannot change anything on this page.

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



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

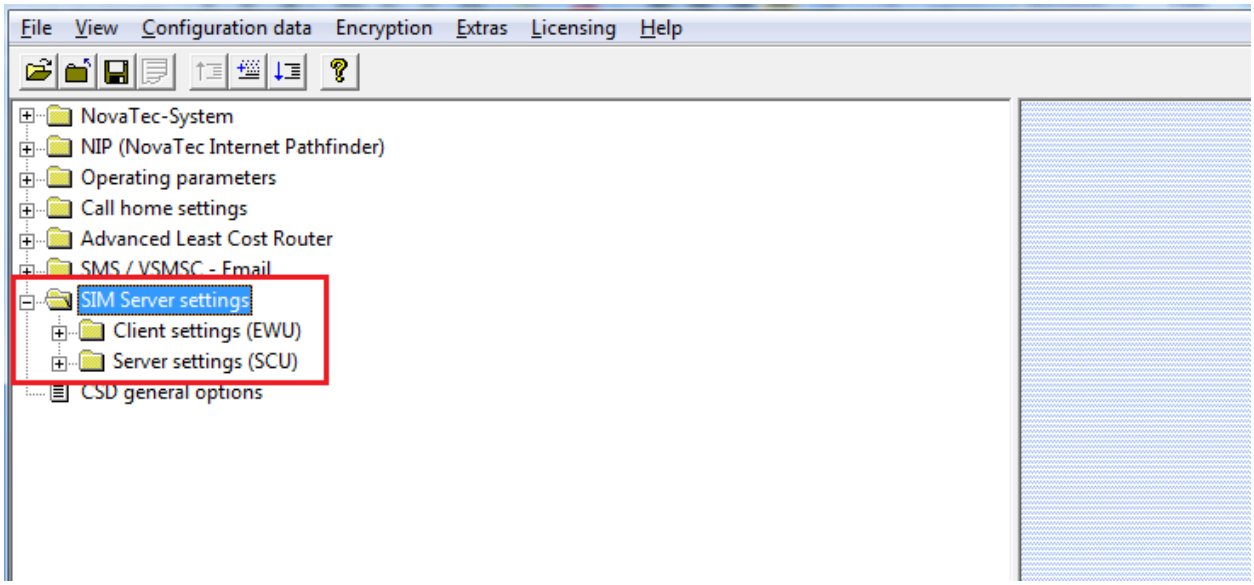
2.6.2 SMS / VSMSC – Email/VSMSC settings



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.

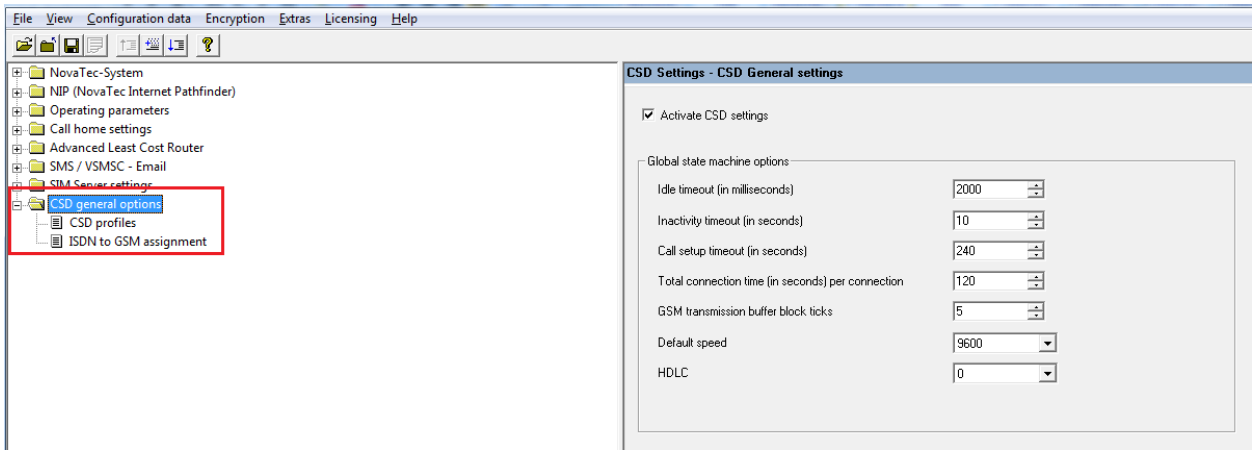
2.7 SIM Server settings



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.