



Avaya Solution & Interoperability Test Lab

Application Note for the Interoperation of NovaLink NovaMail with Avaya Communication Server Integral 55 LX - Issue 1.1

Abstract

These Application Notes describe the necessary configuration steps for the successful interoperation of the NovaLink NovaMail with the Avaya Communication Server Integral 55 LX (I55 LX).

NovaLink NovaMail is a proprietary voice mailbox solution.

An Avaya Communication Server Integral 55 LX with software version L03 GA was used as the hosting PBX for the NovaLink NovaMail system.

Information in these Application Notes has been obtained through *DeveloperConnection* compliance testing and additional technical discussions. Testing was conducted via the *DeveloperConnection* Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

This document specifies the tests to verify compatibility and interoperability between the NovaLink NovaMail with Avaya BCS (Branch Communication Server) and the Avaya Communication Server Integral 55 LX (I55 LX). The NovaMail server processes information, especially voice mails received from various sources, typically external (ISDN/PSTN) subscribers (customers) trying to call Avaya I55 LX extensions which are currently not reachable. The NovaMail server provides mail boxes for certain Avaya I55 LX extensions (agents), stores the received voice mails, sets a message waiting indication, and allows retrieval and processing of the mails. The NovaMail server is connected with the Avaya I55 LX via either a Basic Rate Interface (BRI, S0) or a Primary Rate Interface (PRI, S2M), depending on the amount of resources required. The signalling protocol used on these interfaces is DSS1. The BCS uses the CSTA interface provided by the Avaya I55 LX via the LAN connection.

The figure below shows the interconnection of the NovaLink NovaMail system with the Avaya I55 LX.

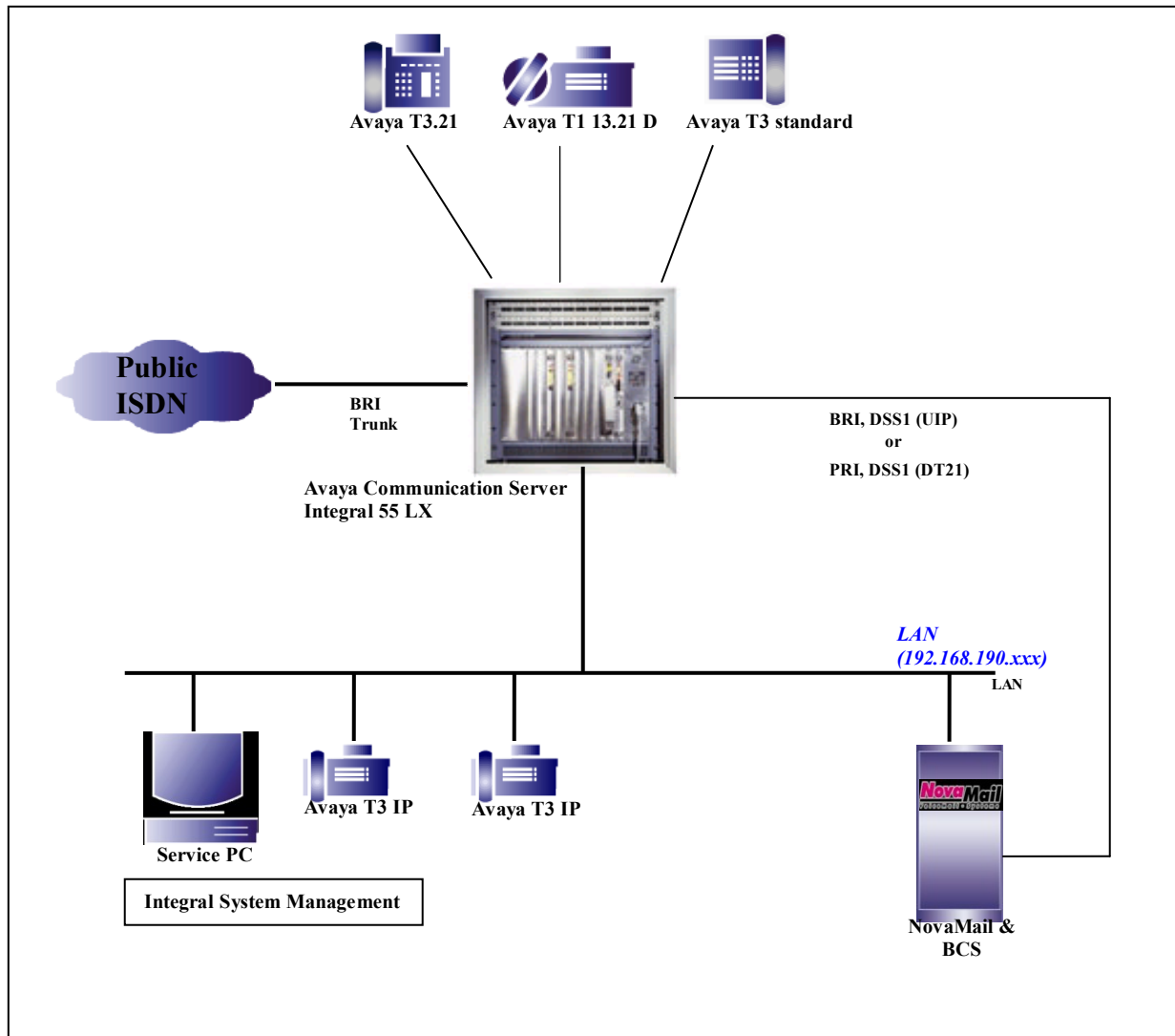


Figure 1: Avaya I55 LX with NovaLink NovaMail server

2. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment	Software
Avaya™ Communication Server Integral 55 LX	L030V00_1_5.1
Avaya™ DT21 circuit pack	Loading list: DT200100 SW-File: DT210016.ICP
Avaya™ UIP circuit pack	Loading list: UIP05100 1.SW-File:UIPOB051.ICP 2.SW-File:UIPOB151.ICP
Avaya™ ACB circuit pack	Platform version: V4.0.16
Avaya™ CF22 circuit pack	Loading list: MSC20201 1.SW-File:MSC2S001.ICP 2.SW-File:MSC202T3.ICP 3.SW-File:MSC202D3.ICP 4.SW-File:MSC20204.ICP
Avaya™ ASCEU circuit pack	Loading list:ASCEU000 1.SW-File:ASCCD002.ICP 2.SW-File:ASCEU023.ICP
Avaya™ Integral System Management (ISM)	V13.003
Avaya™ ComMan	V4401
Avaya™ ICU Editor	V13.004
Avaya™ T3 IP Comfort	Bootloader: B01.03 SW: T323_0DE.h3i
Avaya™ T3.21	Bootloader: V00.09 SW: T314_0DE.hx1
Avaya™ T3 analogue phone (standard)	-
Service PC Dell optiplex gx270	Microsoft Windows XP Professional SP2
Deutsche Telekom BRI ISDN trunk (point to point)	-
Numbering plan: 4 digits	-
NovaLink NovaMail Server	V.7.0 SP1
Gerdes Primux ISDN card 1xPRI / 4xBRI	V3.6.4389
Avaya™ BCS (Branch Communication Server)	V 3.0.6

3. Configuration of the Avaya I55 LX

The BRI on the Avaya I55 LX UIP circuit pack with a SOM sub-module must especially be configured as business call center agent (BCC-agent).

The configuration of the Avaya I55 LX is done via the Integral System Management (ISM) and its components which are running on a Service PC connected to the systems via the LAN. ISM is the basic service tool for administrating the Avaya I55 systems. It is an application running under Windows-2000 or Windows-XP operating system.

The following ISM components are used for the configuration:

ICU Editor - For administrating the various circuit packs of the system.

Transparent console **MML** - For administrating the entire Avaya I55 LX system.

The ISM is opened by default with username n1 and password p1.



Benutzer LOGIN

AVAYA

ISM
Integral System Management

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Benutzername

Paßwort

In order to access the Avaya I55 LX via the LAN, Customer Administration data must be entered:

Software version: IEE3

User name: xxxxxx (default username)

Password: xxxxxx (default password)

MML password: xxxxxxxxxx (default MML password)

IP Address of the system

Kundenverwaltung

Kunde:

PABX:

Rufnummer Intern

Rufnummer Extern

Zugang

☒ Intern ☐ Extern + AKZ

☐ Extern ☐ Extern + LDD

IP Adresse

ISDN Schnittstelle

Ethernet Schnittstelle

TUX

☒ Ethernet ☐ ISDN

☐ USB ☐ ISDN über Router

Benutzername:

Paßwort für die TK-Anlage:

Paßwortbestätigung

MML Passwort

Paßwortbestätigung

PPP Passwort

☒ Passwort der TK-Anlage benutzen

PPP Passwort

Paßwortbestätigung

3.1. Configuration of the BRI on the I55 UIP circuit pack

3.1.1. ICU-Editor

The BRI is to be configured with the ICU Editor. The ICU Editor is an integrated tool in ISM.

The ICU editor can be opened via the following way:

PABX-Administration - Board - SW Exchange Config Data - selection of the board number of the UIP circuit pack. Once the necessary changes are made: Save and Exit.

Important settings according to guidelines from NovaLink are shown below:

- General:

The Component Port 0/1 has to be set to SOM (for the point-to multipoint BRI),
Call Reference Length = 1.

The screenshot shows a Windows-style dialog box titled "Editing Configuration Data". It has four tabs: "General", "Port", "V24", and "Clockdata". The "General" tab is selected. Inside the dialog, there are six rows of configuration options, each with a dropdown menu and a label:

Configuration Option	Label
4/5 dB	Attenuation Table
length 1	Call Reference Length
SOM	Component Port 0/1
SOM	Component Port 2/3
TOM	Component Port 4/5
TOM	Component Port 6/7

At the bottom right of the dialog, there are four buttons: "Reject", "Save", "Cancel", and "Exit".

- Port:
 Port No: 0
 Connection Type: subscriber
 S0 Mode: BUS (point to multipoint connection)
 Layer 1 and Layer 2 Mode: Master
 Protocol: TN1R6 (proprietary DSS1-like protocol),
 Special Type: none.

Editing Configuration Data

Port

subscriber ' Connection Type TN1R6 Protocol Port No. 0
 BUS S0 Mode none ' Special Type
 Master ' Layer 1 Mode
 no ' Layer 1 Disc
 Master ' Layer 2 Mode
 no ' Layer 2 Disc
 after S1 ' Disturbance Ends

Next Port
 Reject
 Save

Nr.	Connection Type	S0 Mode	Layer 1 Mode	Layer 1 Disc	Layer 2
0	subscriber '	BUS	Master '	no '	Master '
1	console	PTP '	Master '	no '	Master '
2	subscriber '	PTP '	Master '	no '	Master '
3	subscriber '	PTP '	Master '	no '	Master '
4	subscriber '	PTP '	Master '	no '	Master '

Cancel
 Exit

3.1.2. Overview of the System Configuration by MML

The following configuration of the Avaya I55 LX has to be made in conjunction with the BRI:

- Assignment of a pseudo call number for a Default User (00000) to a pseudo hardware address (e.g., 01-01-00-00).
- Assignment of a pseudo call number for a Queue Device (e.g., 18001) to a pseudo hardware address (e.g., 01-01-00-02).
- Assignment of a call number to the BRI created with the ICU editor as described above (e.g., 3518).
- Assignment of two Multiple Subscriber Numbers (MSN1 and MSN2) on the same hardware address (e.g., 01-01-04-00).
- Activation of features and authorizations for the connecting circuits (AOs) listed above.
- Creation of a Feature Access Code (FAC) for the actual call number of the NovaMail server.

Assignment of the pseudo call number for the Default User

For the default user the AO type DITN, the protocol TN1R6, and the service TLP with correct dial group are assigned (MML task AOGD).

Note. The AO state WITHDRAWN is correct.

```
AOGD<2;
=====
27.03.07 13:49:32

Connecting circuit
-----
Call No.           : 00000
Slot / HWA        : 01-01-00-01
AO type           : DITN
=====

General ADS data
-----
Name               : default user
Accounting section : 00000
Protocols          :
                   Protocol | Version | faulty | busy 2 | error
                   -|-|-|-|-
                   TN1R6   | 0       | OFF    | OFF    | OFF

Overload priority  : 2
Public bar. unit gr. : 0
Colisee bar. unit gr. : 0
DISA-group        : 0
Dealergroup       : 0
CN alloc. HKZ line & tie :
Category          : -1
Waiting field maximum : 0
Reserved
Connection memory  : 0
Service memory     : 1
AO state           : WITHDRAWN
Service block      : sv-free
Call number block  : Off
=====

Service data
-----
+-----+-----+-----+-----+
|      | TLP  |      |      |      |
+-----+-----+-----+-----+
Status | RELEASED |      |      |      |
Dial group | 2 |      |      |      |
Traffic group | 1 |      |      |      |
Switchover group | 0 |      |      |      |
Code dial group | 0 |      |      |      |
LCR-group | 0 |      |      |      |
Dial retrieval | DEACTIVE |      |      |      |
Backward rel. | DEACTIVE |      |      |      |
+-----+-----+-----+-----+

B channel data
-----
Allocation code : -
Deliberation code : -
```

B chan. number	Bundle number	Direct	Acc.	Status
1	-	-	-	F

B chan. number	Bundle number	Direct	Acc.	Status
2	-	-	-	F

Number of seizable B channels: 2

Seizure direction	Status
G - outgoing	B - BUSY
K - incoming	D - DEFECT.
W - bothway	EB - EDSS1 BUSY
	ER - EDSS1 RESERVED
	F - FREE
	G - FAULTY
	R - RESERVED
	S - BARRED
	T - DEFECT./BARRED
	V - SEIZED/BARRED

Access right

M - with

O - without

=====

Assignment of the pseudo call number for the Queue Device

For each agent group a Queue Device (QDEV) is needed (see below). If no Call No. for the Queue Device is assigned the installation of the agent group will be denied by the Avaya I55 LX. Important is the hardware slot. A pseudo hardware slot must be used and the call number must have five digits. The AO type QDEV and the service TLP with correct dial group is required. For this AO no protocol is assigned (MML task AOGD).

Note: The fact the AO type QDEV implies 30 B channels, although BRI configuration is described in this section, should not lead to confusion.

AOGD<anzg:18001;

=====

27.03.07 13:51:17

Connecting circuit

Call No. : 18001
Slot / HWA : 01-01-00-02
AO type : QDEV
=====

General ADS data

Name : QDEV
Accounting section : 00000
Protocols :
Protocol | Version | faulty | busy 2 | error
-----+-----+-----+-----+-----
no protocol entered
Overload priority : 2
Public bar. unit gr. : 0
Colisee bar. unit gr. : 0
DISA-group : 0
Dealergroup : 0
CN alloc. HKZ line & tie :
Category : -1
Waiting field maximum : 0
Reserved :
Connection memory : 0
Service memory : 1
AO state : IN OPERATION
Service block : sv-free
Call number block : Off
=====

Service data

	TLP			
Status	RELEASED			
Dial group	2			
Traffic group	1			
Switchover group	0			
Code dial group	0			
LCR-group	0			
Dial retrieval	DEACTIVE			
Backward rel.	DEACTIVE			

=====

B channel data

Allocation code : -
Deliberation code : -

B chan. number	Bundle number	Direct	Acc.	Status		B chan. number	Bundle number	Direct	Acc.	Status
1	-	-	-	F		16	-	-	-	F
2	-	-	-	F		17	-	-	-	F
3	-	-	-	F		18	-	-	-	F
4	-	-	-	F		19	-	-	-	F
5	-	-	-	F		20	-	-	-	F
6	-	-	-	F		21	-	-	-	F
7	-	-	-	F		22	-	-	-	F
8	-	-	-	F		23	-	-	-	F
9	-	-	-	F		24	-	-	-	F
10	-	-	-	F		25	-	-	-	F
11	-	-	-	F		26	-	-	-	F
12	-	-	-	F		27	-	-	-	F
13	-	-	-	F		28	-	-	-	F
14	-	-	-	F		29	-	-	-	F
15	-	-	-	F		30	-	-	-	F

Number of seizable B channels: 30

Seizure direction

G - outgoing
K - incoming
W - bothway

Access right

M - with
O - without

Status

B - BUSY
D - DEFECT.
EB - EDSS1 BUSY
ER - EDSS1 RESERVED
F - FREE
G - FAULTY
R - RESERVED
S - BARRED
T - DEFECT./BARRED
V - SEIZED/BARRED

Assignment of the call number to the BRI

The call number corresponds to the hardware address of the actual existing BRI on the UIP circuit pack. The protocols TN1R6 version 0 and ETSI version 0 are required here. The services TLP, DAT, TLT and GEN with correct dial group have to be assigned (MML task AOGD).

```
AOGD<anzg:3518;
=====
                                           27.03.07 13:29:50
Connecting circuit
-----
Call No.           : 3518
Slot / HWA         : 01-01-04-00
AO type            : DITN
=====

General ADS data
-----
Name                : HWR RNR.
Accounting section  : 00000
Protocols           :
                    Protocol | Version | faulty | busy 2 | error
                    +-----+-----+-----+-----+-----
                    TN1R6   | 0       | OFF    | OFF    | OFF
                    ETSI    | 0       | OFF    | OFF    | OFF

Overload priority   : 2
Public bar. unit gr. : 1
Colisee bar. unit gr. : 0
DISA-group          : 0
Dealergroup         : 0
CN alloc. HKZ line & tie :
Category            : 0
Waiting field maximum : 10
Reserved
Connection memory   : 0
Service memory      : 4
AO state            : IN OPERATION
Service block       : sv-free
Call number block    : Off
=====

Service data
-----
|          TLP          |          DAT          |          TLT          |          GEN          |
+-----+-----+-----+-----+
Status      | RELEASED | RELEASED | RELEASED | RELEASED |
Dial group  | 2        | 2        | 2        | 2        |
Traffic group | 1        | 1        | 1        | 1        |
Switchover group | 0        | 0        | 0        | 0        |
Code dial group | 0        | 0        | 0        | 0        |
LCR-group   | 0        | 0        | 0        | 0        |
Dial retrieval | DEACTIVE | DEACTIVE | DEACTIVE | DEACTIVE |
Backward rel. | DEACTIVE | DEACTIVE | DEACTIVE | DEACTIVE |
=====

B channel data
-----
Allocation code      : -
```

Deliberation code : -

B chan. number	Bundle number	Direct	Acc.	Status
1	-	-	-	F

B chan. number	Bundle number	Direct	Acc.	Status
2	-	-	-	F

Number of seizable B channels: 2

Seizure direction

G - outgoing
K - incoming
W - bothway

Access right

M - with
O - without

Status

B - BUSY
D - DEFECT.
EB - EDSS1 BUSY
ER - EDSS1 RESERVED
F - FREE
G - FAULTY
R - RESERVED
S - BARRED
T - DEFECT./BARRED
V - SEIZED/BARRED

Assignment of two Multiple Subscriber Numbers (MSN1 and MSN2)

Multiple subscriber Number one (MSN1): Programmed on the same hardware address as the actual existing BRI. Required AO type is DITN and the protocols are TN1R6 version 0 and ETSI version 0. As Service data only the service TLP with correct dial group is assigned (MML task AOGD).

AOGD<anzg:3600;

27.03.07 15:15:01

Connecting circuit

Call No. : 3600
Slot / HWA : 01-01-04-00
AO type : DITN

General ADS data

Name : MSN1
Accounting section : 00000
Protocols :

Protocol	Version	faulty	busy 2	error
TN1R6	0	OFF	OFF	OFF
ETSI	0	OFF	OFF	OFF

Overload priority : 2
Public bar. unit gr. : 0
Colisee bar. unit gr. : 0
DISA-group : 0
Dealergroup : 0
CN alloc. HKZ line & tie :
Category : -1
Waiting field maximum : 0
Reserved :
Connection memory : 0
Service memory : 1
AO state : IN OPERATION
Service block : sv-free
Call number block : Off

Service data

	TLP			
Status	RELEASED			
Dial group	2			
Traffic group	1			
Switchover group	0			
Code dial group	0			
LCR-group	0			
Dial retrieval	DEACTIVE			
Backward rel.	DEACTIVE			

B channel data

Allocation code : -

Deliberation code : -

B chan. number	Bundle number	Direct	Acc.	Status
1	-	-	-	F

B chan. number	Bundle number	Direct	Acc.	Status
2	-	-	-	F

Number of seizable B channels: 2

Seizure direction

G - outgoing
K - incoming
W - bothway

Status

B - BUSY
D - DEFECT.
EB - EDSS1 BUSY
ER - EDSS1 RESERVED
F - FREE
G - FAULTY
R - RESERVED
S - BARRED
T - DEFECT./BARRED
V - SEIZED/BARRED

Access right

M - with
O - without

Multiple Subscriber Number two (MSN2): Programmed on the same hardware address as the actual existing BRI. Required AO type is DITN and the protocols are TN1R6 version 0 and ETSI version 0. As Service data only the service TLP with correct dial group is assigned (MML task AOGD).

AOGD<anzg:3601;

27.03.07 15:17:12

Connecting circuit

Call No. : 3601
Slot / HWA : 01-01-04-00
AO type : DITN

General ADS data

Name : MSN2
Accounting section : 00000
Protocols :

Protocol	Version	faulty	busy 2	error
TN1R6	0	OFF	OFF	OFF
ETSI	0	OFF	OFF	OFF

Overload priority : 2
Public bar. unit gr. : 0
Colisee bar. unit gr. : 0
DISA-group : 0
Dealergroup : 0
CN alloc. HKZ line & tie :
Category : -1
Waiting field maximum : 0
Reserved
Connection memory : 0
Service memory : 1
AO state : IN OPERATION
Service block : sv-free
Call number block : Off

Service data

	TLP			
Status	RELEASED			
Dial group	2			
Traffic group	1			
Switchover group	0			
Code dial group	0			
LCR-group	0			
Dial retrieval	DEACTIVE			
Backward rel.	DEACTIVE			

B channel data

Allocation code : -

Deliberation code : -

B chan. number	Bundle number	Direct	Acc.	Status
1	-	-	-	F

B chan. number	Bundle number	Direct	Acc.	Status
2	-	-	-	F

Number of seizable B channels: 2

Seizure direction

G - outgoing
K - incoming
W - bothway

Access right

M - with
O - without

Status

B - BUSY
D - DEFECT.
EB - EDSS1 BUSY
ER - EDSS1 RESERVED
F - FREE
G - FAULTY
R - RESERVED
S - BARRED
T - DEFECT./BARRED
V - SEIZED/BARRED

Overview of the agents created by IDM

An agent can only be created by means of the ISM IDM as described in section 3.1.3. This overview by MML (task AOGD) is only visible once an agent has been established.

Overview of agent one:

```
AOGD<anzg:3604;
=====
27.03.07 15:20:45

Connecting circuit
=====
Call No.           : 3604  User Call No.
Slot / HWA         : 01-01-04-00
AO type            : DITN
=====

General ADS data
=====
Name                : Agent 1 3604
Accounting section  : 00000
Protocols           :
                    :
                    : Protocol | Version | faulty | busy 2 | error
                    : +-----+-----+-----+-----+-----+
                    : TN1R6  | 0       | OFF    | OFF    | OFF
                    : ETSI   | 0       | OFF    | OFF    | OFF
Overload priority   : 2
Public bar. unit gr. : 0
Colisee bar. unit gr. : 12
DISA-group          : 0
Dealergroup         : 0
CN alloc. HKZ line & tie :
Category            : -1
Waiting field maximum : 10
Reserved
Connection memory   : 0
Service memory      : 1
AO state            : IN OPERATION
Service block       : sv-free
Call number block    : Off
=====

Service data
=====
|          | TLP |          |          |          |          |
|-----|-----|-----|-----|-----|-----|
Status    | RELEASED |          |          |          |          |
Dial group | 2      |          |          |          |          |
Traffic group | 1      |          |          |          |          |
Switchover group | 0      |          |          |          |          |
Code dial group | 0      |          |          |          |          |
LCR-group   | 0      |          |          |          |          |
Dial retrieval | DEACTIVE |          |          |          |          |
Backward rel. | DEACTIVE |          |          |          |          |
=====

B channel data
=====
Allocation code      : -
```

Deliberation code : -

B chan. number	Bundle number	Direct	Acc.	Status
1	-	-	-	F

B chan. number	Bundle number	Direct	Acc.	Status
2	-	-	-	F

Number of seizable B channels: 2

Seizure direction

G - outgoing
K - incoming
W - bothway

Access right

M - with
O - without

Status

B - BUSY
D - DEFECT.
EB - EDSS1 BUSY
ER - EDSS1 RESERVED
F - FREE
G - FAULTY
R - RESERVED
S - BARRED
T - DEFECT./BARRED
V - SEIZED/BARRED

Overview of agent two:

AOGD<anzg:3605;

27.03.07 15:25:03

Connecting circuit

Call No. : 3605 User assigned
Slot / HWA : 01-01-04-00
AO type : DITN

General ADS data

Name : Agent 2 3605
Accounting section : 00000
Protocols :

Protocol	Version	faulty	busy 2	error
TN1R6	0	OFF	OFF	OFF
ETSI	0	OFF	OFF	OFF

Overload priority : 2
Public bar. unit gr. : 0
Colisee bar. unit gr. : 12
DISA-group : 0
Dealergroup : 0
CN alloc. HKZ line & tie :
Category : -1
Waiting field maximum : 10
Reserved :
Connection memory : 0
Service memory : 1
AO state : IN OPERATION
Service block : sv-free
Call number block : Off

Service data

	TLP			
Status	RELEASED			
Dial group	2			
Traffic group	1			
Switchover group	0			
Code dial group	0			
LCR-group	0			
Dial retrieval	DEACTIVE			
Backward rel.	DEACTIVE			

B channel data

Allocation code : -

Deliberation code : -

B chan. number	Bundle number	Direct	Acc.	Status
1	-	-	-	F

B chan. number	Bundle number	Direct	Acc.	Status
2	-	-	-	F

Number of seizable B channels: 2

Seizure direction

G - outgoing
K - incoming
W - bothway

Access right

M - with
O - without

Status

B - BUSY
D - DEFECT.
EB - EDSS1 BUSY
ER - EDSS1 RESERVED
F - FREE
G - FAULTY
R - RESERVED
S - BARRED
T - DEFECT./BARRED
V - SEIZED/BARRED

Activation of features and authorizations for the connecting circuits (AOs)

The configured subscribers need different sets of enabled features. The features must be enabled in all configured services. Before the AO-performed features (AOLM) can be enabled, the corresponding system features (ANLM) have to be set. In the system features (ANLM), the feature CRC has to be disabled.

AO-Number AO - Perform. features (Service: TLP,DAT,TLT,GEN)

3518	AMT	RULTS	RULBB	ARSTS	GAZTS	WWH	ARR	AUF	CICL1	ANK
	CIPLO	CWA	EMU	API	RWLTS	KON	RZC	RZCCS	IVR	IVRMF
	IVRVU									

AO-Number AO - Perform. features (Service: TLP)

3600	AMT	CIPLO	EMU	SKA	RZC	RZCCS	IVR	IVRMF	IVRVU
3601	AMT	CIPLO	EMU	SKA	RZC	RZCCS	IVR	IVRMF	IVRVU

General features which are required for all users (agents) can be changed by means of the default user (00000) settings.

AO-Number AO - Perform. features (Service: TLP)

00000	AMT	CIPLO	EMU	RUD	TWD	AAA	RZC	RZCCS	AGT	IVR	IVRMF	IVRVU
-------	-----	-------	-----	-----	-----	-----	-----	-------	-----	-----	-------	-------

Additional features (e.g., AGT) for the individual agents can only be set by means of IDM.
 Note: SKA shall not be set for the agents. The list below, however, can be shown by using MML commands (AOLM).

AO-Number	AO - Perform. features (Service: TLP)									
3604	AMT	RULTS	RULED	ARR	CIPLO	EMU	RUD	TWD	AAA	RZC
	RZCCS	AGT	IVR	IVRMF	IVRVU					
3605	AMT	RULTS	RULED	ARR	CIPLO	EMU	RUD	TWD	AAA	RZC
	RZCCS	AGT	IVR	IVRMF	IVRVU					
AO-Number	AO - Perform. features (Service: TLP)									
18001	AMT	CIPLO	EMU	RZC						

Authorizations:

In the MML task SPWE (Barring Unit), international access (SWF4) is assigned to all subscribers:

AONo	COS (service : TLP)			(Customer data)
18001	SWF4	-	SWF zone 4	(SWF4)

Feature Access Code (FAC) for the actual call number of the NovaMail server

In the dial evaluation data (WABE) of the correct dial group, a FAC (AKZ) 5 with dial selector CCC is assigned. Also, a FAC 18 (for the queue device 18001) with dial selector INTERN and AKZ.Info 3 is assigned. The FAC 5 is needed because this is the call number for NovaMail. All other numbers for extensions are assigned with the call selector INTERN and the correct AKZ.Info (i.e. the number of digits to be dialed in addition to the FAC).

Display of dial evaluation data to a dial group

```
=====
```

Dial group	:	2										
Dial method	:	Predial										
AKZ	Dial sele.	Bndl numb.	AKZ Info	SA group	Co. nr.	LCR data set	dialing conversion digits	sel	ext. all. cat.	LCR rout. flg	RI- SA flg	Num. Plan

0	EXTERN	1	-	-	-	-		0	INIT	ROFF	-	-
18	INTERN	-	3	-	-	-		0	-	-	-	-
2	EXTERN	2	-	-	-	-		0	INIT	ROFF	-	-
3	INTERN	-	3	-	-	-		0	-	-	-	-
4	INTERN	-	3	-	-	-		0	-	-	-	-
5	CCC	-	-	-	-	-		0	-	-	-	-
6	INTERN	-	4	-	-	-		0	-	-	-	-
78	NETZ	30	3	-	-	-		0	INIT	ROFF	-	-
79	NETZ	33	-	-	-	-		0	INIT	ROFF	-	-
80	NETZ	99	1	-	-	-		0	INIT	ROFF	-	-
83	NETZ	83	4	-	-	-		0	INIT	ROFF	-	-
85	NETZ	85	3	-	-	-		0	INIT	ROFF	-	-
9003	BCA	-	-	-	-	-	-	-	-	-	-	-
E40	RUVA	-	-	-	-	-	-	-	-	-	-	-
E41	RUFB	-	-	-	-	-	-	-	-	-	-	-
E42	RUFA	-	-	-	-	-	-	-	-	-	-	-
E43	RUVB	-	-	-	-	-	-	-	-	-	-	-
E44	RWLDA	-	-	-	-	-	-	-	-	-	-	-
E45	RWLVA	-	-	-	-	-	-	-	-	-	-	-
E46	RUDA	-	-	-	-	-	-	-	-	-	-	-
E47	CFMVA	-	-	-	-	-	-	-	-	-	-	-
E48	CFMDE	-	-	-	-	-	-	-	-	-	-	-
E49	CFMDE	-	-	-	-	-	-	-	-	-	-	-
E50	RNUAK	-	-	-	-	-	-	-	-	-	-	-
E51	RNUDE	-	-	-	-	-	-	-	-	-	-	-
E52	RNUFR	-	-	-	-	-	-	-	-	-	-	-
E53	RNUSP	-	-	-	-	-	-	-	-	-	-	-
E54	CW	-	-	-	-	-	-	-	-	-	-	-
E55	CWZUS	-	-	-	-	-	-	-	-	-	-	-
E56	CWPRV	-	-	-	-	-	-	-	-	-	-	-
E57	CWS2	-	-	-	-	-	-	-	-	-	-	-
E58	CWS1	-	-	-	-	-	-	-	-	-	-	-
E59	CPZEOS	-	-	-	-	-	-	-	-	-	-	-
E60	CPEOS	-	-	-	-	-	-	-	-	-	-	-
E61	CWZP	-	-	-	-	-	-	-	-	-	-	-
E62	EME	-	-	-	-	-	-	-	-	-	-	-
E63	GENLOE	-	-	-	-	-	-	-	-	-	-	-
E64	SADIR	-	-	2	-	-	-	-	-	-	-	-
E65	SAHAK	-	-	-	-	-	-	-	-	-	-	-
E66	SAHDE	-	-	-	-	-	-	-	-	-	-	-
E67	DCA	-	-	-	-	-	-	-	-	-	-	-
E68	DCD	-	-	-	-	-	-	-	-	-	-	-
E69	DCC	-	-	-	-	-	-	-	-	-	-	-

If the external trunk of the system is in another dial group, the FAC 5 has also to be assigned there.

E99	ACLOI	-	-	-	-	-	-	-	-	-	-	-
F01	MWANA	-	-	-	-	-	-	-	-	-	-	-
F99	ACLOO	-	-	-	-	-	-	-	-	-	-	-

The FACs E99, F99 for login and logoff also have to be configured in the same dial group as the FAC 5. NovaLink has its own agent login tool in which the FACs, the MSNs and the agent numbers are addressed. In addition, FAC F01 with dial selector MWANA (Message waiting analogue server) is assigned. This FAC must also be configured in the NovaMail server (**Section 4.1.2**). It is essential for the proper function of MWI.

In the MML task ANDA, the Second call number is the configured FAC 5. The display texts are changed from "Sprachspeicher" to "novamail". This is required for the BCS Server, that the displayed text is correct:

```

ANDA<tanz;
  TKOM data for server number 1

```

```

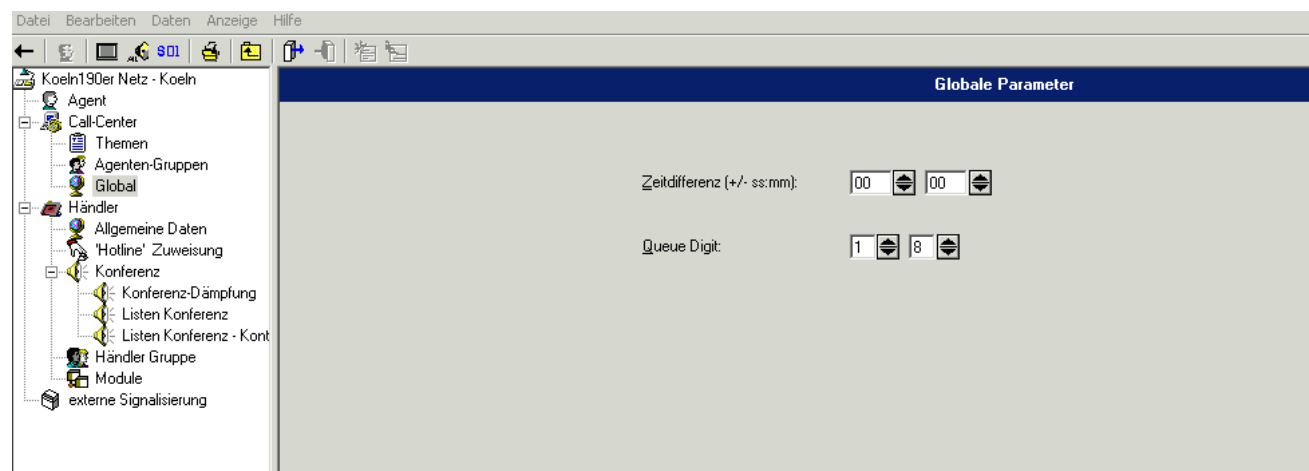
First display text : novamail
Second display text: novamail
Service           : tlp
Second call number : 5
Type of signalling : message waiting sch
D-Flag            : free
AVA-Flag           : blocked

```

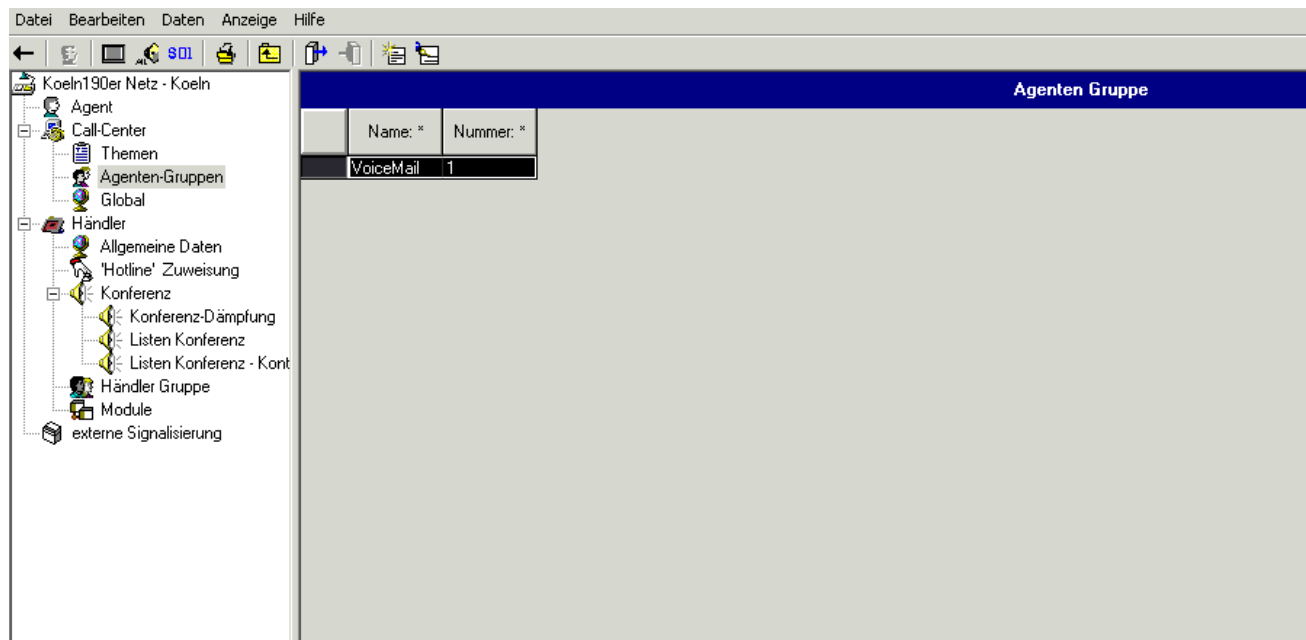
3.1.3. IDM - Integral Data Management

Creation of the agents is only possible with the IDM. IDM is an integrated tool in ISM.

In the global parameters, the queue digits (corresponding to queue device 18xxx) have to be programmed. Only the first two digits are required.



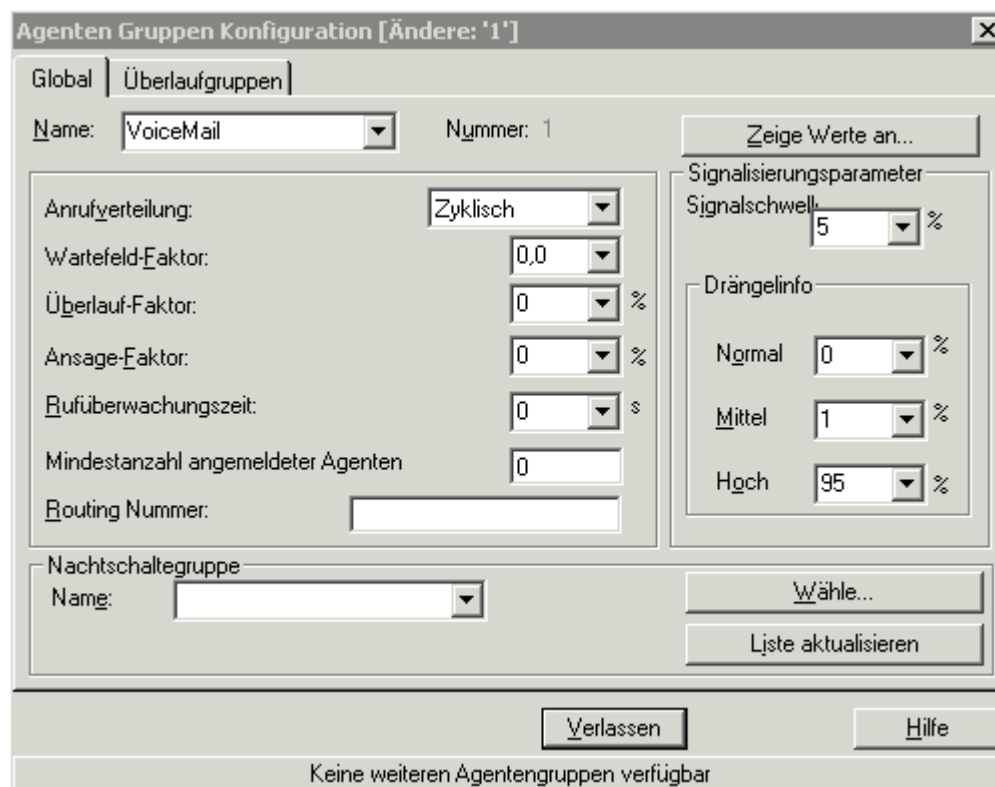
Creation of a new agent group (right-click on "Agenten-Gruppen"):



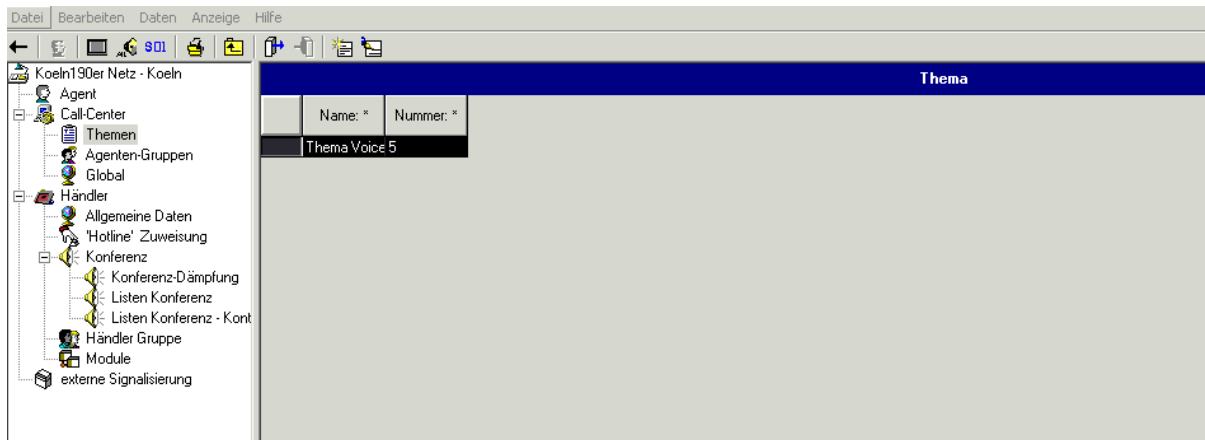
Name of the agent group is VoiceMail.

The call distribution (Anrufverteilung) is changed to cyclic.

All other settings remain default.



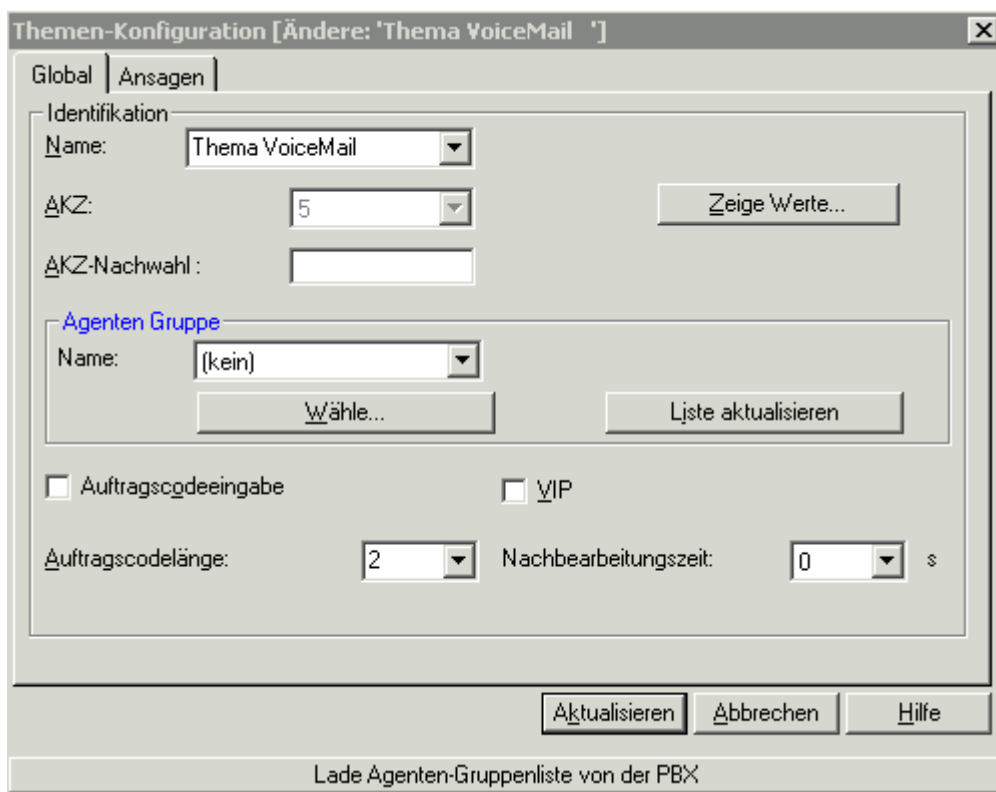
Creation of a new topic (right-click on "Themen"):



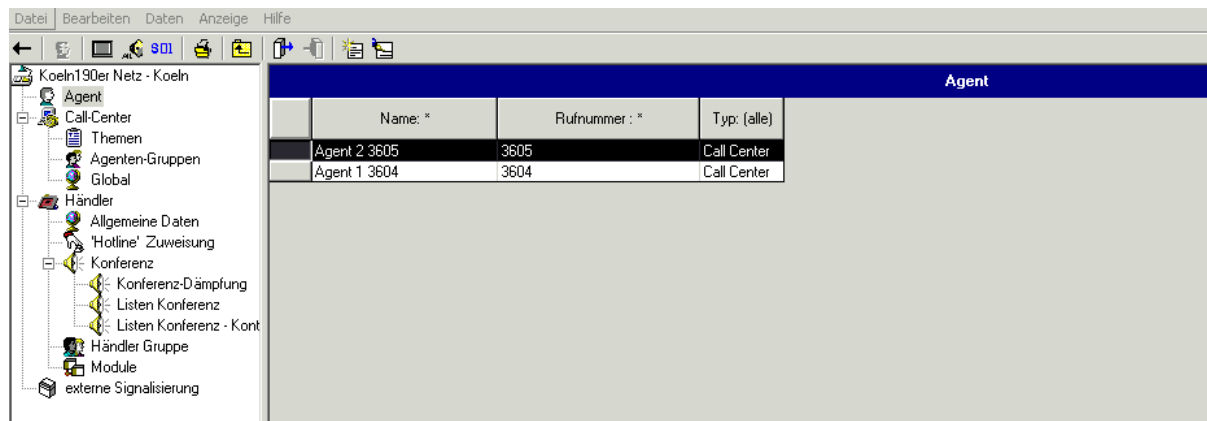
Topic voicemail with the created FAC (AKZ) 5:

No agent group is assigned yet ("kein").

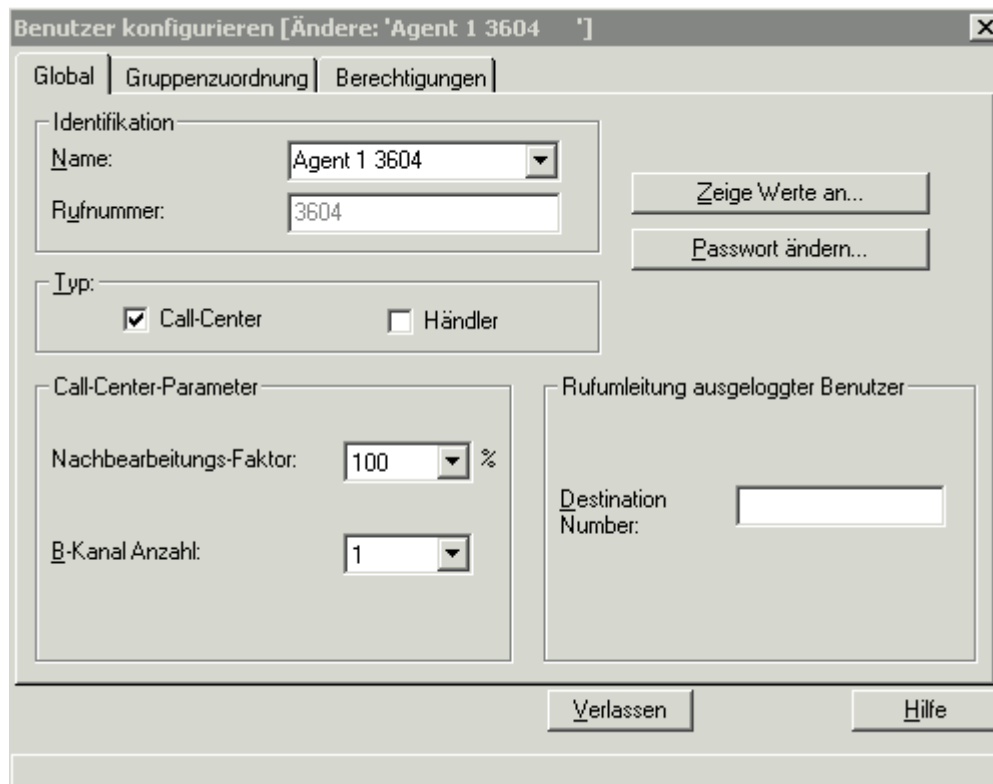
Other settings remain default.



Creation of new agents (right-click on "Agent"):



Agent 1 3604 of type Call Center (tab "Global"):



Assignment of the agent to the agent group VoiceMail (tab "Gruppenzuordnung"):

Benutzer konfigurieren [Ändere: 'Agent 1 3604 ']

Global Gruppenzuordnung Berechtigungen

Abfrage
Name: * Wähle Liste aktualisieren

Agenten-Gruppen Liste Gruppen-Zuordnungsliste

Pos.	Name	Pri.
1	VoiceMail	1
2	(kein)	
3	(kein)	
4	(kein)	
5	(kein)	

Priorität: 1

Verlassen Hilfe

The agent group (VoiceMail) is assigned to the topic (Thema VoiceMail):

The screenshot shows a 'Themen-Konfiguration' dialog box with the title bar 'Themen-Konfiguration [Ändere: 'Thema VoiceMail ']''. It has two tabs: 'Global' and 'Ansagen', with 'Global' selected. The 'Identifikation' section contains a 'Name' dropdown set to 'Thema VoiceMail', an 'AKZ' dropdown set to '5' with a 'Zeige Werte...' button, and an empty 'AKZ-Nachwahl' field. The 'Agenten Gruppe' section contains a 'Name' dropdown set to 'VoiceMail' with 'Wähle...' and 'Liste aktualisieren' buttons. Below these are checkboxes for 'Auftragscodeeingabe' and 'VIP', both unchecked. At the bottom of this section are 'Auftragscodelänge' (dropdown set to '2') and 'Nachbearbeitungszeit' (dropdown set to '0' with a 's' suffix). At the bottom of the dialog are 'Verlassen' and 'Hilfe' buttons. A status bar at the very bottom reads 'Länge des Themennamens: Max=18 Min=0'.

Field	Value
Name	Thema VoiceMail
AKZ	5
AKZ-Nachwahl	
Agenten Gruppe Name	VoiceMail
Auftragscodeeingabe	<input type="checkbox"/>
VIP	<input type="checkbox"/>
Auftragscodelänge	2
Nachbearbeitungszeit	0 s

3.2. Configuration of the PRI on the DT21 circuit pack

3.2.1. ICU-Editor

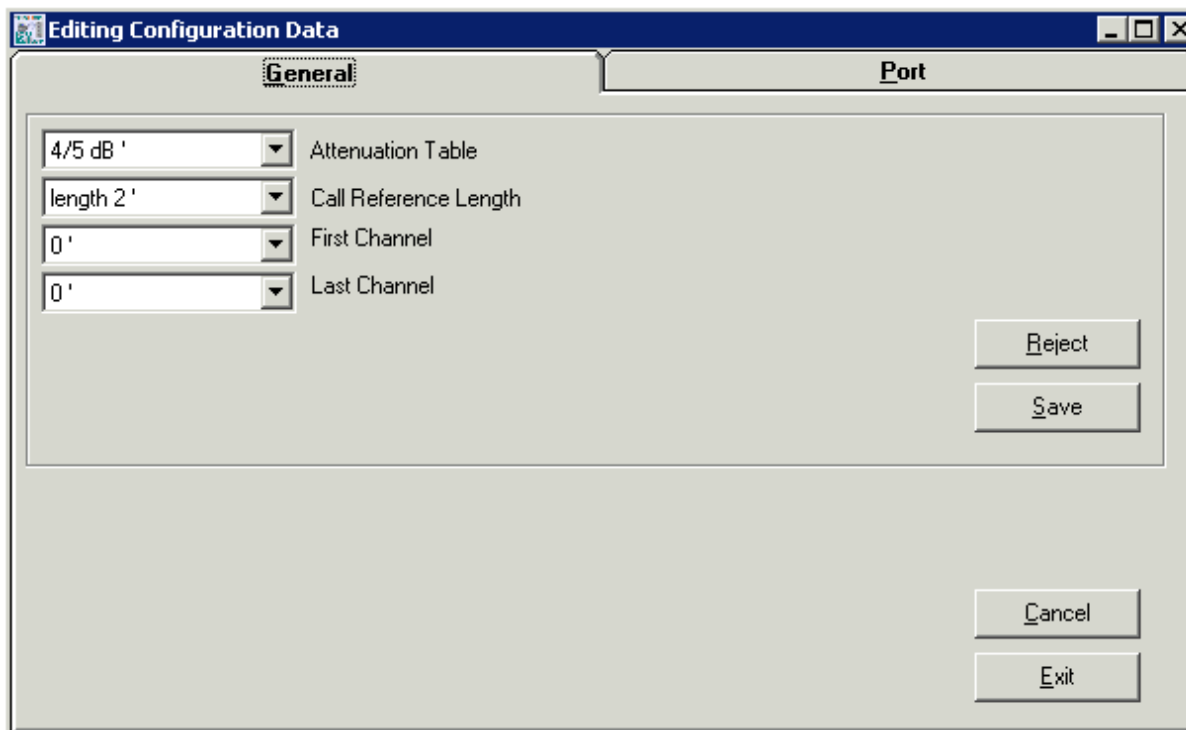
The PRI is to be configured with the ICU Editor. The ICU Editor is an integrated tool in ISM.

The ICU editor can be opened via the following way:

PABX-Administration - Board - SW Exchange Config Data - selection of the board number of the UIP circuit pack. Once the necessary changes are made: Save and Exit.

Important settings according to guidelines from NovaLink are shown below:

- General:
Call Reference Length = 2.



The screenshot shows a Windows-style dialog box titled "Editing Configuration Data". It has two tabs: "General" (selected) and "Port". The "General" tab contains four dropdown menus with the following labels and values:

Field	Value
Attenuation Table	4/5 dB
Call Reference Length	length 2
First Channel	0
Last Channel	0

At the bottom right of the dialog, there are four buttons: "Reject", "Save", "Cancel", and "Exit".

- Port:
- Port No: 0
- Connection Type: subscriber
- Layer 1 Mode: transparent
- Connection Type: symmetrical
- CRC4 Procedure: with CRC4
- Protocol: ETSI (DSS1)
- Special Type: none.

Editing Configuration Data

General **Port**

subscriber Connection Type 16' Time slot Port No. 0

transparent ' Layer 1 Mode

symmetrical ' Connection Type

with CRC4 ' CRC4 Procedure

Master ' Layer 2 Mode

ETSI ' Protocol

none ' Special Type

Next Port

Reject

Save

Nr.	Connection Type	Layer 1 Mode	Connection Type	CRC4	Layer 2 Mode
0	subscriber	transparent '	symmetrical '	with CRC4	Master '

Cancel

Exit

3.2.2. Overview of the Configuration by MML

The following configurations of the Avaya I55 LX have to be made in conjunction with the PRI:

- Assignment of a call number to the PRI created with the ICU editor as described above (e.g., 3700).
- Creation of a Feature Access Code (FAC) MWANA as a prerequisite for Message Waiting Indication.
- Activation of features and authorizations.

Assignment of a call number to the PRI

Overview of the configured PRI in the MML task AOGD (Connecting device basic data): The PRI is configured as a digital subscriber interface with the AO type DTS2. Protocol must be ETSI version 0 and four services TLP, DAT, TLT and GEN are assigned in the correct dial group.

AOGD<anzg;

28.03.07 13:37:02

Connecting circuit

Call No. : 3700
Slot / HVA : 01-01-13-00
AO type : DTS2

General ADS data

Name : Voice Unit
Accounting section : 00000
Protocols :

Protocol	Version	faulty	busy 2	error
ETSI	0	OFF	OFF	OFF

Overload priority : 2
Public bar. unit gr. : 0
Colisee bar. unit gr. : 0
DISA-group : 0
Dealergroup : 0
CN alloc. HKZ line & tie :
Category : -1
Waiting field maximum : 10
Reserved :
Connection memory : 2
Service memory : 4
AO state : IN OPERATION
Service block : sv-free
Call number block : Off

Service data

	TLP	DAT	TLT	GEN
Status	RELEASED	RELEASED	RELEASED	RELEASED
Dial group	2	2	2	2
Traffic group	1	1	1	1
Switchover group	0	0	0	0
Code dial group	0	0	0	0
LCR-group	0	0	0	0
Dial retrieval	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE
Backward rel.	DEACTIVE	DEACTIVE	DEACTIVE	DEACTIVE

B channel data

Allocation code : -
Deliberation code : -

B chan. number	Bundle number	Direct	Acc.	Status		B chan. number	Bundle number	Direct	Acc.	Status
1	-	-	-	F		16	-	-	-	F
2	-	-	-	F		17	-	-	-	F
3	-	-	-	F		18	-	-	-	F
4	-	-	-	F		19	-	-	-	F
5	-	-	-	F		20	-	-	-	F
6	-	-	-	F		21	-	-	-	F
7	-	-	-	F		22	-	-	-	F
8	-	-	-	F		23	-	-	-	F
9	-	-	-	F		24	-	-	-	F
10	-	-	-	F		25	-	-	-	F
11	-	-	-	F		26	-	-	-	F
12	-	-	-	F		27	-	-	-	F
13	-	-	-	F		28	-	-	-	F
14	-	-	-	F		29	-	-	-	F
15	-	-	-	F		30	-	-	-	F

Number of seizable B channels: 30

Seizure direction	Status
G - outgoing	B - BUSY
K - incoming	D - DEFECT.
W - bothway	EB - EDSS1 BUSY
	ER - EDSS1 RESERVED
	F - FREE
	G - FAULTY
	R - RESERVED
	S - BARRED
	T - DEFECT./BARRED
	V - SEIZED/BARRED

=====

Feature Access Code (FAC) MWANA

In the dial group where the PRI is configured, a FAC F01 with dial selector MWANA (Message waiting analogue server) is assigned. This FAC must also be configured in the NovaMail server (Section 4.2.1). It is essential for the proper function of MWI.

```
WABE<anzg;
WABE<dwgr:2,v;
```

28.03.07 13:50:58

Display of dial evaluation data to a dial group

=====												
Dial group		2										
Dial method		Predial										
AKZ	Dial sele.	Bndl numb.	AKZ Info	SA group	Co. nr.	LCR data set	dialing conversion digits	sel	ext. all. cat.	LCR rout flg	RI- SA flg	Num. Plan
0	EXTERN	1	-	-	-	-		0	INIT	ROFF	-	-
18	INTERN	-	3	-	-	-		0	-	-	-	-
2	EXTERN	2	-	-	-	-		0	INIT	ROFF	-	-
3	INTERN	-	3	-	-	-		0	-	-	-	-
4	INTERN	-	3	-	-	-		0	-	-	-	-
5	CCC	-	-	-	-	-		0	-	-	-	-
6	INTERN	-	4	-	-	-		0	-	-	-	-
78	NETZ	30	3	-	-	-		0	INIT	ROFF	-	-
79	NETZ	33	-	-	-	-		0	INIT	ROFF	-	-
80	NETZ	99	1	-	-	-		0	INIT	ROFF	-	-
83	NETZ	83	4	-	-	-		0	INIT	ROFF	-	-
85	NETZ	85	3	-	-	-		0	INIT	ROFF	-	-
9003	BCA	-	-	-	-	-	-	-	-	-	-	-
E40	RUVA	-	-	-	-	-	-	-	-	-	-	-
E41	RUFB	-	-	-	-	-	-	-	-	-	-	-
E42	RUFA	-	-	-	-	-	-	-	-	-	-	-
E43	RUVB	-	-	-	-	-	-	-	-	-	-	-
E44	RWLDA	-	-	-	-	-	-	-	-	-	-	-
E45	RWLVA	-	-	-	-	-	-	-	-	-	-	-
E46	RUDA	-	-	-	-	-	-	-	-	-	-	-
E47	CFMVA	-	-	-	-	-	-	-	-	-	-	-
E48	CFMDE	-	-	-	-	-	-	-	-	-	-	-
E49	CFMDE	-	-	-	-	-	-	-	-	-	-	-
E50	RNUAK	-	-	-	-	-	-	-	-	-	-	-
E51	RNUDE	-	-	-	-	-	-	-	-	-	-	-
E52	RNUFR	-	-	-	-	-	-	-	-	-	-	-
E53	RNUSP	-	-	-	-	-	-	-	-	-	-	-
E54	CW	-	-	-	-	-	-	-	-	-	-	-
E55	CWZUS	-	-	-	-	-	-	-	-	-	-	-
E56	CWPRV	-	-	-	-	-	-	-	-	-	-	-
E57	CWS2	-	-	-	-	-	-	-	-	-	-	-
E58	CWS1	-	-	-	-	-	-	-	-	-	-	-
E59	CPZEOS	-	-	-	-	-	-	-	-	-	-	-
E60	CPEOS	-	-	-	-	-	-	-	-	-	-	-
E61	CWZP	-	-	-	-	-	-	-	-	-	-	-
E62	EME	-	-	-	-	-	-	-	-	-	-	-
E63	GENLOE	-	-	-	-	-	-	-	-	-	-	-
E64	SADIR	-	-	2	-	-	-	-	-	-	-	-

E65	SAHAK	-	-	-	-	-	-	-	-	-	-	-
E66	SAHDE	-	-	-	-	-	-	-	-	-	-	-
E67	DCA	-	-	-	-	-	-	-	-	-	-	-
E68	DCD	-	-	-	-	-	-	-	-	-	-	-
E69	DCC	-	-	-	-	-	-	-	-	-	-	-
E70	PUALLG	-	-	-	-	-	-	-	-	-	-	-
E72	RRSEL	-	-	-	-	-	-	-	-	-	-	-
E73	GENLOE	-	-	-	-	-	-	-	-	-	-	-
E99	ACIOI	-	-	-	-	-	-	-	-	-	-	-
F01	MWANA	-	-	-	-	-	-	-	-	-	-	-
F99	ACLOO	-	-	-	-	-	-	-	-	-	-	-

In the MML task ANDA, the Second call number is the configured PRI call number 3700. The display texts are changed from "Sprachspeicher" to "novamail". This is required for the BCS Server, that the displayed text is correct:

```

ANDA<tanz;
  TKOM data for server number 1
  -----
  First display text : novamail
  Second display text: novamail
  Service           : tlp
  Second call number : 3700
  Type of signalling : message waiting sch
  D-Flag            : free
  AVA-Flag           : blocked

```

Activation of features and authorizations

In the MML task AOLM, some important features must be enabled (Note: first they must be enabled in the MML task ANLM):

```

AOLM<4;
28.03.07 14:06:21
AO-Number  AO - Perform. features ( Service: TLP )
-----
3700      AMT  CIPL0 EMU  IVR  IVRMF IVRVU

```

In the MML task SPWE (Barring Unit), international access (SWF4) is assigned to the subscriber:

```

SPWE<anbe;
28.03.07 14:10:45
AONo      COS ( service : TLP )      (Customer data )
-----
3700      SWF4  -   SWF zone 4      ( SWF4  )

```

4. Configuration of the NovaMail Server

The NovaLink NovaMail server offers the following ways of configuration:

- For initial configuration, the Configuration & License Manager is used (as described below).
- Further configurations or changes can be made by means of a web interface (not described here).
- All configurations are saved in the NovaMail.ini file. This file can also be altered by means of a text editor and restored.

The configuration for the NovaLink NovaMail server includes some screen shots and fields in German.

4.1. Configuration of the NovaMail for the BRI

4.1.1. Configuration of the Gerdes PrimuX ISDN Card for the BRI

The configuration of the Gerdes PrimuX ISDN Card is done together with the installation of the card:

D-Kanal Protokoll: Europa/andere Länder, Euro-ISDN (ETSI-DSS1)

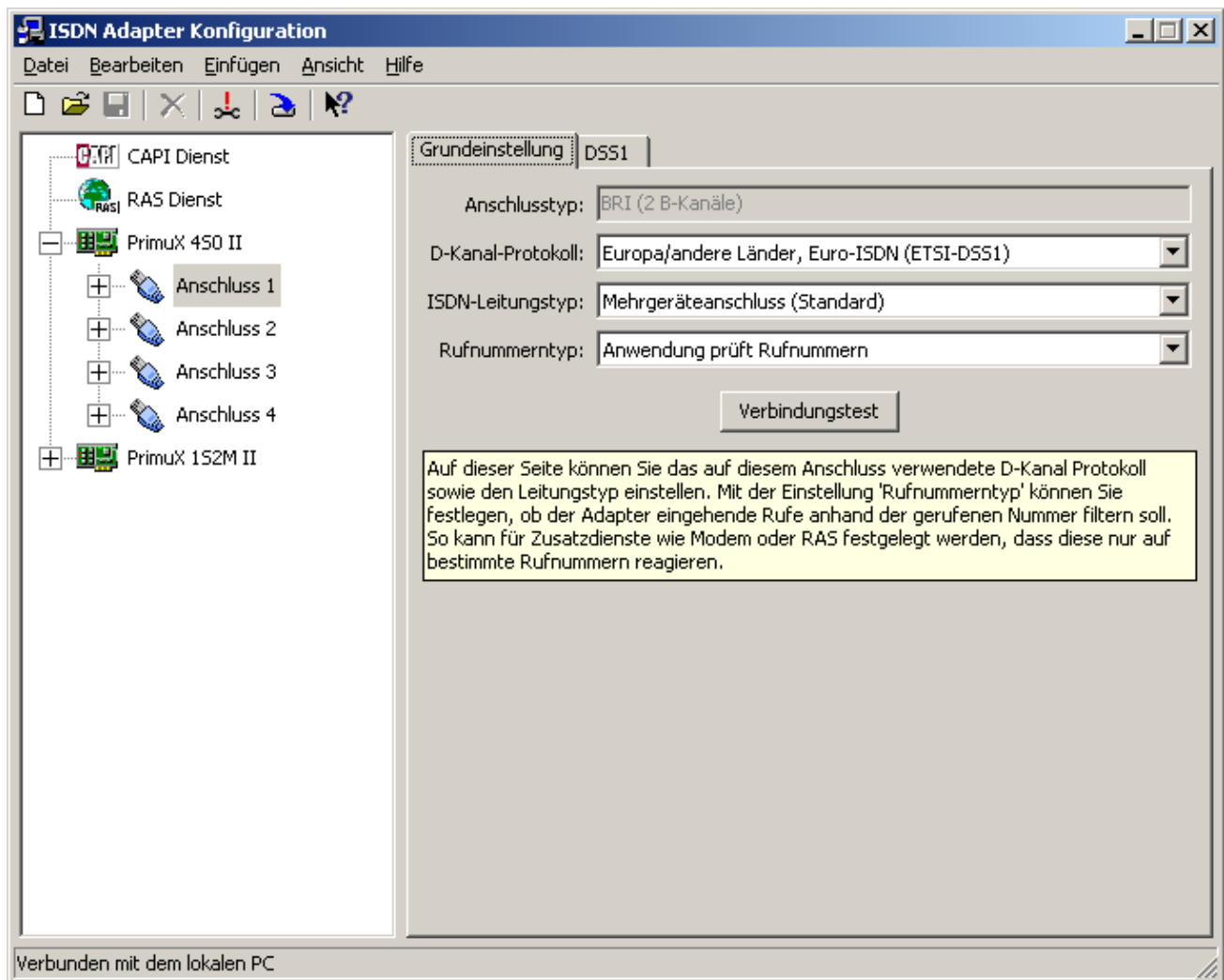
ISDN-Leitungstyp: Mehrgeräteanschluss (Standard)

Rufnummerntyp: Anwendung prüft Rufnummer

D-channel-protocol: Europe/other countries, European ISDN (ETSI-DSS1)

Type of ISDN trunk: Basic rate, point to multipoint (standard)

Type of numbers: Application checks call numbers



4.1.2. Configuration & License Manager for the BRI configuration

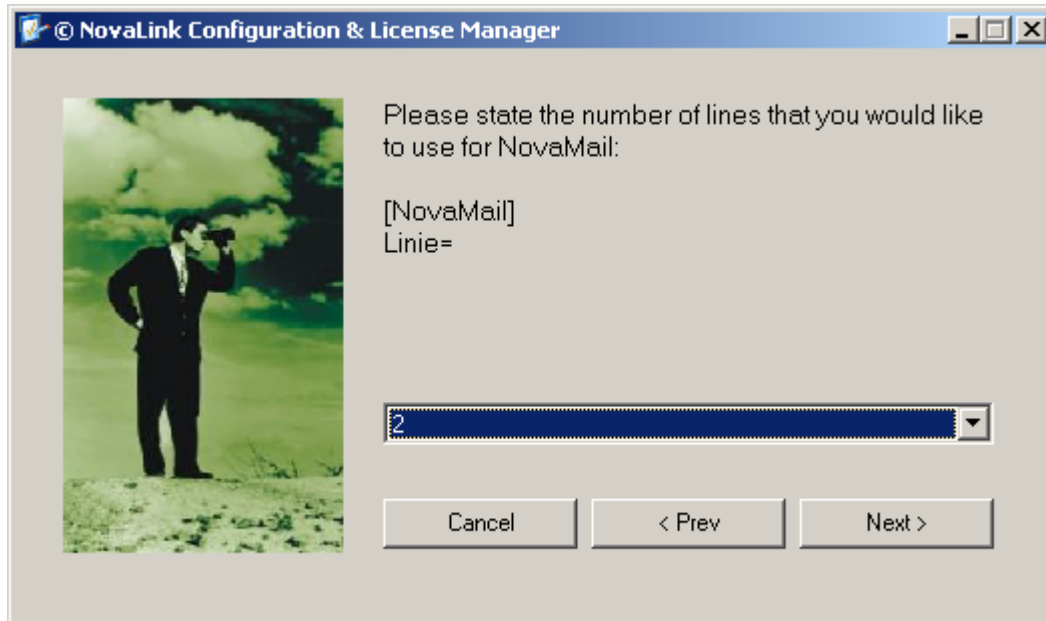
The following screens show the step-by-step configuration of the NovaMail server by means of the Configuration & License Manager.

Configure Server-Settings

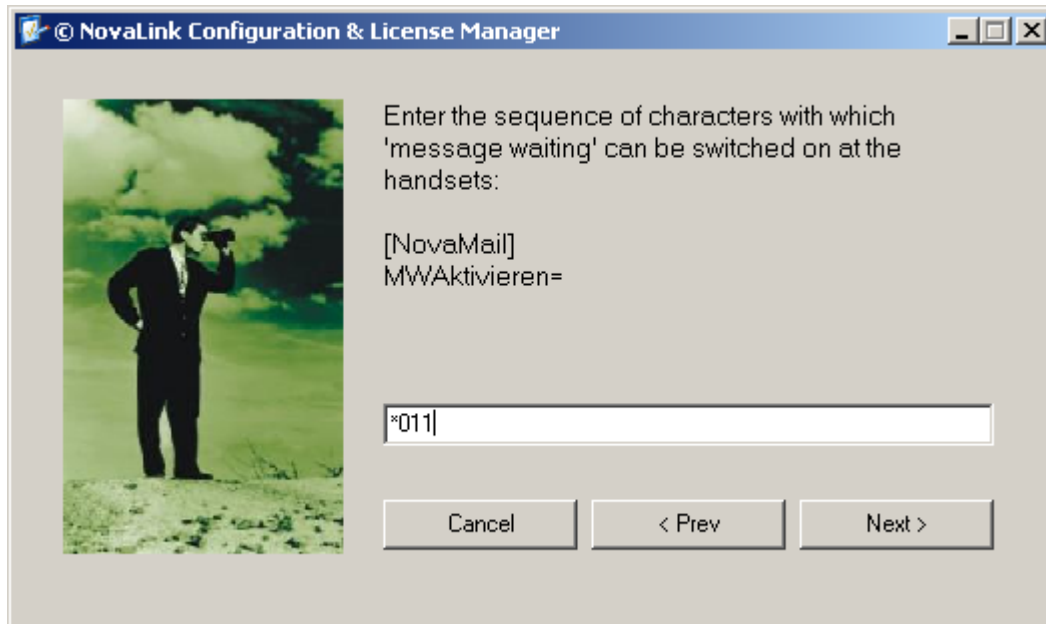


Linie=2

Two lines are used:

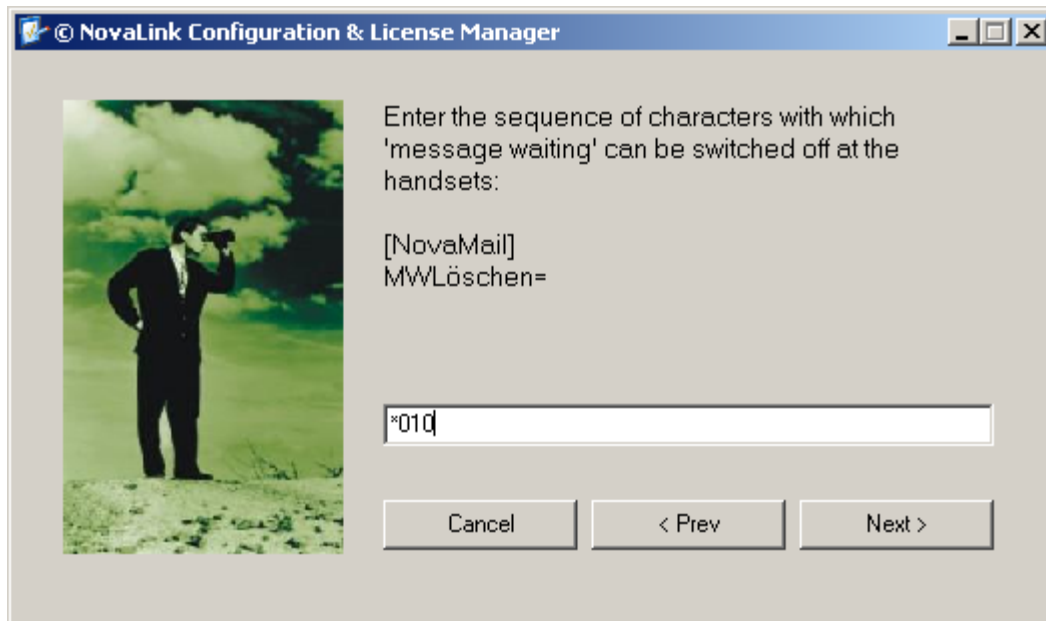


MWAktivieren= *011
Activate message waiting= *011



The screenshot shows a window titled "© NovaLink Configuration & License Manager". On the left is a small image of a man in a suit looking through binoculars. The main text area contains the instruction: "Enter the sequence of characters with which 'message waiting' can be switched on at the handsets:". Below this, it shows "[NovaMail]" and "MWAktivieren=". A text input field contains the code "*011". At the bottom are three buttons: "Cancel", "< Prev", and "Next >".

MWLöschen= *010
Deactivate message waiting= *010



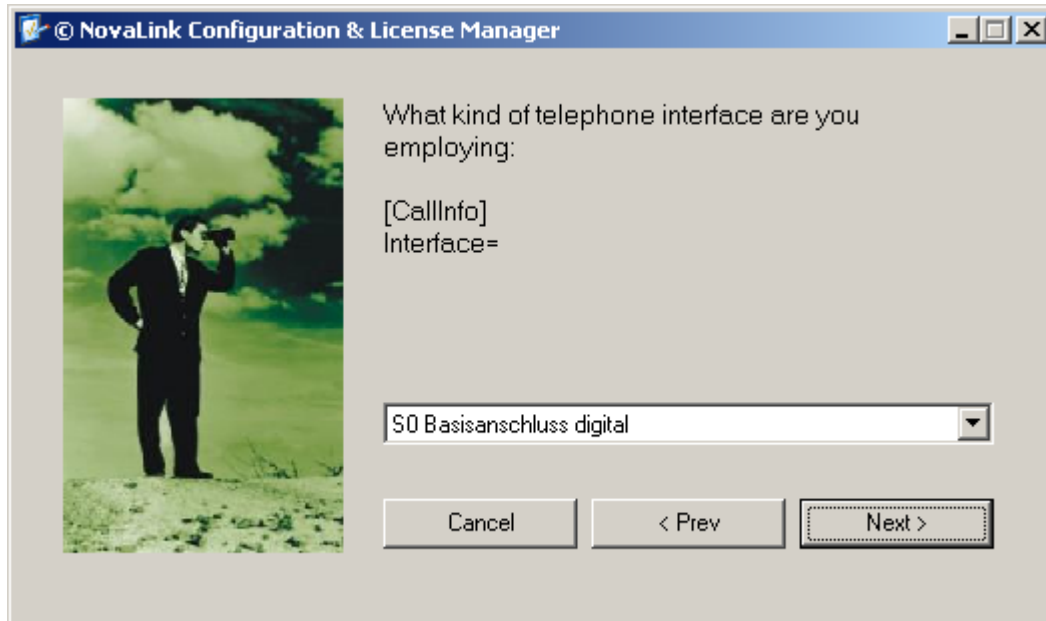
The screenshot shows a window titled "© NovaLink Configuration & License Manager". On the left is a small image of a man in a suit looking through binoculars. The main text area contains the instruction: "Enter the sequence of characters with which 'message waiting' can be switched off at the handsets:". Below this, it shows "[NovaMail]" and "MWLöschen=". A text input field contains the code "*010". At the bottom are three buttons: "Cancel", "< Prev", and "Next >".

CardDriver= CAPI



Interface= S0 Basisanschluss digital

Interface= S0 BRI digital



SigTyp= Altes Tenovis-Format (I33/I55)
Signalling Type = Old Tenovis format (I33/I55)



4.1.3. Settings in the NovaMail.ini for BRI

The settings from the NovaLink Configuration & License Manager are taken over in the NovaMail.ini file. The file with the configurations as described above is listed below:

```
[NovaMail]
Linie1=1                'Allocation of the lines logical=physical
Linie2=2
MWAktivieren=*011      'digits to activate message waiting
MWLöschen=*010         'digits to delete message waiting
MWQuittung=1           '0=no acknowledge for message waiting, 1=waiting for acknowledge from the
telephone system (digit or connect), ...

[CallInfo]
CardDriver=2            '0=auto-Detect, 1=dialogic, 2=CAPI, 3=VoIP
Interface=3            ' Line-Interface-type 1=analogue, 2= 2 MBit primary digital, 3= BRI
basicinterface digital
SigTyp=1               '1=old bosch-format, 2=new bosch-format (with external number), ...
```

4.2. Configuration of the NovaMail for the PRI

4.2.1. Configuration of the Gerdes PrimuX ISDN Card for PRI

In the ISDN adapter configuration for interface 1 under the tab Grundeinstellungen (basic settings), the following settings have to be made:

D-Kanal-Protokoll: Europa/andere Länder, Euro-ISDN (ETSI-DSS1)

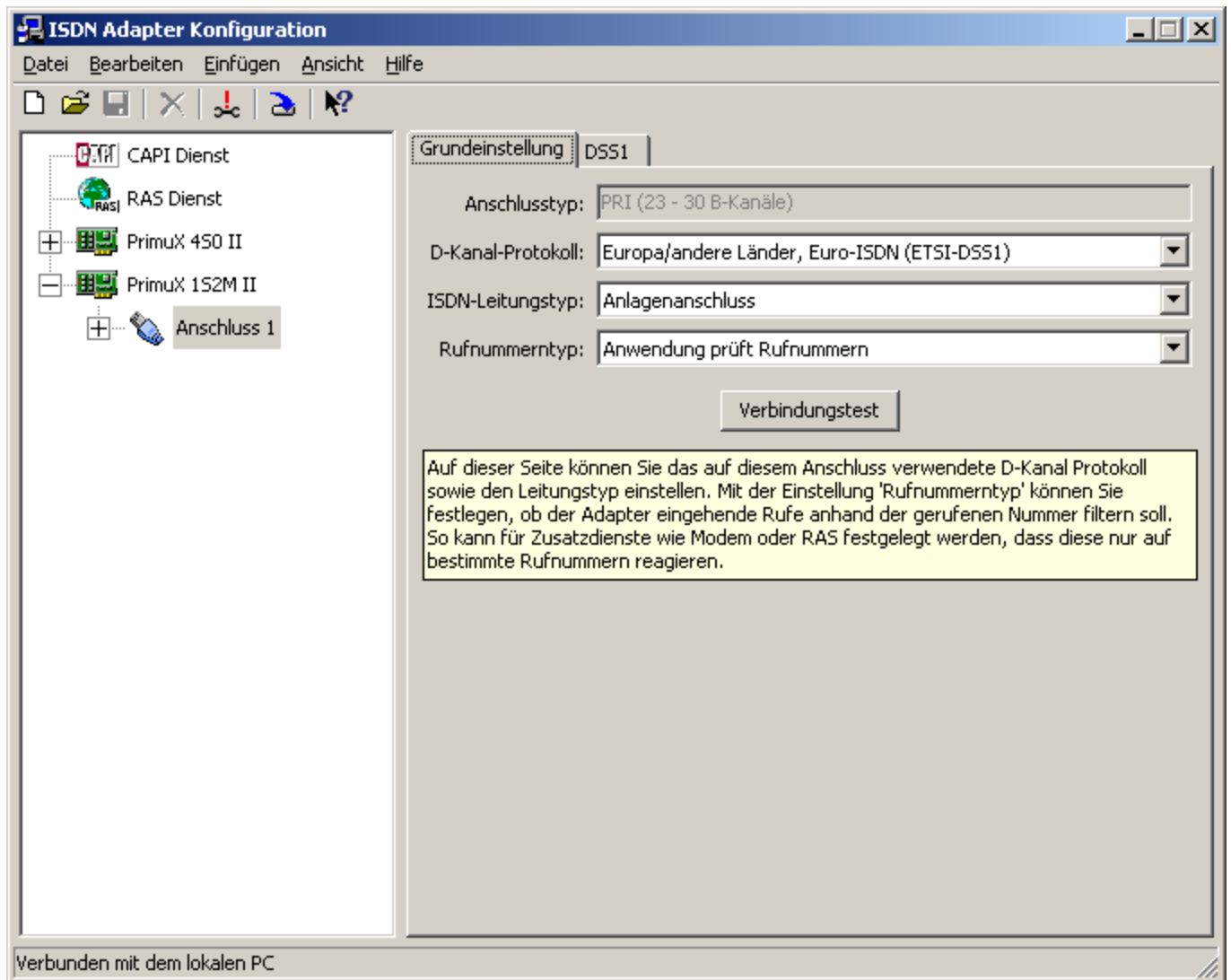
ISDN-Leitungstyp: Anlagenanschluss

Rufnummerntyp: Anwendung prüft Rufnummern

D-channel protocol: Europe/other countries, European ISDN (ETSI-DSS1)

Type of ISDN trunk: Trunk (point to point)

Type of number: Application checks call numbers

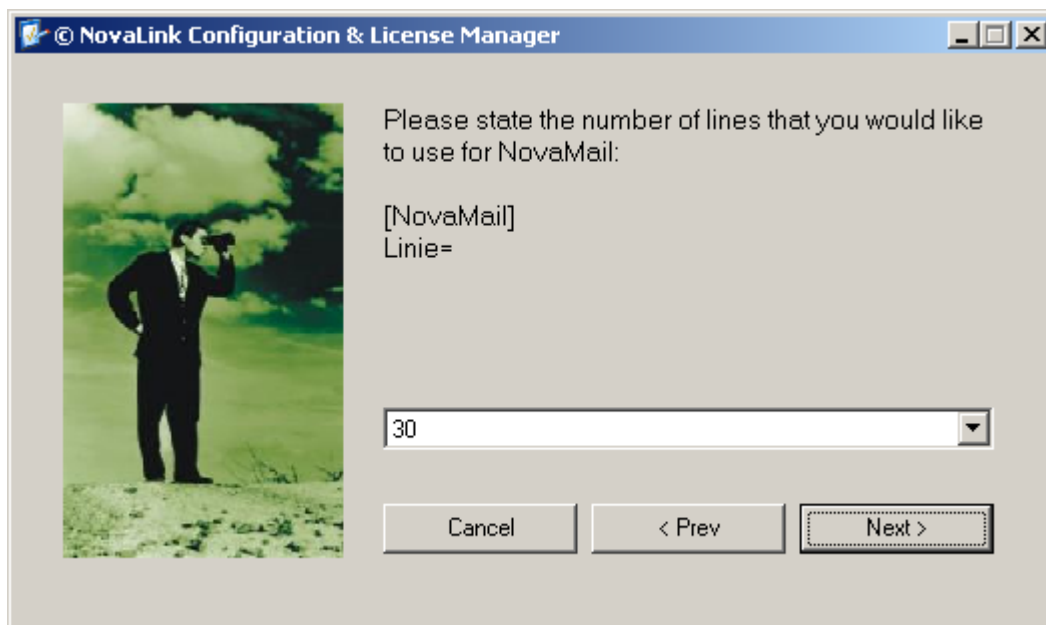


4.2.2. Configuration & License Manager for PRI

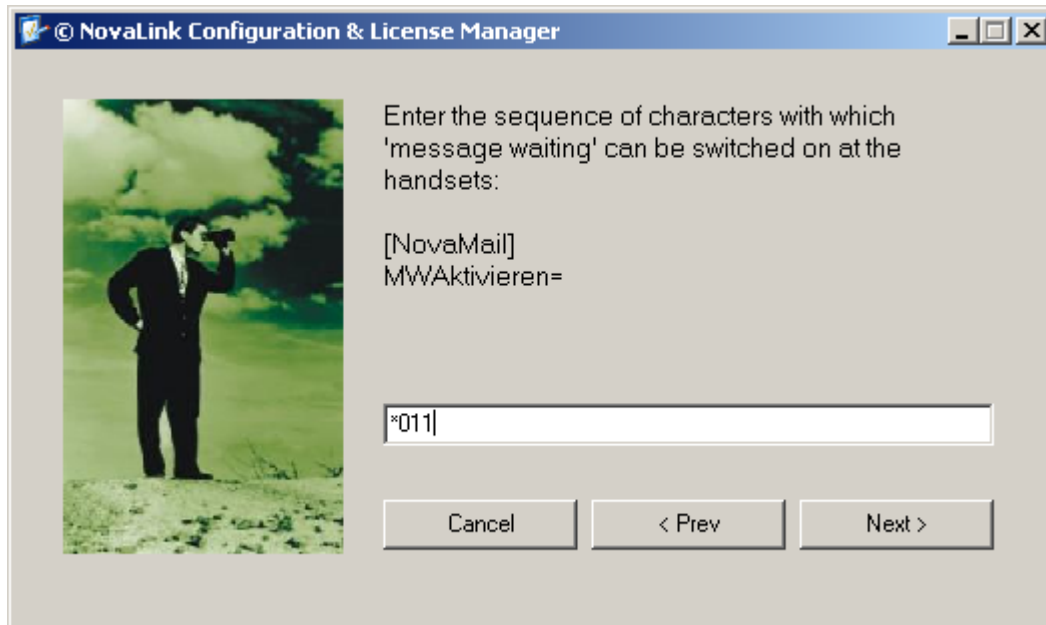
Configure Server-Settings



Linie= 30
Thirty lines are used.

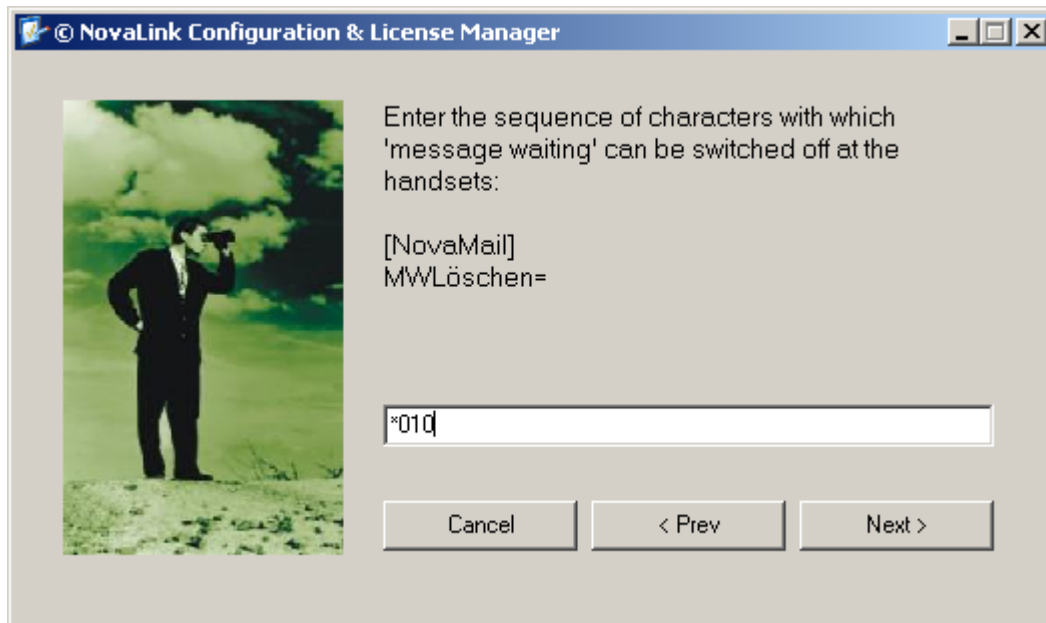


MWAktivieren= *011
Activate message waiting= *011



The screenshot shows a window titled "© NovaLink Configuration & License Manager". On the left is a small image of a man in a suit looking through binoculars. The main text area contains the instruction: "Enter the sequence of characters with which 'message waiting' can be switched on at the handsets:". Below this, it shows "[NovaMail]" and "MWAktivieren=" followed by a text input field containing "*011". At the bottom are three buttons: "Cancel", "< Prev", and "Next >".

MWLöschen= *010
Deactivate message waiting= *010



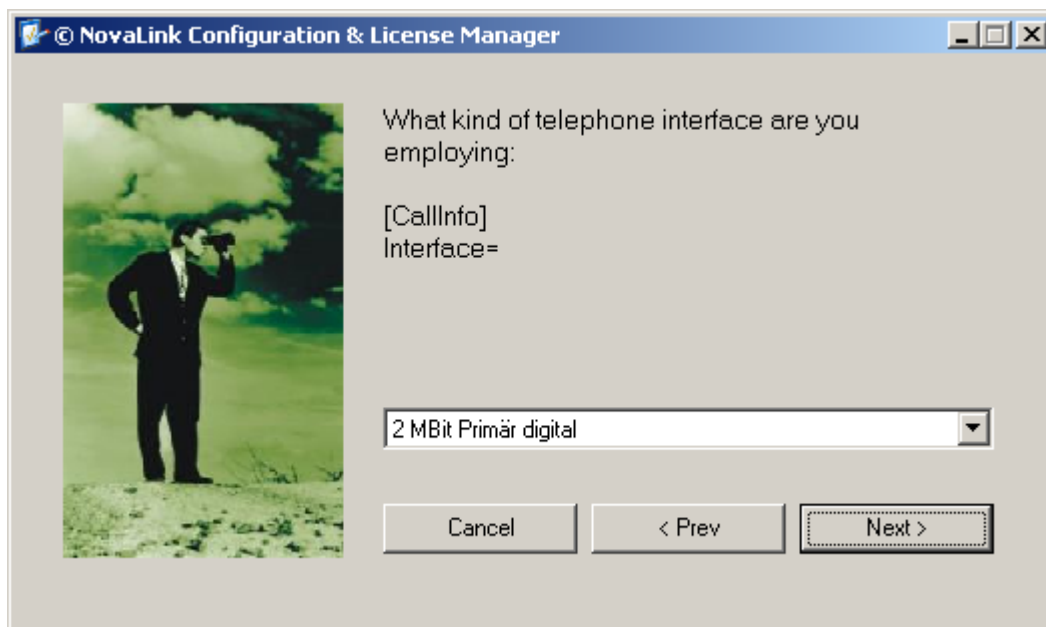
The screenshot shows a window titled "© NovaLink Configuration & License Manager". On the left is a small image of a man in a suit looking through binoculars. The main text area contains the instruction: "Enter the sequence of characters with which 'message waiting' can be switched off at the handsets:". Below this, it shows "[NovaMail]" and "MWLöschen=" followed by a text input field containing "*010". At the bottom are three buttons: "Cancel", "< Prev", and "Next >".

CardDriver= CAPI

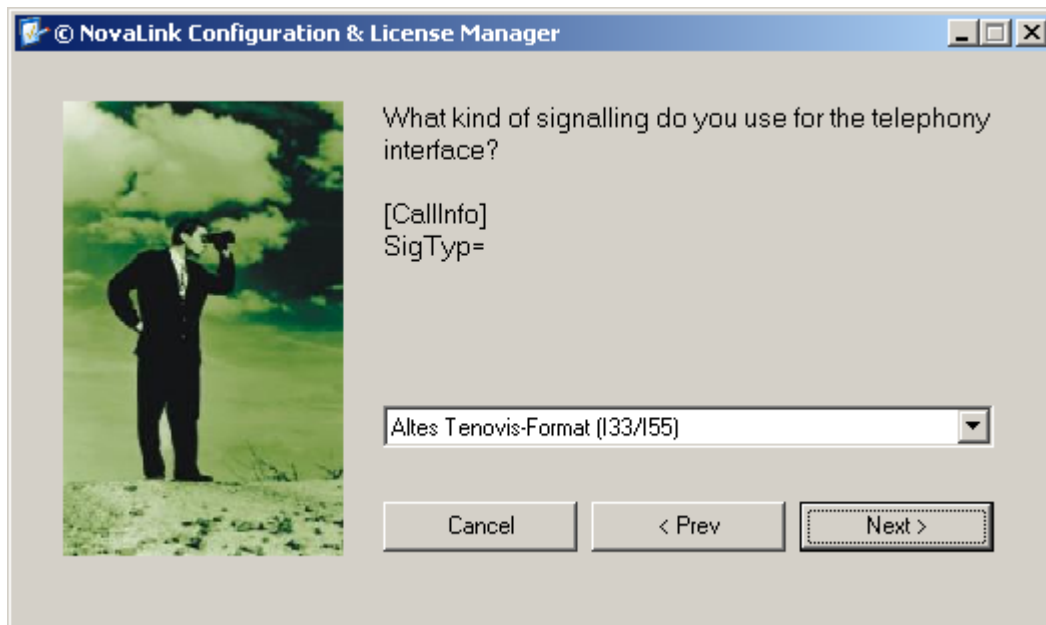


Interface= 2MBit Primär digital

Interface= 2MBit/s PRI digital



SigTyp= Altes Tenovis-Format (I33/I55)
Signalling Type = Old Tenovis format (I33/I55)



4.2.3. Settings in the NovaMail.ini for PRI

The settings from the NovaLink Configuration & License Manager are taken over in the NovaMail.ini file. The file with the configurations as described above is listed below:

```
[NovaMail]
Linie1=1                ' Allocation of the lines logical=physical
...
Linie30=30
MWAktivieren=*011      'digits to activate message waiting
MWLöschen=*010         'digits to delete message waiting
MWQuittung=1           '0=no acknowledge for message waiting, 1=waiting for acknowledge from the
telephone system (digit or connect), ...

[CallInfo]
CardDriver=2            '0=auto-Detect, 1=dialogic, 2=CAPI, 3=VoIP
Interface=2            'Line-Interface-type 1=analogue, 2= 2 MBit primary digital, 3= BRI basic
interface digital
SigTyp=1               '1=old bosch-format, 2=new bosch-format (with external number), ...
```


4.3. Configuration of the BCS

The following screens show the basic step by step configuration for the BCS.

The BCS (Branch Communications Server) is server software which is used as an interface between an Avaya branch solution (e.g., HotCom, MedCom) and one or more Avaya telecommunication systems. BCS allows the exchange of data between Avaya telecommunication systems and Avaya branch solutions. The data sets of Avaya telecommunication systems and Avaya branch solutions have different formats. BCS transforms the format of incoming data sets internally and forwards them to the Avaya telecommunication systems or Avaya branch solutions respectively in the appropriate format.

Typ der Anwendung: Hotelanwendung:

Type of application = Hotel application

Assistent zur BCS Basiskonfiguration

Auswahl Applikation

Bitte wählen Sie den Typ der anzuschliessenden Anwendung

☒ Hotelanwendung

☐ Medial System (MedCom/SeCom)

< zurück weiter > Abbruch

Schnittstelle: TCP/IP

Standard Einstellungen: HotCom

Interface: TCP/IP


Default settings: HotCom

The screenshot shows a Windows-style dialog box titled "Assistent zur BCS Basiskonfiguration". The current step is "Anbindung Hotelapplikation". In the top left, there is a diagram showing a box labeled "PBX" connected to a circle labeled "BCS", which is then connected to a box labeled "APP". Below this, a text box contains the instruction: "Bitte geben Sie an, mit welchen Einstellungen die Hotelapplikation angebunden werden soll bzw. betätigen Sie eine der Schaltflächen, um System abhängig die jeweiligen Standard Einstellungen auszuwählen." Below the text box, there is a label "Schnittstelle" followed by a dropdown menu currently set to "TCP/IP". Below that is a checkbox labeled "Zeichensatzkonvertierung OEM (IBM#2) => Windows (ANSI)" which is currently unchecked. Below the checkbox is a group box labeled "Standard Einstellungen (auch für nachfolgende Dialogschritte)". Inside this group box are two buttons: "HotCom" and "Fidelio". At the bottom of the dialog box are three buttons: "< zurück", "weiter >", and "Abbruch".

Typ der TK-Anlage: IEE (via TCP/IP; ab Software L03)

Type of telecommunication system: IEE (via TCP/IP; from software L03)

Assistent zur BCS Basiskonfiguration



Auswahl TK-Anlage

Bitte wählen Sie den Typ der anzuschliessenden TK-Anlage

☐ I33/I55 (via Module Manager)

☒ IEE (via TCP/IP; ab L03)

☐ I3/I5 (via V.24)

☐ I5 (via V.24; ab R2.3)

< zurück weiter > Abbruch

Hostname: 192.168.190.7

Port: 5353

Benutzername: HEIKE

Kennwort: ACCESS

Hostname: IP address of the connected telecommunication system (e.g., 192.168.190.7)

Port: 5353 (CSTA Port)

Username: HEIKE

Password: ACCESS

Assistent zur BCS Basiskonfiguration

Zugangsdaten IEE

Bitte geben Sie die Zugangsdaten zur Anbindung der IEE ein.


IEE

Hostname	192.168.190.7
Port	5353
Benutzername	HEIKE
Kennwort	ACCESS

< zurück weiter > Abbruch

Weitere Systeme: Sprachspeichersysteme
Further systems: Voice mail box

Assistent zur BCS Basiskonfiguration



Weitere Systeme

Bitte wählen Sie, welche weiteren Systeme angeschlossen werden sollen


☐ Verzoner

☒ Sprachspeichersystem

< zurück weiter > Abbruch

Sprachspeicher: NovaLink
Voice mail box: NovaLink

Assistent zur BCS Basiskonfiguration



Sprachspeicher

Bitte wählen Sie, welches Sprachspeichersystem angeschlossen werden soll

☐ ComTelco Hospitality System

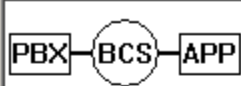
☐ mc3

☒ Nova Link

< zurück weiter > Abbruch

Weckaufträge verwalten: Hotelanwendung PMS via HotCom+ Protokoll
Manage awake-up calls: Hotel application PMS via HotCom+ protocol

Assistent zur BCS Basiskonfiguration



Verwaltung von Weckaufträgen

Bitte wählen Sie, von welchem System Weckaufträge verwaltet werden sollen

☐ BCS

☒ Hotelanwendung PMS via HotCom+ Protokoll

☐ Nova Link

< zurück weiter > Abbruch

Weitere Einstellungen:

PIN Eingabe

Gesprächs Zusatzinformationen

Übertragung Zimmercode bei Roomstatus

Ausfallsignalisierung TK-Anlage, Fehlermeldung

Additional settings:

Enter PIN for making calls

Additional information for a call

Transfer room mate code with room status

Failure signaling to telecommunication system

Assistent zur BCS Basiskonfiguration

Weitere Einstellungen

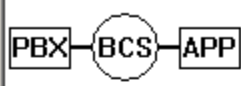
Bitte wählen Sie die gewünschten Einstellungen

- ☒ PIN Eingabe zum telefonieren
- ☒ Gesprächs Zusatzinformationen (X1 - X4)
- ☐ Gast Zusatzinformationen (A0 - A6)
- ☐ Reservierungsnummer bei Check-In (R#)
- ☒ Übertragung Zimmerdamencode bei Roomstatus
- ☒ Ausfallsignalisierung TK-Anlage, Fehlermeldungen

< zurück weiter > Abbruch

Optionale Leistungsmerkmale: no entries necessary
Optional features: no entries necessary

Assistent zur BCS Basiskonfiguration



Optionale Leistungsmerkmale

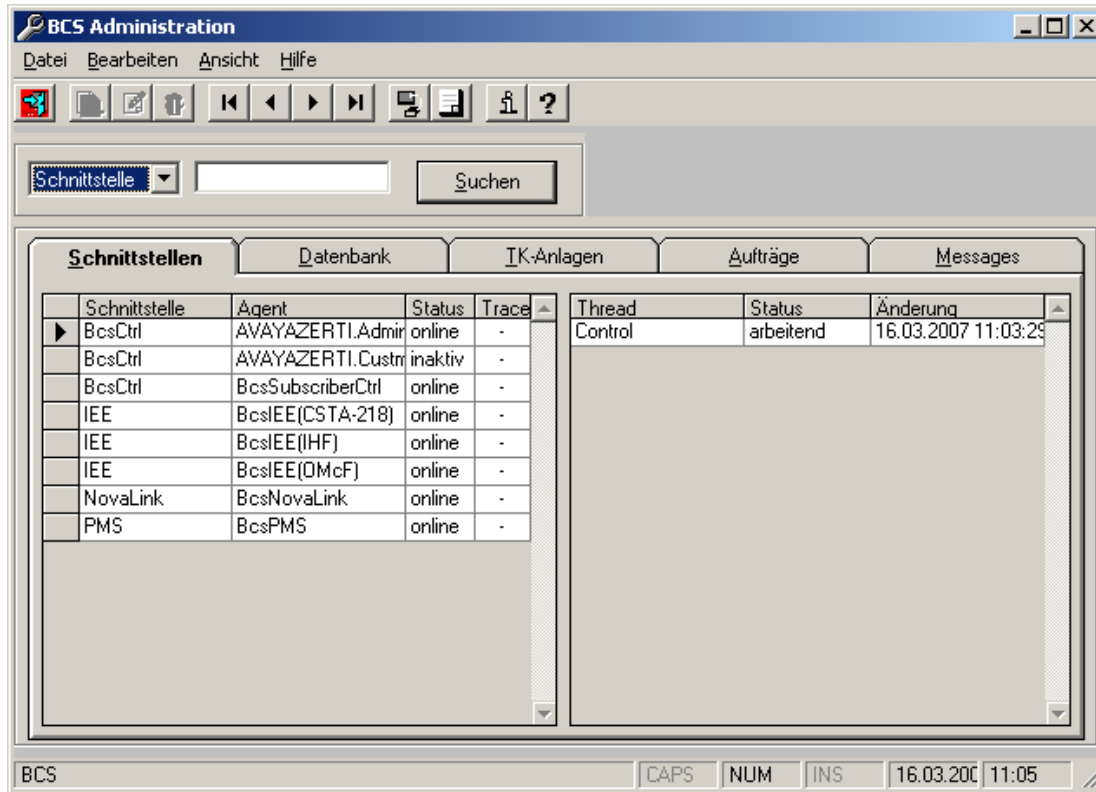
Bitte selektieren Sie die benötigten weiteren Leistungsmerkmale.

- ☐ Archivierung von Bewegungsdaten
- ☐ PBX Statussignalisierung per Administratormeldungen
- ☐ Zeitsynchronisation mit PBX

< zurück weiter > Abbruch

4.3.1. BCS Administrator

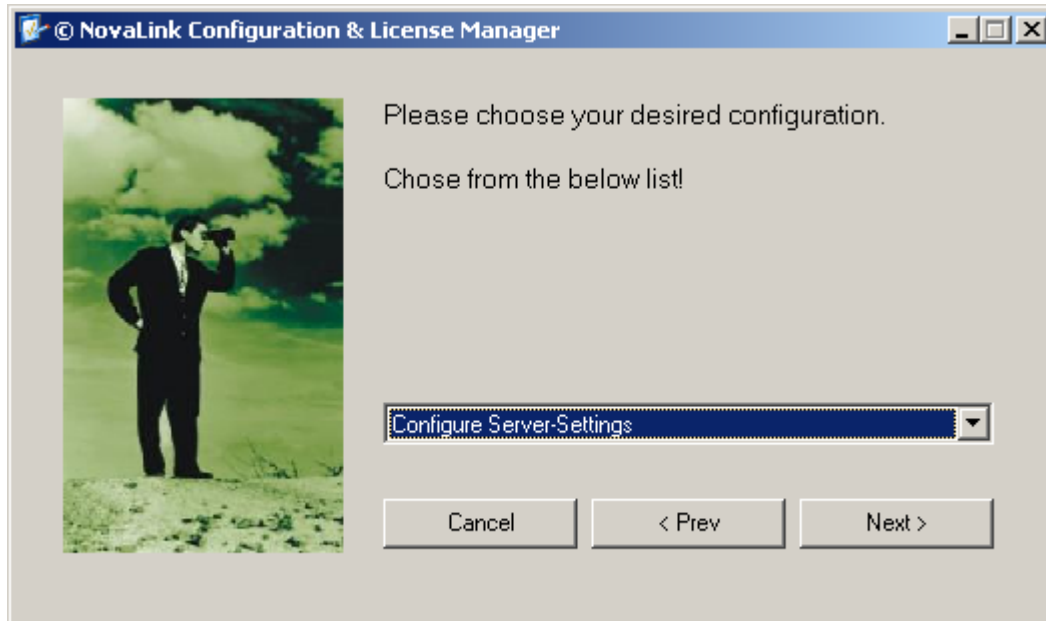
With the BCS Administrator the status of the interfaces used as well as data bases, telecommunication systems, etc. can be observed:



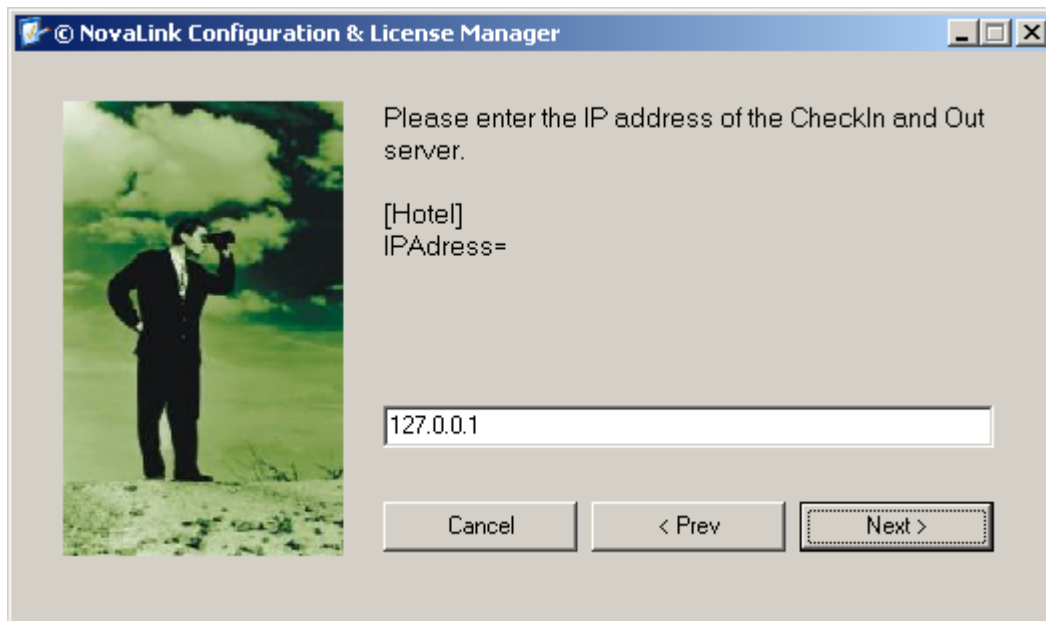
4.3.2. Configuration & License Manager

The following settings were made by means of the Configuration and License Manager:

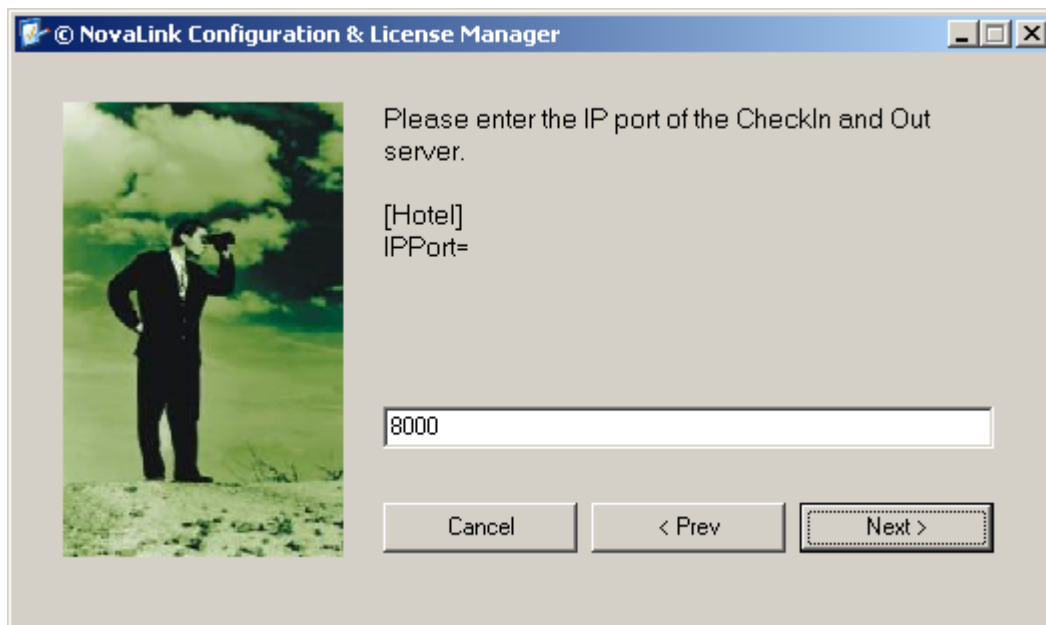
Configure Server-Settings



IP address=IP address of the BCS server (e.g., 127.0.0.1)



IPPort= default 8000



The screenshot shows a Windows-style dialog box titled "© NovaLink Configuration & License Manager". On the left is a small image of a man in a suit looking through binoculars. The main text area says "Please enter the IP port of the CheckIn and Out server." Below this, it shows "[Hotel]" and "IPPort=" followed by a text input field containing "8000". At the bottom are three buttons: "Cancel", "< Prev", and "Next >".

RecordFormat=Avaya BCS-Server Ver. 2.x oder 3.x



The screenshot shows the same dialog box as above, but the text now says "Please choose the recordformat of the CheckIn Out server." Below this, it shows "[Hotel]" and "RecordFormat=" followed by a dropdown menu. The dropdown menu is open, showing the selected option "Avaya BCS-Server Ver. 2.x oder 3.x". At the bottom are the same three buttons: "Cancel", "< Prev", and "Next >".

4.3.3. Settings in the NovaMail.ini

The settings from the NovaLink Configuration & License Manager are taken over in the NovaMail.ini file. The file with the configurations as described above is listed below:

[Hotel]	
Load=1	'If 1 is programmed the interface starts automatically
IPAdress=127.0.0.1	'IP address of the connected server
IPPort=8000	'Port of the connected server
RecordFormat=1	'Dataset, 1=Avaya BCS-Server version. 2.x or 3.x
CheckedOutName=Vacant	'Setting name if guest checked out
SaveOriData=1	'If 1 is programmed the received data saved in file NovaInt.Log
CheckedInAnsage=101	'Announcement if somebody has checked in (only for hotel-connection)
CheckedOutAnsage=101	'Announcement if somebody has checked out (only for hotel-connection)
CheckedOutUmleitung= for hotel-connection)	'Mailbox forwarding, for check out, for example: reception mailbox (only
StandardSprache=1	'Language for check out (only for hotel-connection)
StandardCode=1234	'PIN code for check in / check out (only for hotel-connection)

4.3.4. Front Office application

The BCS supports Front Office applications. As described in **Section 4.3**, the BCS also transforms the format of incoming data sets such as Check-In or Check-Out or Message waiting Activation and Deactivation from the Front office and forwards them to the Avaya telecommunication systems or Avaya branch solutions respectively. The BCS configuration for Front Office applications is covered by **Section 4.3.2**.

5. Interoperability Compliance Testing

5.1. General Test Approach

Testing included validation of correct operation of the functions as agreed with NovaLink such as:

Normal cases:

- Incoming / outgoing calls internal / external
- Receipt of DTMF tones during incoming / outgoing calls
- Incoming calls with en-bloc number
- Incoming calls with overlap receiving
- BCS > Check-in and check-out - setting of subscriber name, setting of language via front office tool
- Connection to BC Server over IP

Supplementary services:

- Call transfer
- Call forwarding unconditional / on busy / on no reply / external
- Call with no answer - must be listed in the call log of the station

Recovery treatment

- Reconnect after disconnect of the BRI / PRI cable between NovaMail and Avaya I55 LX
- Power down the NovaMail services, start it again and wait for reconnect
- Power down the Avaya I55 LX, start it again and wait for reconnect
- BCS > Reconnect after disconnection of the network cable

5.2. Test Results

All test cases were executed and passed.

6. Verification Steps

To verify that the solution is properly configured, the following steps can be taken:

After establishing the physical connection between the NovaMail Server and the Avaya I55 LX for BRI or PRI, the correct LEDs on the associated circuit packs must be active.

Also, the initialization of the BRI or PRI (layer 1) can be observed on an ISDN monitor at the NovaMail server.

The status of the various interfaces can be checked with the BCS Administrator (**Section 4.3.1**).

A test call to the NovaMail server can be made and checked whether a voice mail can be recorded.

A test call can be made to verify that the NovaMail server can reach the Avaya I55 LX phones to deliver a voice mail.

Also, the function of message waiting indication can be checked.

7. Support

For technical support for the NovaLink NovaMail solution, please contact the technical support hotline of NovaLink:

- **Phone:** +41 52 762 6677
- **Email:** helpdesk@novalink.ch

8. Conclusion

These Application Notes describe the configuration steps required for NovaLink NovaMail to successfully interoperate with an Avaya Communication Server Integral 55 LX. A Linux based Advanced Computer Board (ACB) with software version L03 was used. Normal test cases (e.g., basic call incoming / outgoing or receiving DTMF tones and overlap receiving) were validated. Also, normal test cases with the BCS Server were executed. The available supplementary services and the error and recovery treatment of the solution were checked. The configuration described in these Application Notes has been compliance tested successfully.

9. Additional References

Additional product information from Avaya:

Avaya I55 LX:

<http://support.avaya.com/japple/css/japple?PAGE=Product&temp.productID=304366>

BCS: <http://www.avaya.de/gcm/emea/de/solutions/offers/hotcom.htm&View=SolComponents>

Additional product information from NovaLink:

<http://www.novalink.ch/index.php?id=50>

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