

Communication Server 1000 Rls 5.0
Guide:
Telecom Italia SIP

July 2008
Issue: 1.0

Copyright © 2008 Nortel Networks

All rights reserved. July 2008

The information in this document is subject to change without notice. The statements, configurations, technical data, and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. Users must take full responsibility for their applications of any products specified in this document. The information in this document is proprietary to Nortel Networks Inc.

The software described in this document is furnished under a license agreement and may be used only in accordance with the terms of that license.

Trademarks

Nortel, the Nortel logo, the Globemark, Unified Networks, and BayStack are trademarks of Nortel Networks.

All other Trademarks are the property of their respective owners.

Table of Contents

Contents

Table of Contents	3
Introduction	4
Lab Network Diagram	5
Deployment Options.....	6
Element Manager Configuration.....	9
Basic SIP trunk configuration	20
Call Server Configuration “SIP Route”	25
Call Server Configuration “SIP Trunk”	27
Call Server Configuration “Virtual DCH”	28
Call Server Configuration “CDB”	28
Call Server Configuration “CLID”	35
Call Server Configuration “CFN”	36
Call Server Configuration “SUPL”	41
Call Server Configuration “ IP Phone”.....	41
Call Server Configuration “ DLC Phone”.....	42
Call Server Configuration “ Analog Phone”.....	43
Call Server Configuration Outgoing Call.....	44
Call Server Configuration Incoming Call.....	45

Introduction

This document provides a typical network deployment of Communication Server 1000 (CS1000) utilizing the Telecom Italia Business SIP Trunking product offering. It is not possible to document every possible variation of configuration and this document should serve as general guidelines. Further information may be obtained from your Nortel support representative.

The CS1000E system is configured as a non-registered SIP endpoint on the Telecom Italia network. The example below is based upon using Public IP addresses for the sets and TLAN, and private IP addressing for the ELAN. Should Private IP addressing be utilized in the entire enterprise network, a SIP aware Firewall such as an ALG or SBC will be required for both SIP & RTP NAT/PAT.

The CS1000 does not use SIP Redirect or Proxy for Carrier SIP trunking, the SIP Virtual Gateway is simply provisioned with the SBC as the static SIP endpoint of the SIP Trunk.

The software and patch lineup for the configuration is as follows:

Call Server Software – 5.00W

Patches – Latest DEPLIST

PLUGIN - 4, 14, 15, 22, 27, 59

Signaling Server Software - 5.00.31

Patches – Latest DEPLIST, MPLR22452, MPLR26057, MPLR26072, MPLR25982

MPLR22452:Multi Fix and no MCDN on SIP

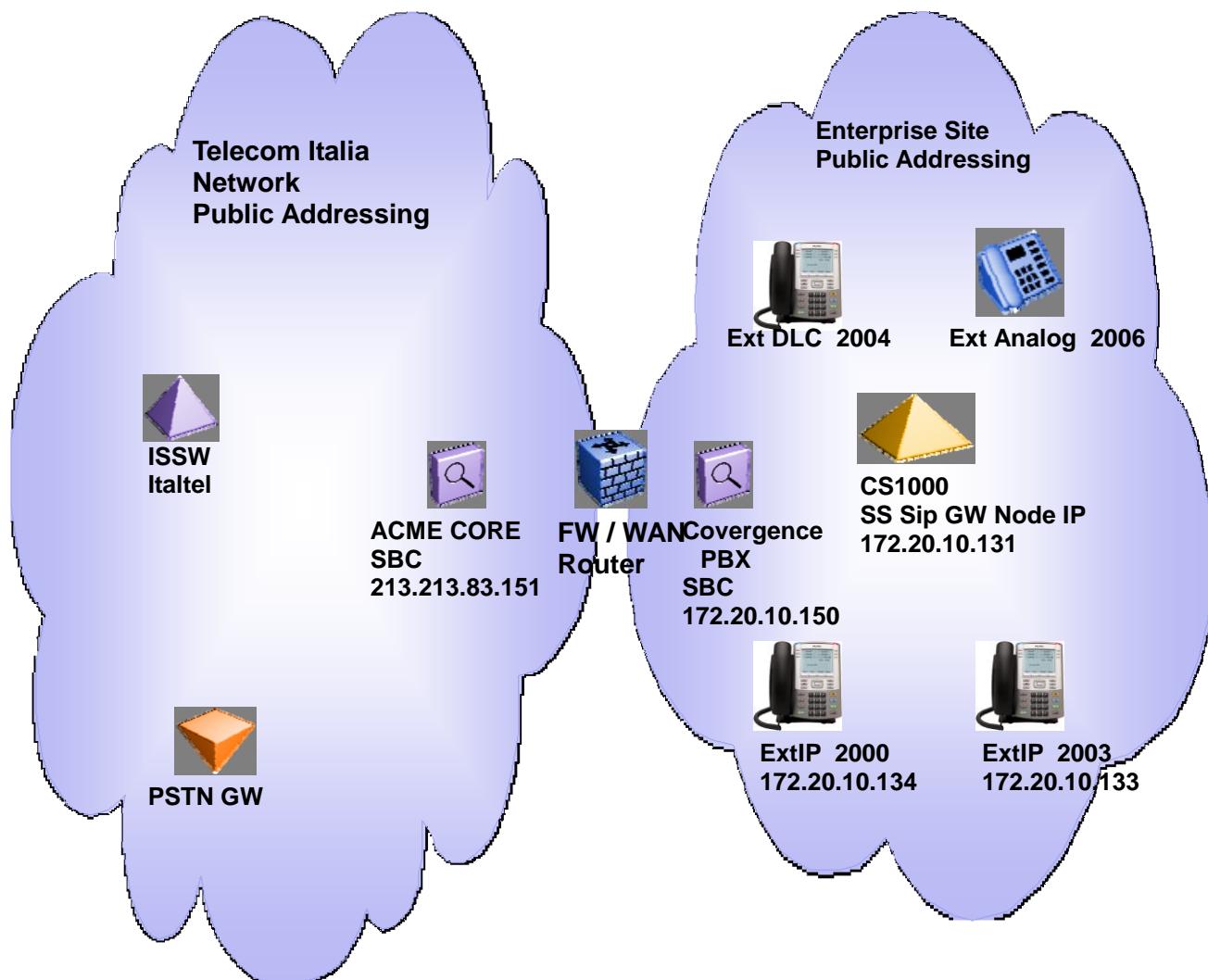
MPLR26057:FAX call

MPLR26072:Invite within the session SDP and Call Forwarding without the History info

MPLR25982: 183/SDP before 180

Users will have to utilize Enterprise Configurator (EC) to determine what specific hardware & software changes will be required prior to configuring the CS1000 to use SIP trunking to Telecom Italia. Given the flexibility in deploying the CS1000 a standard system Bill of Materials cannot be provided.

Lab Network Diagram



Deployment Options

There are a number of possible engineering options to consider when deployed SIP based trunking. The two main considerations that affect hardware and patching are redundancy and Private Networking requirements.

ISP1100 servers are shown in the diagrams below, but COTS and CP-PM servers can be used as well.

Figure 1 below depicts the simplest deployment model, utilizing one or more Signaling Servers to provide Telephone Proxy and SIP GW capability. The single Node configuration would have TPS and SIP GW applications enabled for all servers in the Node. The engineering rules for co-resident TPS and SIP GW would apply. Patching on the Signaling Servers would consist of the current DEPLIST plus the required patches to support Telecom Italia SIP Trunking. Private Networking to other Nortel products or Nortel Developer Partner products is **not** supported due to the changes the Telecom Italia specific patches introduce to the SIP signaling.

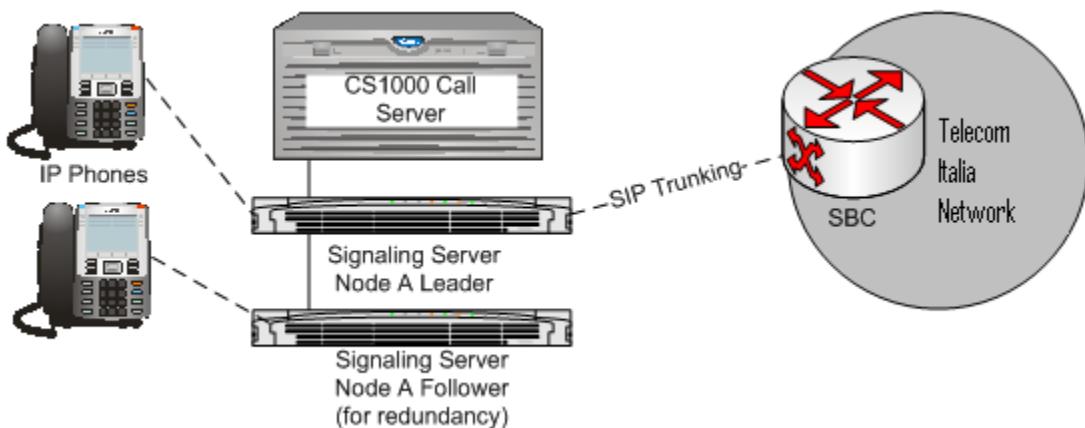


Figure 1 - Stand-Alone Communication Server and Telecom Italia Sip Trunking

In environments that will experience call rates that would exceed the co-resident TPS/SIP GW engineering recommendations, the TPS and SIP GW functionality must be split apart into different Nodes. See Figure 2 as an example where Node A is configured for TPS and is patched with the current DEPLIST. Node B is configured with SIP GW only and is patched with the current DEPLIST plus the patches required to support Telecom Italia SIP Trunking.

Note: When creating a new Node on a separate Sig Server, remember to configure a dedicated D-Channel for each Node to communicate to the Call Server.

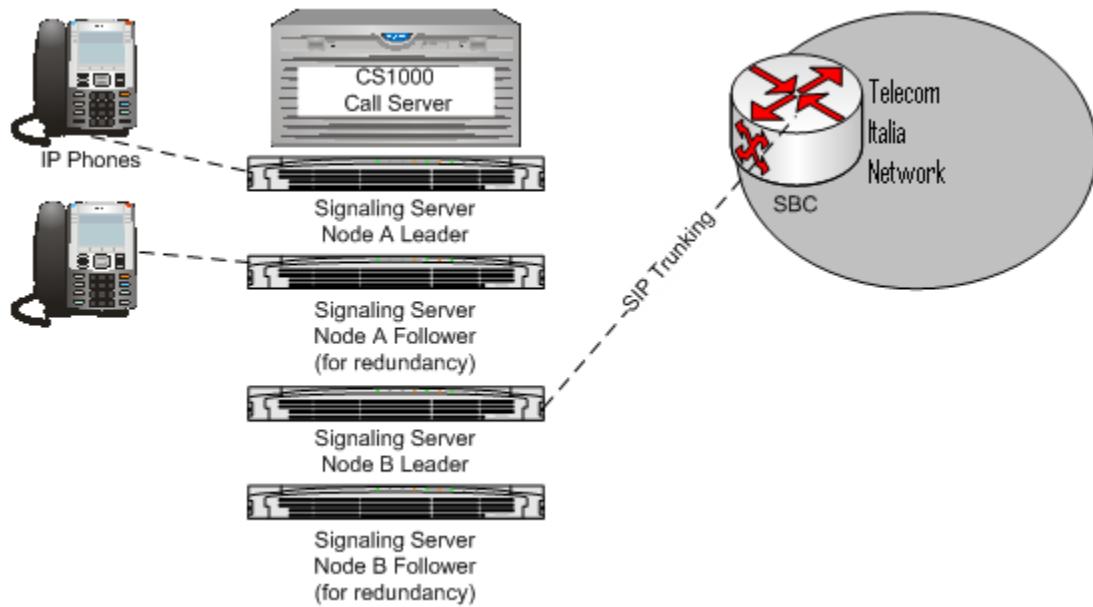


Figure 2 - Stand-Alone Communication Server and Telecom Italia Sip Trunking for High Call Volume

The deployment options become more complex when additional Call Servers or SIP Applications are introduced behind the CS1K., such as SIP DECT, OCS, ICP etc.

See Figure 3 for an example utilizing SIP Private Networking to a BCM and a SRG.

Node A is configured for TPS and SIP GW, and patched with the current DEPLIST. Node B is configured with SIP GW only and is patched with the current DEPLIST plus the patches required to support Telecom Italia SIP Trunking.

Note: A deployment using SIP Public trunking and H.323 Private Networking is not recommended due to limitations that occur when translating between the 2 protocols.

Note: When creating a new Node on a separate Sig Server, remember to configure a dedicated D-Channel for each Node to communicate to the Call Server.

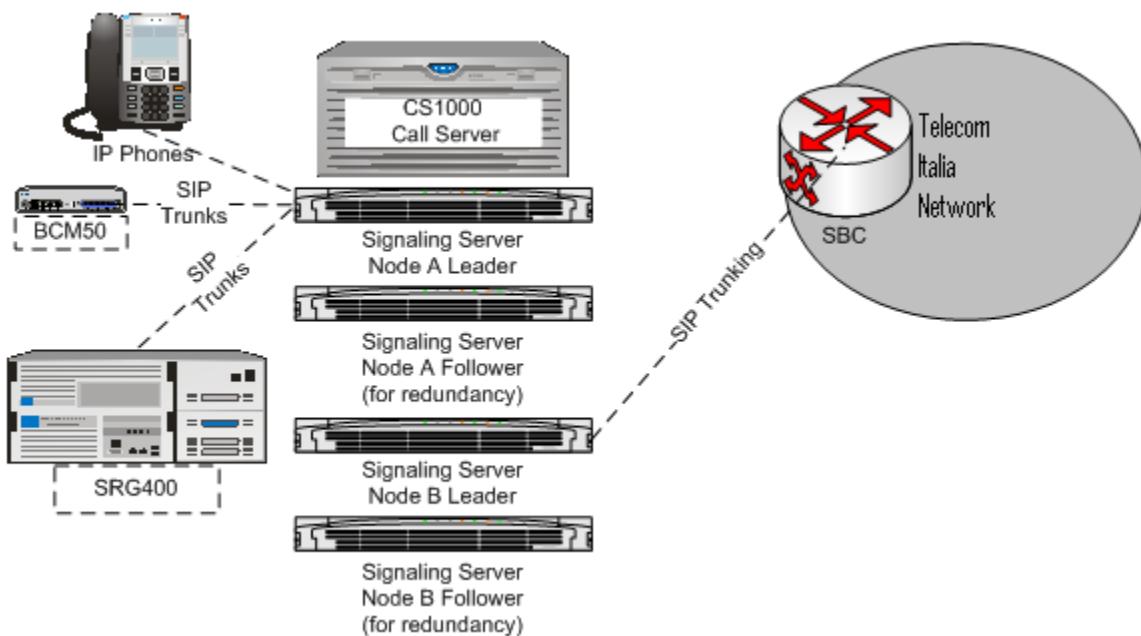
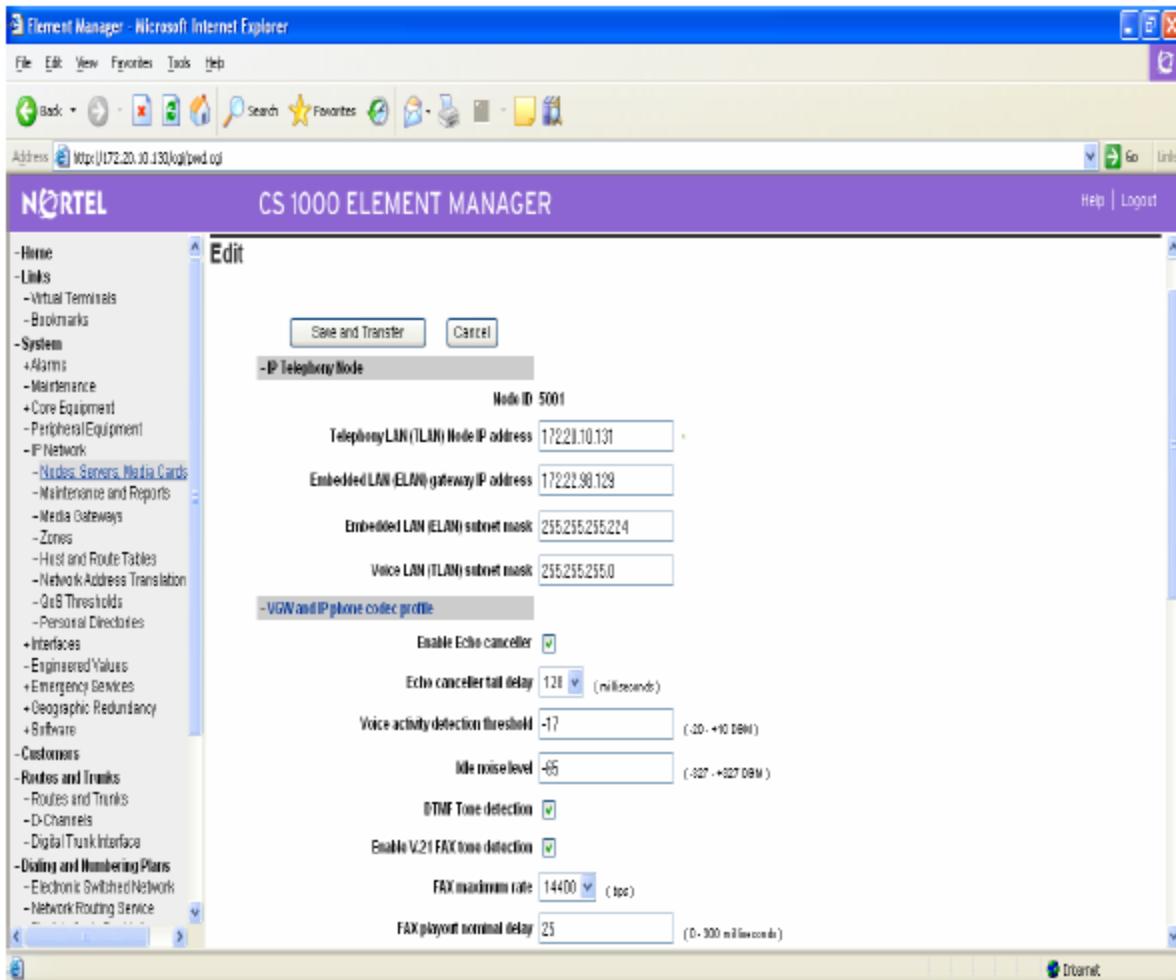


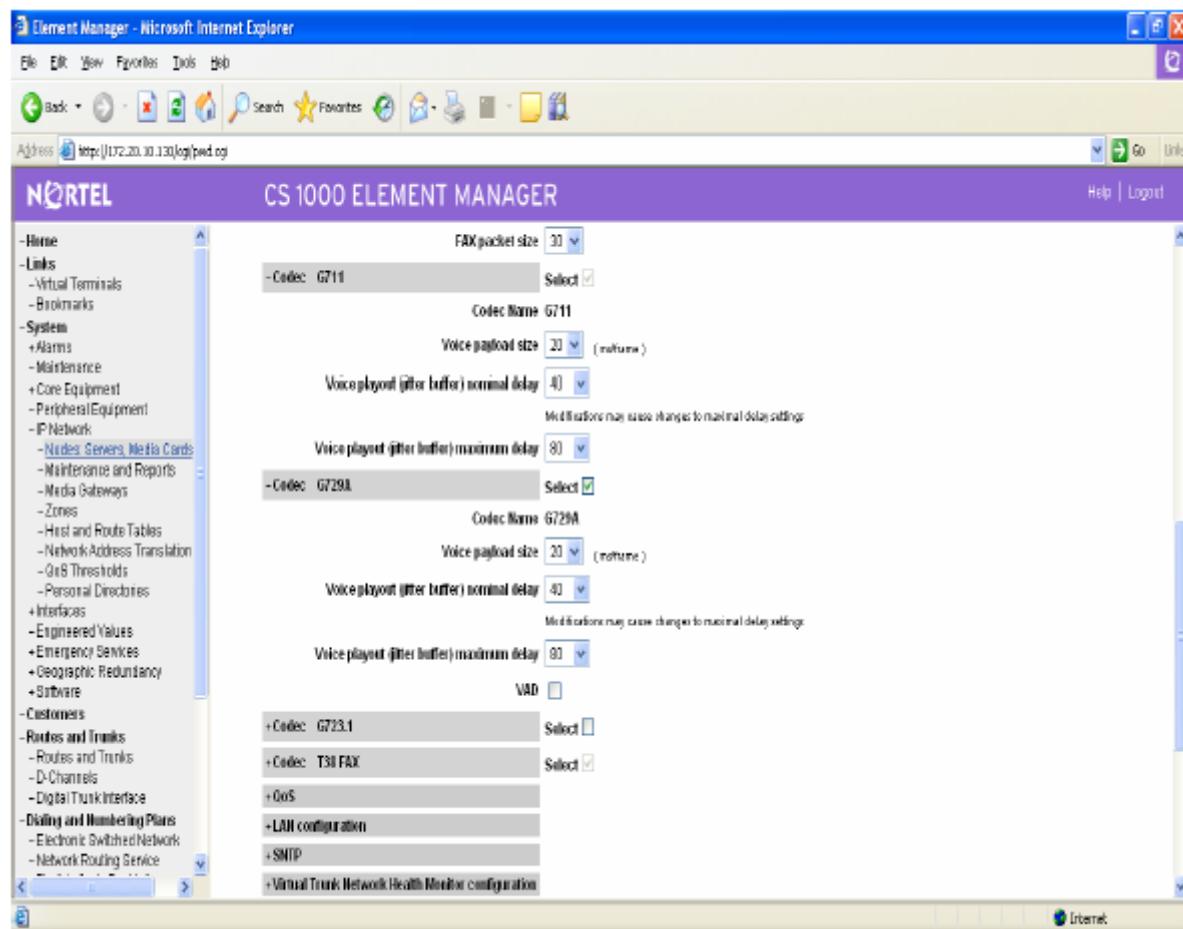
Figure 3 - Multiple Call Server with Tandem to Telecom Italia Business Sip Trunking

Element Manager Configuration

The following configuration examples are based upon the network deployment as detailed above.

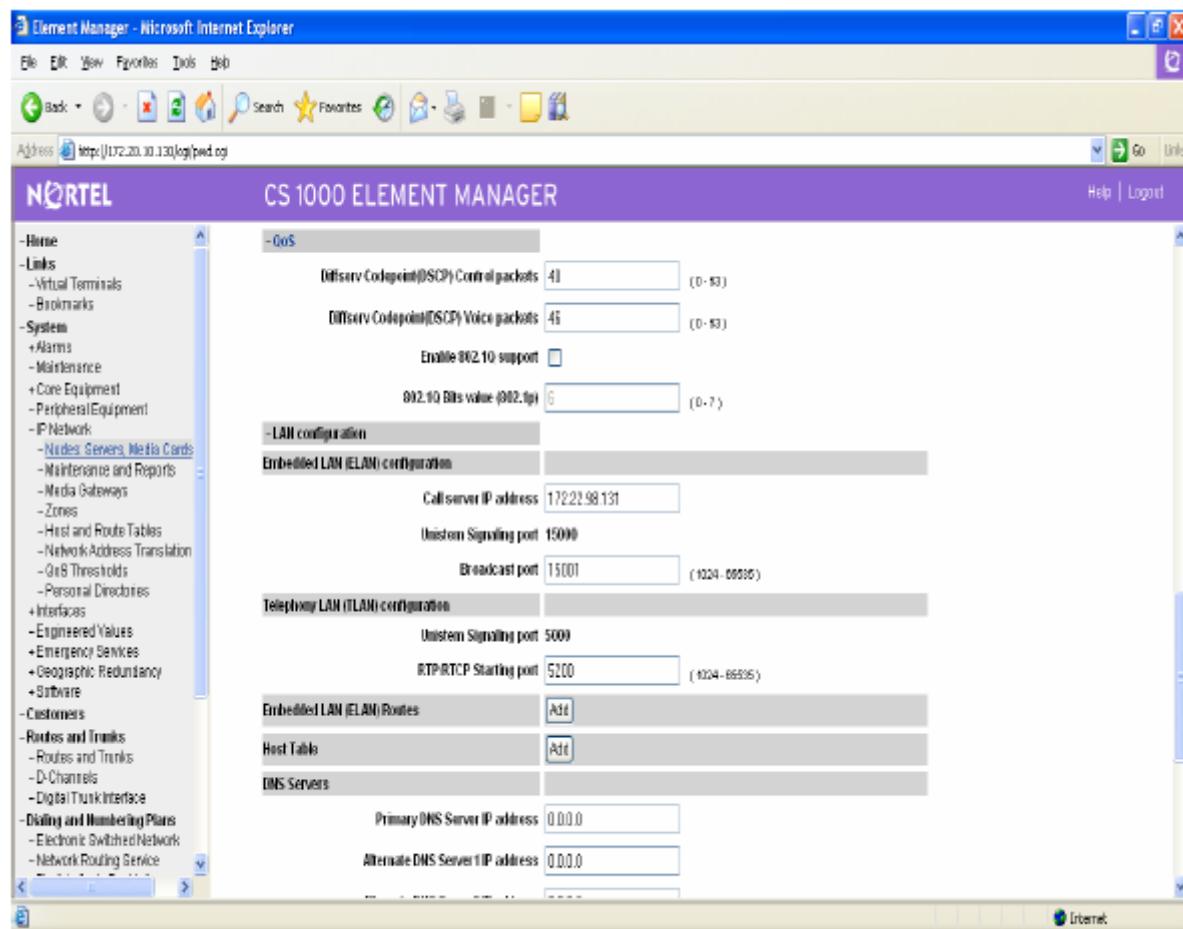


T38 is Enabled on the Telecom Italia network.



The Telecom Italia network supports both g.711 and g.729, with the preference set to g.729.

The Fax packet size is set to 20 to match the network also.



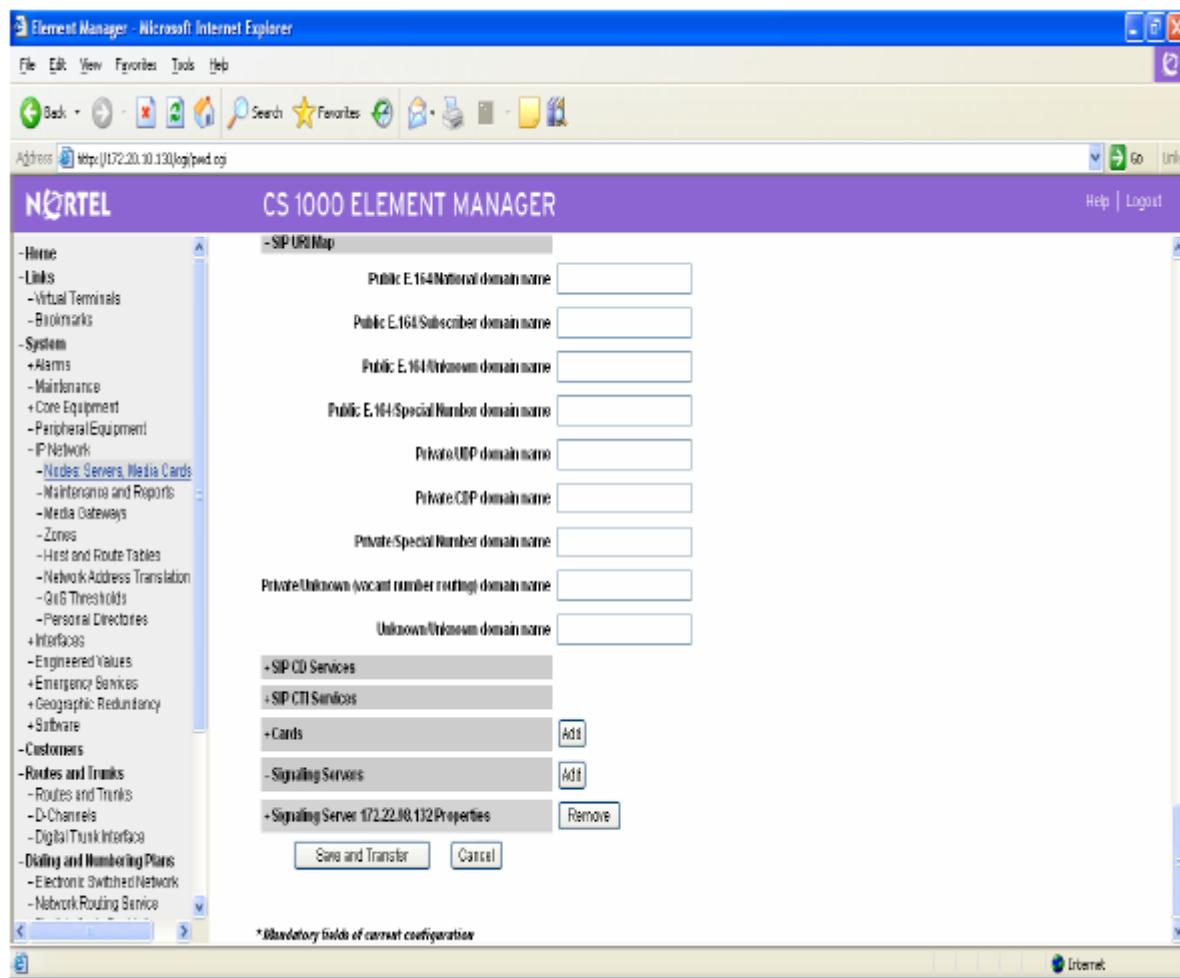
Diff Serv is required for the network, and the default values in the system are correct. The primary Proxy server is the Covergence PBX SBC IP address. All calls are routed to the SBC, then to the Telecom Italia network.

Telecom Italia also requires different port configuration, with all services fully operational on each port. This is not the typical 5060 port but is dependent on the port assigned by Telecom Italia.

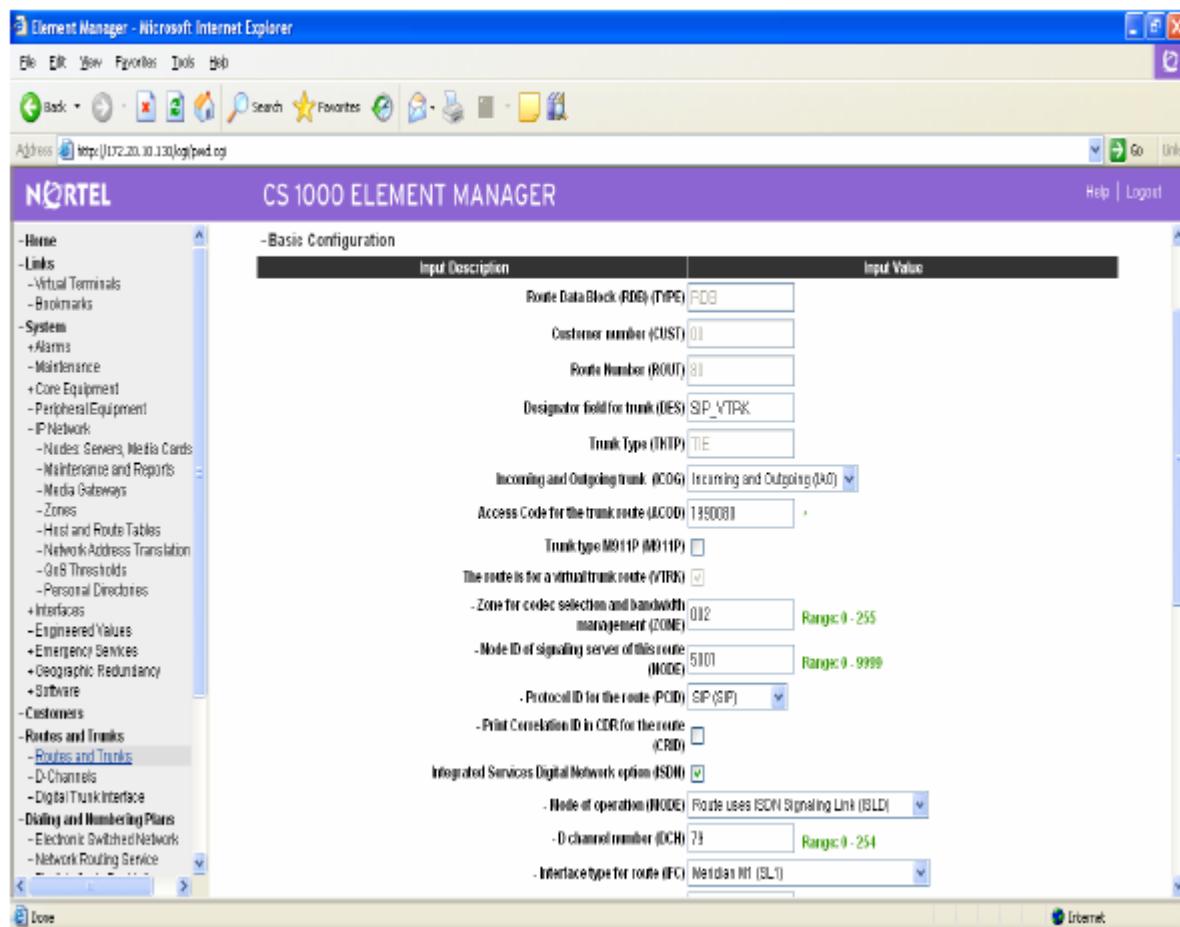
The screenshot shows the Nortel CS 1000 Element Manager interface. The left sidebar lists various system components like Home, Links, System, IP Network, and Customers. The main panel displays the properties for 'Signaling Server 172.22.98.102 Properties'. Key settings include:

- Role:** Leader
- Type:** CPPM
- Embedded LAN (ELAN) IP address:** 172.22.98.102
- Embedded LAN (ELAN) MAC address:** 00:11:00:fd:17:05
- Telephony LAN (TLAN) IP address:** 172.22.10.130
- Telephony LAN (TLAN) gateway IP address:** 172.22.10.1
- Hostname:** sigserver
- H323 ID:** cs1000
- Enable Line TPS:**
- Enable IP Peer Gateway (Virtual Trunk TPS):** SIP only
- Note:** If Telephony LAN (LAN) IP address and Telephony LAN (TLAN) gateway IP address are not in the same subnet as Telephony LAN (TLAN) Node IP address, then Line TPS or IP Peer Gateway is enabled, then the TPS and/or VTRK apply to all routes.
- Enable SIP Proxy / Redirect Server:**
- Local SIP TCP/UDP Port to Listen:** 5160
- SIP Domain name:** 213.213.81.151
- SIP Gateway Endpoint Name:** 068093462
- SIP Gateway Authentication Password:** *****

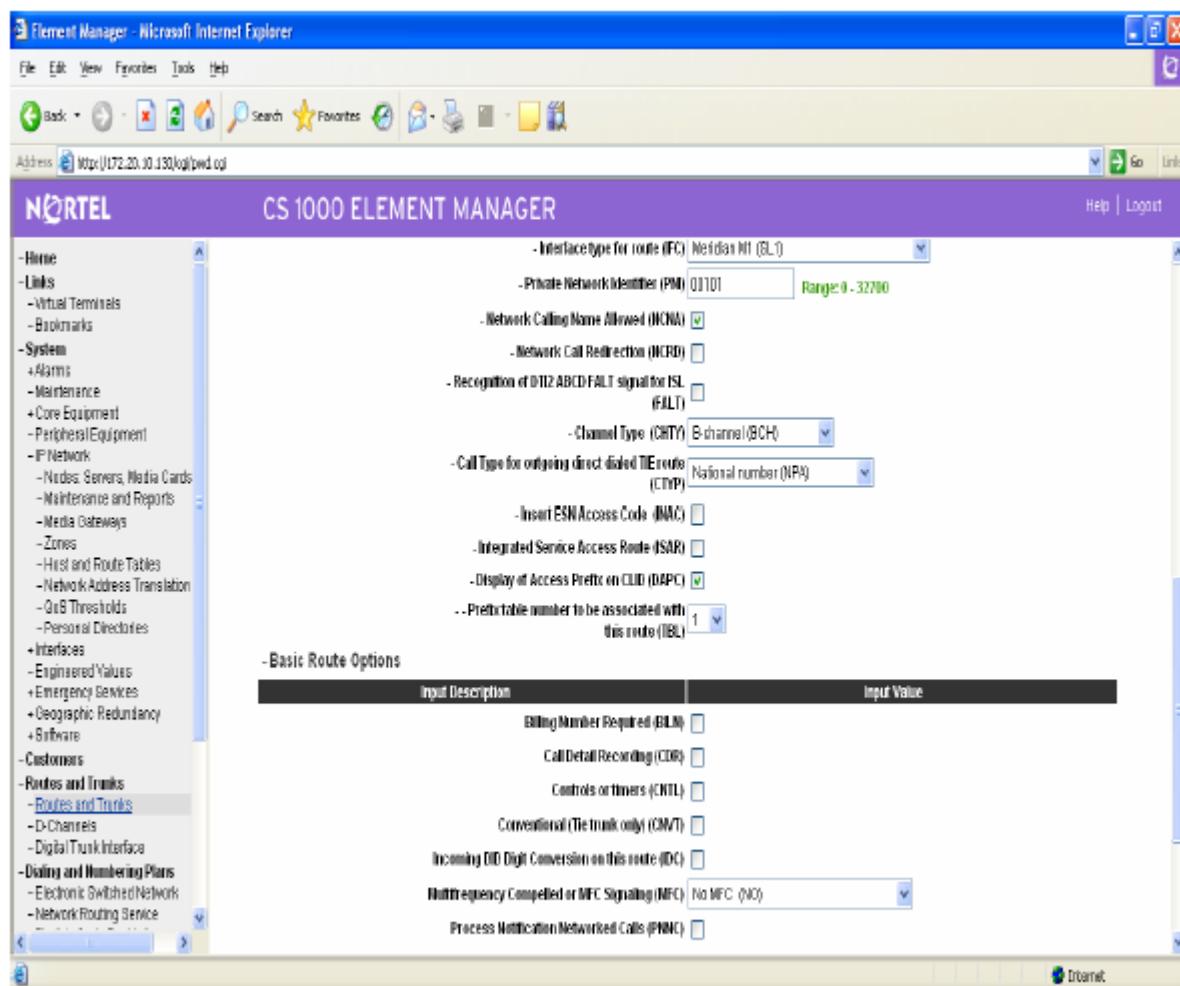
NRS is not enabled for the system, all calls are routed to the SBC for routing.



Please note that no domain information should be contained within the E.164 fields.



Basic SIP trunk route configuration, set up in a different zone than the sets.



Element Manager - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Stop Refresh Search Favorites Home Address: <http://172.20.30.130/cgi/pad.cgi> Go Links

NORTEL CS 1000 ELEMENT MANAGER

Help | Logout

- Home
- Links
- Virtual Terminals
- Bookmarks
- System
+ Alarms
- Maintenance
+ Core Equipment
- Peripheral Equipment
- IP Network
- Nidus Servers, Media Cards
- Maintenance and Reports
- Media Gateways
- Zones
- Host and Route Tables
- Network Address Translation
- QoS Thresholds
- Personal Directories
+ Interfaces
- Engineered Values
+ Emergency Routes
+ Geographic Redundancy
+ Software
- Customers
- Routes and Trunks
- Routes and Trunks
- D-Channels
- Digital Trunk Interface
- Dialing and Numbering Plans
- Electronic Switched Network
- Network Routing Services

- Network Options

Input Description	Input Value
Electronic Switched Network pad control (ESN)	<input type="checkbox"/>
Signaling arrangement (SGA)	Standard (STC) <input type="button"/>
Route Class (RCLS)	Route Class marked as external (EXT) <input type="checkbox"/>
Auticode (AUTR)	<input type="checkbox"/>

- General Options

Input Description	Input Value
M is the only Controlling Party on incoming calls (CPDC)	<input type="checkbox"/>
Dial Tone on originating calls (DTLN)	<input type="checkbox"/>
Hold failure threshold (HOLDT) 01 02 40	<input type="text"/>
Trunk Access Restriction Group (TARG)	<input type="text"/>
Alternate trunk route for outgoing trunks (STEP)	<input type="text"/> Range: 0 - 511
Actual outgoing toll digits to be ignored for Code Restriction (OABS)	<input type="text"/>
Display I/C Name (INNAME)	<input type="checkbox"/>
Enable Equal Access Restrictions (EQAR)	<input type="checkbox"/>
ACD DNS route (DNS)	<input type="checkbox"/>
Include DNS number in CDR records (ICDR)	<input type="checkbox"/>

+ Advanced Configurations

Element Manager - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address http://172.20.30.130/cgi/pwd.cgi Go Links

CS 1000 ELEMENT MANAGER

Help | Logout

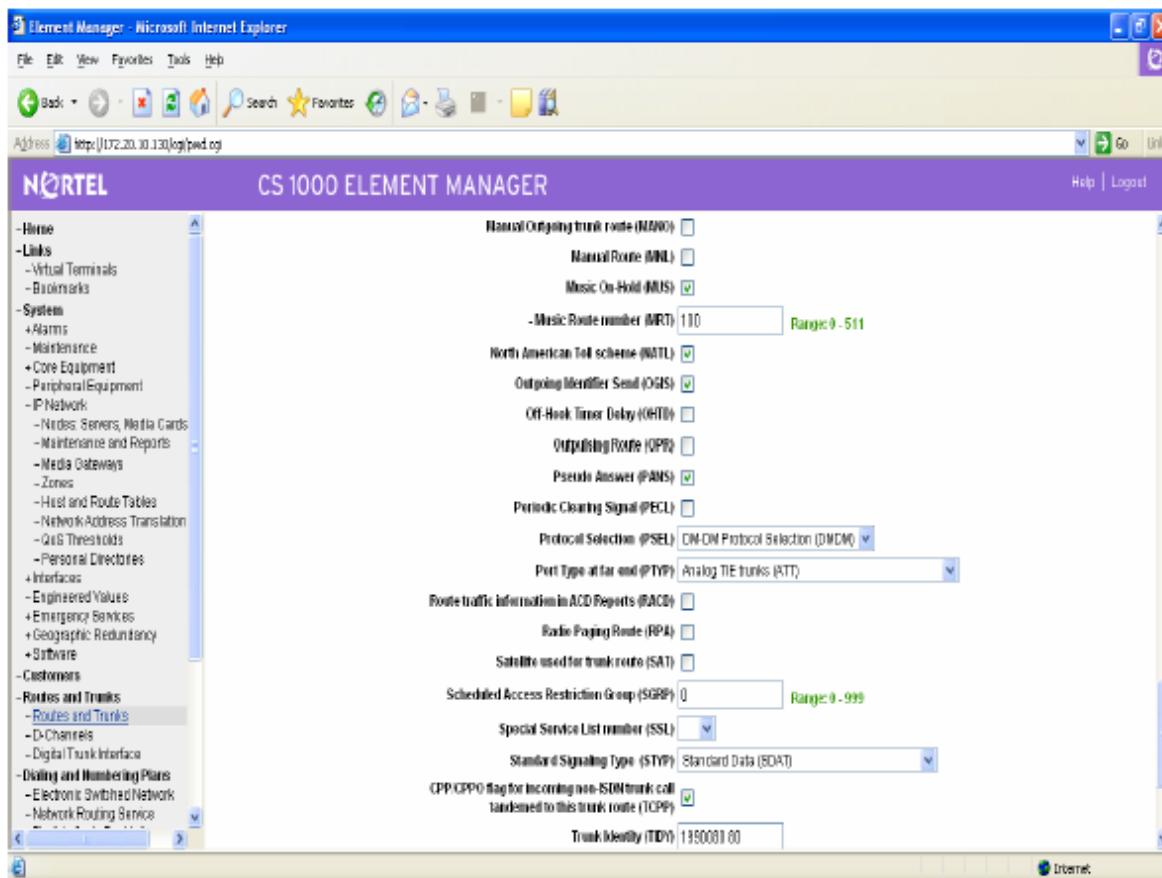
NORTEL

-Home
 -Links
 -Virtual Terminals
 -Bookmarks
 -System
 +Alarms
 -Maintenance
 +Core Equipment
 -Paraphone Equipment
 -IP Network
 -Nodes: Servers, Media Cards
 -Maintenance and Reports
 -Media Gateways
 -Zones
 -Host and Route Tables
 -Network Address Translation
 -QoS Thresholds
 -Personal Directories
 +Interfaces
 -Engineered Values
 +Emergency Services
 +Geographic Redundancy
 +Software
 -Customers
 -Routes and Trunks
 -Routes and Trunks
 -D-Channels
 -Digital/Tunck Interface
 -Dialing and Numbering Plans
 -Electronic Switched Network
 -Network Routing Services

-Advanced Configurations

Input Description	Input Value
Malicious Call Trace Alarm is allowed for external calls (ALRM)	<input type="checkbox"/>
Allow last Re-directing Number (LRDN)	ARDN (YES) <input type="button" value="▼"/>
AMIdentifier number (AMTR)	<input type="text"/>
JC15 Timed Reminder Recall (ATRR)	<input type="checkbox"/>
Auto terminate (AUTO)	<input type="checkbox"/>
Call Forward Restriction (CFWR)	<input type="checkbox"/>
Maximum number of CN digits (CLDN)	1 <input type="button" value="▼"/>
Time (in seconds) that an extension is allowed to ring or be On-Hold or Call Park before the trunk is disconnected (DCTI)	0 <input type="text"/> Range: 0 - 511
North American Distinctive Ringing for incoming calls (IRNG)	<input type="checkbox"/>
Home Local Number (HLCL)	<input type="text"/>
Home National Number (HNNR)	<input type="text"/>
In-Band Automatic Number Identification route (IANI)	<input type="checkbox"/>
Incoming Identifier Send (ICS)	<input checked="" type="checkbox"/>
Internal/External definition (IEEF)	Use network info (NET) <input type="button" value="▼"/>
Identify Originating Party (IOP)	<input type="checkbox"/>
Insert (INST)	1996 <input type="button" value="▼"/>

Internet



Element Manager - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Address: http://172.20.10.130/cgj/wd.cgi

CS 1000 ELEMENT MANAGER

Help | Logout

Customer 0, Route 80, Trunk 1 Property Configuration

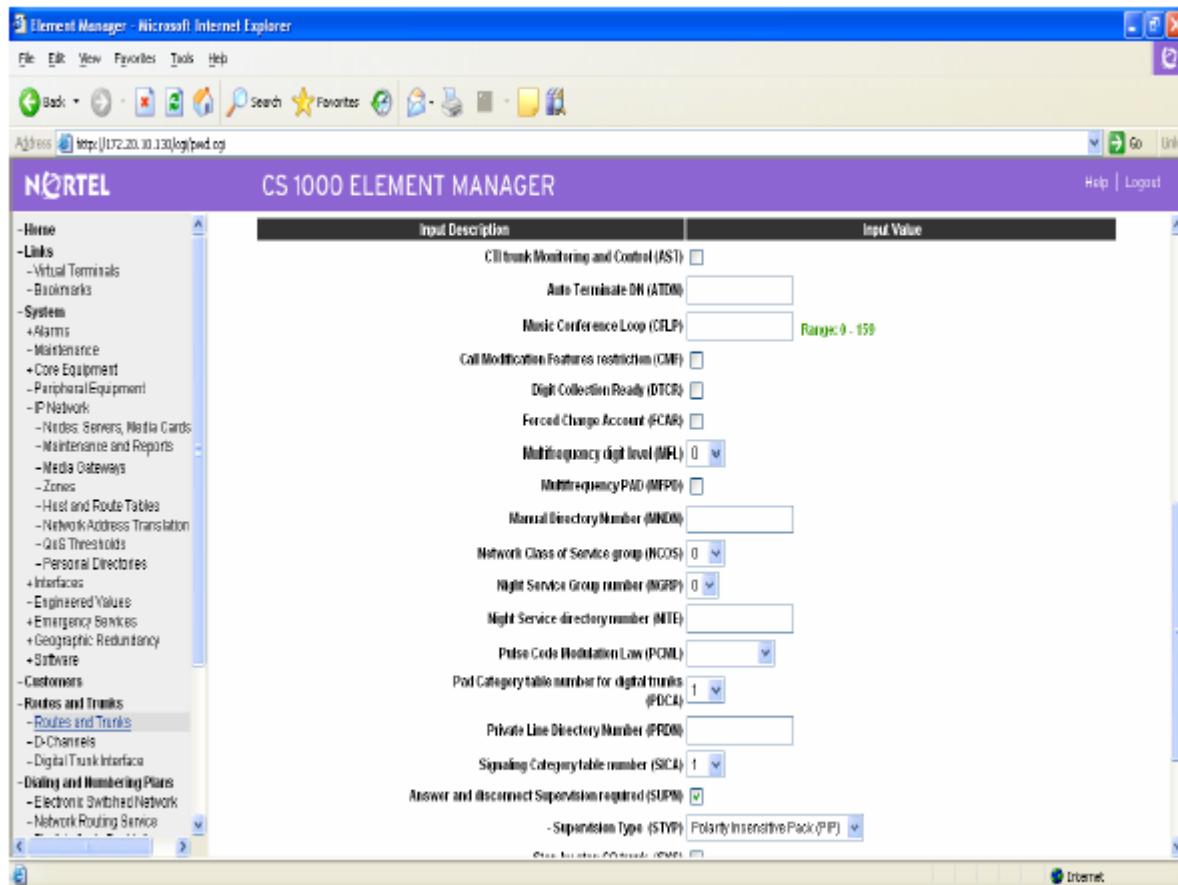
-Basic Configuration

Input Description	Input Value
Trunk data Block (TYPE)	EPT
Terminal Number (TM)	104 00 00
Designator field for trunk (DES)	SPTPK
Extended Trunk (CTRK)	VTRK
Route number, Member number (RTMB)	801
Level 1 Signaling (S1G1)	
Card Density (CDEN)	80
Start arrangement Incoming (STR)	Immediate (IMM)
Start arrangement Outgoing (STRO)	Immediate (IMM)
Trunk Group Access Restriction (TGR)	0
Channel ID for this trunk (CHD)	1
Increase or decrease the member numbers (INC)	Increase channel and member number (YES)
Class of Service (CLS)	E11

-Advanced Trunk Configurations

Input Description	Input Value
	Internet

Basic SIP trunk configuration.



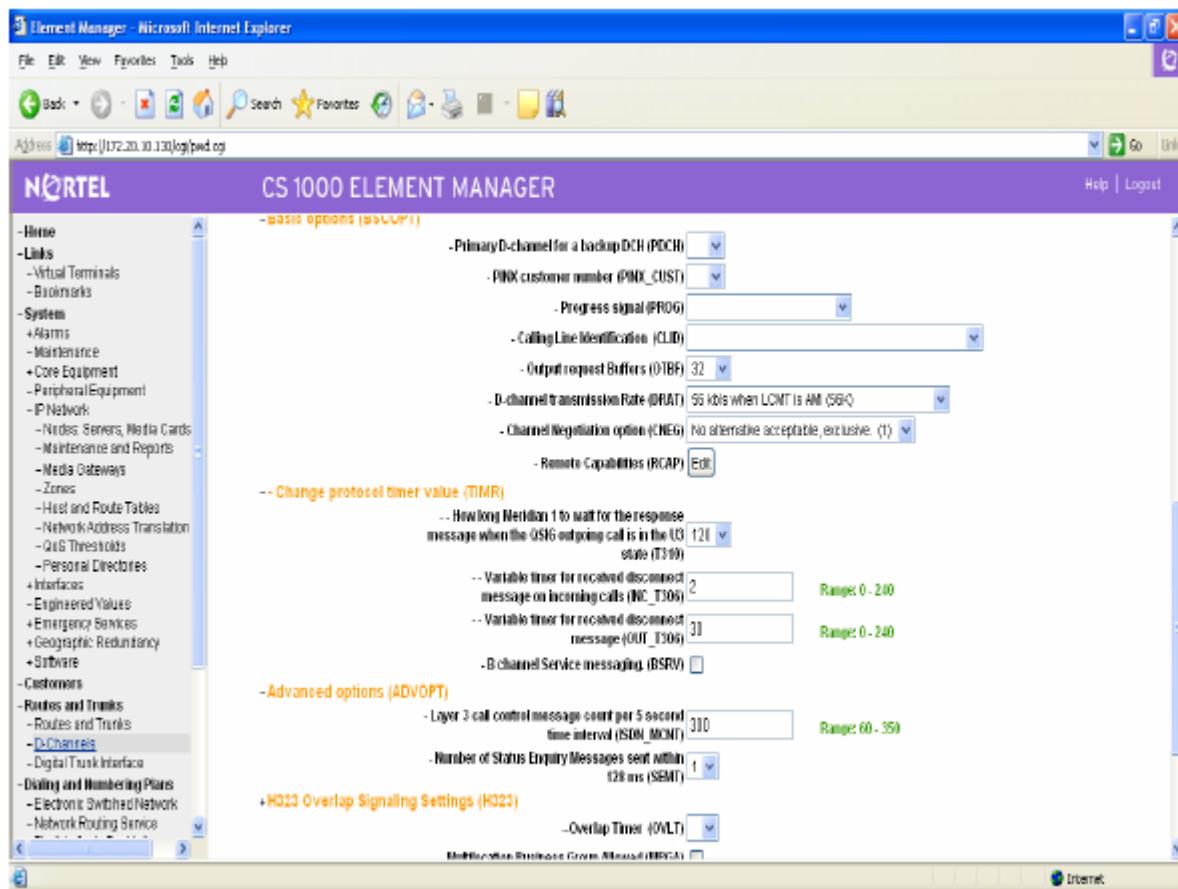
D-Channels 79 Property Configuration

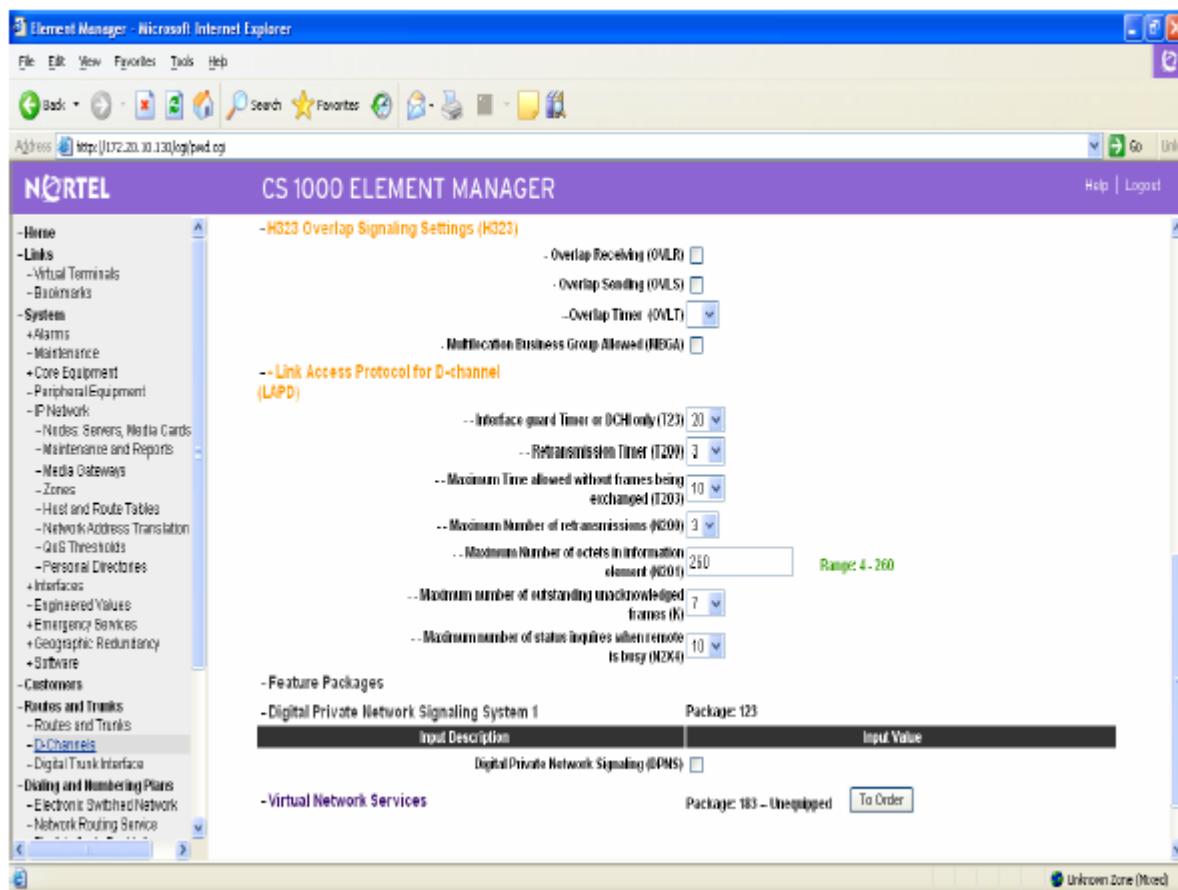
-Basic Configuration

Input Description	Input Value
Action Device And Number (ADAM) (TYPE)	DCH
D channel Card Type (CTP)	DCP
Designator (DES)	DCH_VTRK
Recovery to Primary (RUP)	
User (USR)	Integrated Services Signaling Link Dedicated (ISLD)
Interface type for D-channel (IFC)	Nortel Meridian1 (SL1)
Country (CMTY)	ETSI 301-112 basic protocol (ETSI)
D-Channel PRI loop number (OHL)	
Primary Rate Interface (PRI)	
Secondary PRI2 loops (PRI2)	
Meridian 1 mode type (SMDT)	Slave to the controller (USR)
Release ID of the switch at the far end (RLS)	4
Integrated Services Signaling Link Maximum (ISLH)	1100
Signaling Server Resource Capacity (SSRC)	1100

+Basic options (BSCOPT)
+Advanced options (ADVOPT)

DCH configuration with Meridian 1 simulation for the far end.





Call Server Configuration “SIP Route”

REQ: prt
TYPE: rdb
CUST 0
ROUT 80
TYPE RDB
CUST 00
ROUT 80
DES SIP_VTRK
TKTP TIE
NPID_TBL_NUM 0
ESN NO
RPA NO
CNVT NO
SAT NO
RCLS EXT
VTRK YES
ZONE 002
PCID SIP
CRID NO
NODE 5001
DTRK NO
ISDN YES
MODE ISLD
DCH 79
IFC SL1
PNI 00101
NCNA YES
NCRD NO
FAULT NO
CTYP NPA
INAC NO
ISAR NO
DAPC YES
TBL 1
PTYP ATT
AUTO NO
DNIS NO
DCDR NO
ICOG IAO
SRCH LIN
TRMB NO
STEP
ACOD 1990080
TCPP YES TARG
CLEN 1
BILN NO
OABS
INST 1998
IDC NO
DCNO 0 *
NDNO 0
DEXT NO
SIGO STD
STYP SDAT

MFC NO
ICIS YES
OGIS YES
TMR ICF 512
OGF 512
EOD 13952
DSI 34944
NRD 10112
DDL 70
ODT 4096
RGV 640
GTO 896
GTI 896
SFB 3
NBS 2048
NBL 4096
TFD 0
EESD 1024
SST 5 0
DTD NO
SCDT NO
2 DT NO
NEDC ORG
FEDC ORG
CPDC NO
DLTN NO
HOLD 02 02 40
SEIZ 02 02
SVFL 02 02
DRNG NO
CDR NO
NATL YES
SSL
CFWR NO
IDOP NO

MUS YES
MRT 100
PANS YES
RACD NO
MANO NO
FRL 0 0
FRL 1 0
FRL 2 0
FRL 3 0
FRL 4 0
FRL 5 0
FRL 6 0
FRL 7 0
AUTH NO
TTBL 0
ATAN NO
OHTD NO
PLEV 2
OPR NO
ALRM NO

ART 0
PECL NO
DCTI 0
TIDY 1990080 80
ATTR NO
TRRL NO
SGRP 0
ARDN YES
AACR NO

Call Server Configuration “SIP Trunk”

REQ: prt
TYPE: tnb
TN 104 0 0 0
DATE
PAGE
DES
DES SIPTRK
TN 104 0 00 00 VIRTUAL
TYPE IPTI
CDEN 8D
CUST 0
XTRK VTRK
ZONE 002
LDOP BOP
TIMP 600
BIMP 600
AUTO_BIMP NO
NMUS NO
TRK ANLG
NCOS 0
RTMB 80 1
CHID 1
TGAR 0
STRI/STRO IMM IMM
SUPN YES
AST NO
IAPG 0
CLS UNR DTN CND ECD WTA LPR APN THFD XREP SPCD MSBT
P10 NTC MID
TKID
AACR NO
DATE 10 NOV 2006
NACT

Call Server Configuration “Virtual DCH”

REQ prt
TYPE adan dch 79
ADAN DCH 79
CTYP DCIP
DES DCH_VTRK
USR ISLD
ISLM 4000
SSRC 1800
OTBF 32
NASA YES
IFC SL1
CNEG 1
RLS ID 4
RCAP ND2
MBGA NO
H323
OVLR NO
OVLS NO

Call Server Configuration “CDB”

REQ: prt
TYPE: cdb
CUST 0
TYPE CDB
CUST 00
AML_DATA
OPT DNX
VSID
GP02
GP03
GP04
GP05
GP06
GP07
GP08
GP09
GP10
GP11
GP12
GP13
GP14
GP15
ATT_DATA
OPT ABDD AHD BIND BIXA BLA BOHA DNCA DRE
DNX DRE FACD IC2 XTG IDP XLF XBL

FKA MCTD NCD CUI MWUD LOD PSD RECA
REA EHS SLD SIAD THPD ATDA

ATDN 99
NCOS 0
CWUP NO
CWCL 1 1
CWTM 0 0
CWBZ NO YES
MATT NO
RTIM 30 30 30
ATIM 0
AQTT 0
AODN
SPVC 00
SBLF NO
RTSA RSAD
SACP SNGL

ABDN NO
IRFR NO
XRFR NO

ADHT 0
AFNT 0
AFBT 0
IDBZ NO
PBUZ 02 10
ICI 00 LD0
ICI 01 LD1
ICI 02
ICI 03 RLL
ICI 04 CFB
ICI 05 CFN
ICI 06 DL0
ICI 07 DF0
ICI 08 INT
ICI 09 IAT
ICI 10 R000
ICI 11
ICI 12
ICI 13
ICI 14
ICI 15
ICI 16
ICI 17
ICI 18
ICI 19
RICI 0
AWU_DATA
AWU YES
ATRC NO
RANF
RAN1
RAN2
LA11
LA12

LA21
LA22
LA31
LA32
LA41
LA42
LA51
LA52
R2BN 00 00

R2ED 00 00
NRWU 5
TAWU 3
WUD NO
STE NO
CCS_DATA
CCRS SRE
ECC1 UNR
ECC2 UNR
CNCS 7
PELK NO
CDR_DATA
CDR NO
CHLN 0
FCAF NO
FCR_DATA
NFCR YES
MAXT 8
OCB1 255
OCB2 255
OCB3 255
IDCA YES
DCMX 50
FFC_DATA
CCRS SRE
SCPL 4
SBUP YES
FFCS NO
STRL 0
STRG
ADLD 0
DFLT_SCPW NO
FTR_DATA
DAPCPREFIX TABLE NO: 00 **
UNKN**INTL**NATL**ESPN**LOCL**ELOC**ECDP**
UNKN*
E164* 00 0
PRIV*
E163* 00 0
TELX*
X121*
NATL*

DAPCPREFIX TABLE NO: 01 **
UNKN**INTL**NATL**ESPN**LOCL**ELOC**ECDP**
UNKN* 0

E164*
PRIV*
E163*
TELX*
X121*
OPT ABDD AHD BIND BIXA BLA BOHA CFO CFRA
COX CPA CTD DBD DNCA DNX DSX DRE
DSTD FACD HTU HVD XBL IC2 IDP XLF
IHD XTG FKA LOD LRA MCI MCTD CUI
MWUD NCD PCMD PSD PVCA RECA REA RNA
RTR RTD ROX SBD SDDE SIAD SLD EHS
THPD TTAD VOBA CWRD HLPD HRLD
CXOD BWTD
DGRP 0
IRNG NO
PKND 4
DNDL NO
SPRE 1888
PREO 0
BPSS NO
SRCD NONE
EEST YES
DTMF YES
EESD NO
TTBL 0
MUS YES
MUSR 100
HCC NO
ALDN
RECD NO
PORT 0
TFDR NO
RPA NO
MCDC NO
NAUT NO
IDEF NO
MTAR NO
LEND NO
MSCD NO
CONF_DSP
CNFFIELD YES
CNF_NAME CONF
INTFIELD YES

INT_NAME I
EXTFIELD YES
EXT_NAME E
BSFE NO
ASPCT 010
FXS NO
DFLT_LANG ENG
STS_MSG
MSG01 Please leave message
MSG02 Back to work
MSG03 In a meeting
MSG04 On a conference call

MSG05 At lunch
MSG06 Busy call
MSG07 Out of the office today
MSG08 On a business trip
MSG09 Project deadline today
MSG10 Will reply after
VO_ALO NO
PCA OFF
TPDN
BFS_CFW YES
VO_CUR_ZONE_ZDM NO
VO_CUR_ZONE_TD NO
ICP_DATA
ICP NO
IMS_DATA
IMS YES
IMA YES
APL NONE
UST NO
APL NONE
UMG NO
APL NONE
INT_DATA
ACCD OVF OVF OVF ATN
CTVN OVF OVF OVF ATN
MBNR OVF OVF OVF ATN
CTRC OVF NAP OVF NAP
CLDN NAP OVF NAP NAP
NINV OVF OVF OVF ATN
NITR OVF OVF OVF ATN
NRES OVF OVF OVF ATN
NBLK OVF OVF OVF ATN
MFVOOVF OVF OVF ATN
MFVN OVF OVF OVF ATN

MFCG OVF OVF OVF ATN
LCKT BSY BSY BSY BSY
RCLE ATN OVF ATN ATN
CONG OVF
LLT OVF
DNDT BSY
ESAM OVF
LDN_DATA
OPT XLDN
DLDN NO
LDN0 1800
LDN1
LDN2
LDN3
LDN4
LDN5
ICI 00 LD0
ICI 01 LD1
ICI 02
ICI 03 RLL

ICI 04 CFB
ICI 05 CFN
ICI 06 DL0
ICI 07 DF0
ICI 08 INT
ICI 09 IAT
ICI 10 R000
ICI 11
ICI 12
ICI 13
ICI 14
ICI 15
ICI 16
ICI 17
ICI 18
ICI 19
MON_DATA
USBM NO
MPO_DATA
FMOP
RGNA STD STD
AOCS DIS ATN
RCY1 06
RCY2 04
RALL NO
CDTO 14

IFLS NO
MHLD NO
PCDS
CNFD 3
TGLD 2
DISD 1
CCDO NO
AFCO NO
ACNS NO
NET_DATA
OPT RTD
AC1 INTL NPA SPN NXX LOC
AC2
FNP YES
ISDN YES
VPNI 100
PNI 100
PINX_DN 199999
MBG 0
BSGC 65535
PFX1
PFX2
HLOC
LSC
RCNT 5
PSTN NO
TNDM 15
PCM 15
SATD 1

OCLI EXT
TNMD 15
TIDM NO
DASC
DITI YES
TRNX YES
EXTT YES
FTOP FRES
APAD 3 0
VNR NO
NIT 8
FOPT 14
CNDN
CNAT
CNIP YES
CNTC 02
NATC 39

INTC 00
NIT_DATA
NIT1 2000
TIM1
NIT2
TIM2
NIT3
TIM3
NIT4
TIM4
RPNS NO
ENS NO
OAS_DATA
ODN0
ODN1
ODN2
ODN3
ODN4
ODN5
ODN6
ODN7
ODN8
ODN9
ASTM 30
HDOPT 0
HDTM 30
RDR_DATA
OPT CFO CFRA DSTD PVCA CWRD MCI
FNAD FDN
FNAT FDN
FNAL FDN
CFTA NO
CCFWDN
CFN0 4
CFN1 4
CFN2 4
DFN0 4
DFN1 4

DFN2 4
DNDH NO
MDID NO
NDID NO
MWFB NO
TRCL 0
DFNR 0
CRT0 00 00 00 00

CRT1 00 00 00 00
CRT2 00 00 00 00
CRT3 00 00 00 00
DAY0
DAY1
DAY2
DAY3
HOLIDAY0
HOLIDAY1
HOLIDAY2
HOLIDAY3
ROA_DATA
OPT_ROX
RICI 0
TIM_DATA
FLSH 45 896
PHDT 30
DIND 30 32 30
DIDT 14 16 14
LDTT 6
DLAT 0
BOTO 14
DBRC 60
RTIM 30 30 30
ATIM 0
AQTT 0
ADLD 0
AFNT 0
NFNA 0
ADHT 0
HWTT 300
NIT 8
FOPT 14
TST_DATA

Call Server Configuration “CLID”

REQ: prt
TYPE: clid
CUST 0
SIZE 10
RNGE
INTL 39

```
ENTRY 0
HNTN 068899
ESA_HLCL
ESA_INHN NO
ESA_APDN YES
HLCL 4820
DIDN NO
HLOC
LSC
CLASS_FMT DN
ENTRY 1
HNTN 068899
ESA_HLCL
ESA_INHN NO
ESA_APDN YES
HLCL 47844
DIDN NO
HLOC
LSC
CLASS_FMT DN
ENTRY 2
HNTN 068899
ESA_HLCL
ESA_INHN NO
ESA_APDN YES
HLCL 47846
DIDN NO
HLOC
LSC
CLASS_FMT DN
```

Call Server Configuration “CFN”

```
REQ prt
TYPE cfn
ADAN HIST
SIZE 5000
USER MTC SCH BUG OSN
ADAN TTY 0
CTYP CPSI
DNUM 0
PORT 0
DES CS_Maint0
BPS 9600
BITL 8
```

```
STOP 1
PARY NONE
FLOW NO
USER MTC SCH BUG OSN
XSM NO
TTYLOG 0
BANR YES
ADAN TTY 1
CTYP MGC
IPMG 0 0
DNUM 1
PORT 1
DES CS_Maint1
BPS 9600
BITL 8
STOP 1
PARY NONE
FLOW NO
USER MTC SCH BUG OSN
XSM NO
TTYLOG 0
BANR NO
ADAN TTY 2
CTYP MGC
IPMG 0 0
DNUM 2
PORT 2
DES CS_Maint2
BPS 9600
BITL 8
STOP 1
PARY NONE

FLOW NO
USER MTC SCH BUG OSN
XSM NO
TTYLOG 0
BANR YES
ADAN TTY 13
CTYP PTY
DNUM 13
PORT 0
DES pty0
FLOW NO
USER MTC SCH BUG OSN
XSM NO
TTYLOG 0
BANR YES
```

ADAN TTY 14
CTYP PTY
DNUM 14
PORT 1
DES pty1
FLOW NO
USER MTC SCH BUG OSN
XSM NO
TTYLOG 0
BANR YES
ADAN TTY 15
CTYP PTY
DNUM 15
PORT 2
DES pty2
FLOW NO
USER MTC SCH BUG OSN
XSM NO
TTYLOG 0
BANR YES
ADAN ELAN 16
CTYP ELAN
DES ELAN
N1 512
ADAN DCH 79
CTYP DCIP
DES DCH_VTRK
USR ISLD
ISLM 4000
SSRC 1800
OTBF 32

NASA YES
IFC SL1
CNEG 1
RLS ID 4
RCAP ND2
MBGA NO
H323
OVLR NO
OVLS NO
PARM
LPIB 3500
HPIB 3500
500B 2000
SL1B 160

DTIB 0
DTOB 0
NCR 20000
MGCR 25
CSQI 255
CSQO 255
TUBO NO
NCPU 1
CFWS NO
PCML A
ALRM YES
ERRM ERR BUG AUD
DTRB 100
ABCD NO
TMRK 128
FCDR OLD
PCDR NO
TPO NO
TSO NO
CLID NO
DUR5 NO
MLDN YES
MARP NO
IPIE NO
FRPT NEFR
DCUS 5
DTDT NO
MSCL 255
PMSI
MANU PMS1
PMCR 30
PORT NONE

NDIS 20
OCAC NO
MTRO MR
SBA_ADM_INS 001
SBA_USER 010
BCAP SPEECH
IDLE_SET_DISPLAY NORTEL
ICON YES
MSEC OFF
CEQU
MPED 8D
TERM
REMO

TERD
REMD
TERQ
REMQ
SUPL V000 N096 V100 V104
SUPC
SUPF
DDCS MG_CARD
DTCS
XCT
CONF
MGTDS IPMG IPMG_TYPE
124 000 0 MGC
MGCONF IPMG PORTS IPMG_TYPE
125 000 0 30 MGC
MFSD * 124
APVL
DTI2 MG_CARD
MISP MG_CARD
SYNM 0
EXT0 3PE
EXT1 3PE
MCFN 011 MB
OVLY
SID 0
BKGD 044
PBXH 01
TODR 01
DROL 030 034 038 043 044 135
MID_SCPU NO
CY45 00
MULTI_USER ON
VAS

VSID 016
DLOP
ELAN 016
SECU YES
INTL 0001
MCNT 9999
ATRN
CODE 2
SOLR 7
ROLR +45.00
AOLR +39.90
TOLR -45.00

AGCD YES
 VOLR YES
 HRLR +42.00
 HTLR -44.00
 ESA
 LIS NONE
 DYNAMIC_ELIN_TIMEOUT 180
 DYNAMIC_ELIN_REUSE YES

Call Server Configuration “SUPL”

```

REQ prt
TYPE supl
SUPL
SUPL SUPT SLOT XPEC0 XPEC1 SHLF ZONE0/1 IPR0/1
000 IPMG ----- 0 001 172.22.98.130
1 -----
096 ----- PHANTOM -----
100 ----- VIRTUAL -----
104 ----- VIRTUAL -----
  
```

Call Server Configuration “IP Phone”

```

REQ: prt
TYPE: tnb
TN 100 0 1 1
DATE
PAGE
DES
DES 1120
TN 100 0 01 01 VIRTUAL
TYPE 1120
CDEN 8D
CTYP XDLC
CUST 0
NUID
NHTN
CFG_ZONE 010
CUR_ZONE 010
ERL 25610
ECL 0
FDN 2003
TGAR 0
LDN NO
NCOS 0
SGRP 0
RNPG 100
SCI 0
SSU 0001
LNRS 16
XLST
SCPW 1111
SFLT NO
CAC_MFC 0
CLS TLD FBD WTA LPR PUA MTD FNA HTA TDD HFA CRPA
MWA LMPN RMMD SMWD AAD IMD XHD IRA NIA OLA VCE DRG1
POA DSX VMD SLKD CCSD SWD LNA CNDA
CFTD SFD MRD DDV CNIA CDCA MSID DAPA BFED RCBD
ICDD CDMC MCTD CLBD AUTU
GPUD DPUA DNDA CFXA ARHD CLTD ASCD
CPFA CPTA ABDD CFHD FICD NAID BUZZ AGRD MOAD
UDI RCC HBTD AHA IPND DDDA NAMA MIND PRSD NRWD NRCD NROD
DRDD EXR0
USRA ULAD RTDD RBDD RBHD PGND OCBD FLXD FTTC DNDY DNO3 MCBN
FDSD NOVD VOLA VOUA CDMR ICRD MCDD T87D KEM3 MSNV FRA PKCH
CPND_LANG ROM
RCO 0
HUNT 03481580185
LHK 0
LPK 16
PLEV 02
DANI NO
  
```

```

AST
IAPG 0
AACS NO
ITNA NO
DGRP
MLWU_LANG 0
MLNG ITA
DNDR 0
KEY 00 MCR 2000 0 MARP
01 MCR 2000 0
02 ADL 16 03481580185
03 ADL 16 03486919602
04
05
06
07
08
09
10
11
12
13
14
15
16 MWK 2222
17 TRN
18 AO6
19 CFW 16 2005
20 RGA
21 PRK
22 RNP
23
24 PRS
25 CHG
26 CPN
27
28
29
30
31

```

Call Server Configuration “DLC Phone”

```

REQ: prt
TYPE: tnb
TN 0 0 7 0
DATE
PAGE
DES
DES 3904
TN 000 0 07 00 VIRTUAL
TYPE 3904
CDEN 8D
CTYP XDLC
CUST 0
ERL 0
FDN
TGAR 0
LDN NO
NCOS 0
SGRP 0
RNPG 100
SCI 0
SSU 0001
LNRS 16
XLST
SCPW 1111
SFLT NO
CAC_MFC 0
CLS CTD FBD WTA LPR PUA MTD FND HTD TDD HFA GRLD CRPA STSD
MWA LMPN RMMD SMWD AAD IMD XHD IRA NIA OLA VCE DRG1
POA DSX VMD SLKD CCSA-CSI SWD LNA CNDA
CFTD SFD MRD DDV CNIA CDCA MSID DAPA BFED RCBD
ICDD CDMD MCTD CLBD AUTU
GPUD DPUA DNDA CFXA ARHD CLTD ASCD
CPFA CPTA ABDD CFHD FICD NAID BUZZ AGRD MOAD
UDI RCC HBTD AHA IPND DDGA NAMA MIND PRSD NRWD NRCD NROD
DRDD EXR0
USRD ULAD RTDD RBDD RBHD PGND OCBD FLXD FTTC DNDY DNO3 MCBN
FDSD NOVD CDMR MCDD T87D PKCH
CPND_LANG ROM
RCO 0
HUNT
LPK 16
PLEV 02
DANI NO
AST

```

```
IAPG 0
AACS NO
ITNA NO
DGRP
MLWU_LANG 4
MLNG ITA
DNDR 0
KEY 00 SCR 2004 1 MARP
01 ADL 16
02 ADL 16
03 ADL 16
04 ADL 16
05 ADL 16
06 ADL 16
07 ADL 16
08 ADL 16
09 ADL 16
10 ADL 16
11 ADL 16
12
13
14
15
16
17 TRN
18 AO6
19 CFW 16
20 RGA
21 PRK
22 RNP
23
24 PRS
25 CHG
26 CPN
27 CLT
28 RLT
29
30
31
```

Call Server Configuration “Analog Phone”

```
REQ PRT
TYPE:
TYPE TNB
TN 0 0 3 0
DATE
PAGE
DES
DES 500
TN 000 0 03 00 VIRTUAL
TYPE 500
CDEN 4D
CUST 0
ERL 00000
WRLS NO
DN 2006 2 MARP
AST NO
IAPG 0
HUNT
TGAR 0
LDN NO
NCOS 0
SGRP 0
RNPG 100
XLST
SCI 0
```

SCPW
SFLT NO
CAC_MFC 0
CLS UNR DTN FBD XFD WTA THFD FND HTD ONS
LPR XRD AGRD CWD SWD PUA MWD RMMD SMWD LPD XHD SLKD CCSD LND TVD
CFTD SFD MRD C6D CNID CLBD AUTU
ICDD CDMD EHTD MCTD
GPUD DPUD CFXD ARHD OVDD AGTD CLTD LDTD ASCD
TSA MBXD CPFA CPTA UDI RCC HBTD IRGD IAMD DDGA NAMA MIND
NRWD NRCD NROD SPKD CRD PRSD MCRD
EXR0 SHL ABDD CFHD DNDY DNO3
CWND USRD BNRD OCBD RTDD RBDD RBHD FAXD CNUD CNAD PGND FTTC
FDSD NOVD CDMR MCDD T87D PKCH
PLEV 02
AACS NO
MLWU_LANG 0

Call Server Configuration Outgoing Call

The Outgoing Call must be modify the NUM PLAN with DMI from SPN to NPA

LD 90
REQ prt
CUST 0
FEAT net
TRAN ac1
TYPE spn
SPN 0
FLEN 10
RLI 80
LD 86
REQ prt
CUST 0
TYPE RLB
RLI 80
ENTRY 0

.....
ROUTE 80 (SIP Route)

DMI 80
REQ prt
CUST 0
TYPE DGT
DMI 80

.....
CTYP npa

Example Call Trace DCH

DCH 79 OMSG SETUP REF 00000194 CH 104 0 0 00 TOD 14:25:02

FEAT :NAS
FEAT :CRID

FEAT :CDS

FEAT :NCID

PROGRESS: ORIG ADDR IS NOT ISDN

CALLING #:0688994820 **NUM PLAN: E164/NATIONAL / NPA**

CALLED #:0651529316 **NUM PLAN: E164/NATIONAL / NPA**

Call Server Configuration Incoming Call

In order to configure the SIP DDI you have two choices:

1. Under the SIP Route at the prompt INST insert the number, and create the LSC with the same number, and associate the DMI with DEL = Number INST + DDI Number and INST the digit of internal num plane

Example:

DDI Number 068899482x

Extensions from 2000 to 2009

LD 21

REQ prt

TYPE rdb

CUST 0

ROUTE 80 (SIP Route)

.....

INST 1998

LD 86

REQ prt

CUST 0

TYPE DGT

DMI 180

DEL 13

INST 200

.....

CTYP npa

LD 87

REQ prt

CUST 0

FEAT cdp

TYPE lsc

LSC 1998

DMI 180

2. Under the SIP Route at the prompt IDC insert the IDC 10 created before with IDGT the DDI Number and CDGT the digit of internal num plane.

Example:

DDI Number 068899482x

Extensions from 2000 to 2009

LD 49

REQ prt

TYPE idc

CUST 0

DCNO

DCNO 10

SDID NO

IDGT CDGT

068899482 200

The information in this document is subject to change without notice. The statements, configurations, technical data, and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. Users must take full responsibility for their applications of any products specified in this document. The information in this document is proprietary to Nortel Networks. Nortel, the Nortel logo and the Globemark are trademarks of Nortel Networks.