

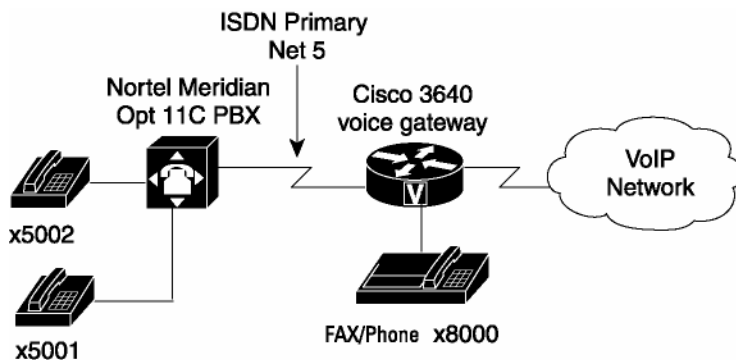
Cisco 3640 Gateway - PBX Interoperability: Nortel Meridian Opt 11C PBX using E1 ISDN Primary Net5 Interfaces to an H.323 Gateway

Introduction

- This note describes the interoperability between the Nortel Meridian Opt 11C PBX using E1 ISDN primary Net5 interfaces to a Cisco 3640XM gateway.
- The Network Topology diagram shows the end-to-end interoperability.

Network Topology

Figure 1. Network Topology



Limitations

- Nortel Opt11C Release 25 (or older) does not support Calling/Called Name display with ISDN NET5 EURO protocol.

System Components

Hardware Requirements

- Nortel Meridian Opt11C PBX
- Cisco 3640 gateway
- NM-HDV-2E1

Software Requirements

- Cisco IOS Software Release 12.2(13)T
- PBX Software Release, 25

Configuration

Configuring the Nortel Meridian Opt11



Configuration Tasks

Perform the configuration tasks in the following order:

- Configure common equipment (CEQU)
- Configure D-channel (ADAN)
- Configure Route Date Block (RDB)
- Configure Trunk (TNB)
- Configure Digital Phone

PBX Configuration Menus and Commands

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Note: For Nortel EURO protocol, in order to change the side to NETWORK, under LD17(ADAN) and LD16(RDB), the CNTY has to be set to NET.

Configure Common Equipment

ld 22

PT2000

MARP NOT ACTIVATED

TYPE cequ

CEQU

MPED 8D

SUPL 000 004 008 012

016 032 036 040

044 048 064 068

072

DDCS

DTCS

XCT 000

CONF 029 030 031 062

094 095

PRI2 05

APVL

DTI2

MISP 002

REQ



Configure D-channel

ld 22

PT2000

MARP NOT ACTIVATED

REQ prt

TYPE adan dch 5

ADAN DCH 5

CTYP MSDL

CARD 05

PORT 1

DES euronet

USR PRI

DCHL 5

OTBF 32

PARM RS422 DTE

DRAT 64KC

CLOK EXT

IFC EURO

CNTY NET (set to USR if user side)

PINX_CUST 0

ISDN_MCNT 300

CLID OPT1

PROG NCHG

CO_TYPE STD

SIDE NET

CNEG 1

RLS ID **

RCAP COLP

MBGA NO

OVLN NO

OVLS NO

T310 120

INC_T306 120

OUT_T306 120

T200 3

T203 10

N200 3

N201 260

K 7

REQ ****



Configure Route Data Block

```
ld 21
PT1000

REQ: prt
TYPE: rdb
CUST 0
ROUT 105
TYPE RDB
CUST 00
DMOD
ROUT 105
DES EURONET
TKTP TIE
NPID_TBL_NUM 0
ESN NO
RPA NO
CNVT NO
SAT NO
RCLS EXT
DTRK YES
BRIP NO
DGTP PRI2
ISDN YES
    MODE PRA
    IFC EURO
    CNTY NET
    SBN NO
    PNI 00001
    NCNA NO
    NCRD NO
    CTYP UKWN
    INAC NO
    ISAR NO
    CPFXS YES
    DAPC NO
    INTC NO
DSEL VOD
PTYP DTT
AUTO NO
DNIS NO
DCDR NO
ICOG IAO
SRCH RRB
TRMB YES
STEP
ACOD 705
TCPP NO
TARG 01
```



BILN NO
OABS
INST
SIGO STD
MFC NO
ICIS YES
OGIS YES
TIMR ICF 1920
OGF 1920
EOD 13952
LCT 256
NRD 10112
DDL 70
ODT 4096
RGV 640
GTO 896
GTI 896
SFB 3
PRPS 800
NBS 2048
NBL 4096
IENB 5
TFD 0
VSS 0
VGD 6
DTD NO
SCDT NO
2 DT NO
DRNG NO
CDR NO
NATL YES
SSL
CFWR NO
IDOP NO
VRAT NO
MUS NO
PANS YES
OHQ NO
OHQT 00
CBQ NO
AUTH NO
TTBL 0
PLEV 2
OPR NO
ALRM NO
ART 0
PECL NO
DCTI 0
TIDY 705 105
SGRP 0



AACR NO

REQ: ****

Configure Trunk

ld 20
PT0000
MARP NOT ACTIVATED

REQ: prt
TYPE: tnb
TN 5 1
DATE
PAGE
DES
TN 005 01
TYPE TIE
CDEN SD
CUST 0
TRK PRI2
PDCA 1
PCML A
NCOS 0
RTMB 105 1
B-CHANNEL SIGNALING
TGAR 0
AST NO
IAPG 0
CLS UNR DTN CND WTA LPR APN THFD XREP BARD
P10 VNL
TKID
DATE 21 MAR 2003

NACT ****

Configure Digital Phone

ld 11

SL1000
MARP NOT ACTIVATED

MEM AVAIL: (U/P): 1309814 USED U P: 59305 23520 TOT: 1392639
DISK RECS AVAIL: 489
TNS AVAIL: 2455 USED: 45 TOT: 2500
ACD AGENTS AVAIL: 10 USED: 0 TOT: 10



AST AVAIL: 1000 USED: 0 TOT: 1000
DATA PORTS AVAIL: 2499 USED: 1 TOT: 2500
DIGITAL TELEPHONES AVAIL: 44 USED: 4 TOT: 48
INTERNET TELEPHONES AVAIL: 0 USED: 0 TOT: 0

REQ: prt
TYPE: 2616
TN 1 0 0 0
DATE
PAGE
DES

DES TEST1
TN 001 0 00 00
TYPE 2616
CDEN 8D
CUST 0
AOM 0
FDN
TGAR 0
LDN NO
NCOS 0
SGRP 0
RNPG 0
SCI 0
SSU
XLST
SFLT NO
CAC_MFC 0
CLS CTD FBD WTA LPR MTD FND HTD ADD HFD
MWD LMPN RMMD SMWD AAD IMD XHD IRD NID OLD VCE DRG1
POD DSX VMD CMSD CCSD SWD LND CNDA
CFTD SFD MRD DDV CNID CDCA MSID DAPA BFED RCB
ICDD CDMD MCTD CLBD AUTU
GPUD DPUD DNDA CFXA ARHD CLTD ASCD
ABDD CFHD FICD NAID BUZZ AGRD MOAD
UDI RCC HBT D AHD IPND DDGA NAMA MIND PRSD NRWD NRCD NROD
DRDD EXR0
USRD ULAD RTDD RBDD RBHD PGND FLXD FTTC DNDY DNO3 MCBN
CPND_LANG ENG
HUNT
PLEV 02
AST
IAPG 0
AACS NO
ITNA NO
DGRP
MLWU_LANG 0
DNDR 0
KEY 00 SCR 5001 0 MARP



```
CPND
  CPND_LANG ROMAN
  NAME BIG BIRD
  XPLN 27
  DISPLAY_FMT FIRST, LAST
01 SCR 5011 0      MARP
```

```
CPND
  CPND_LANG ROMAN
  NAME MINI BIRD
  XPLN 27
  DISPLAY_FMT FIRST, LAST
```

```
02
03 CFW 12  7051004#
04 AO6
05 TRN
06 DSP
07
08 ADL 16
09 ADL 16
10 ADL 16
11 ADL 16
12 ADL 16
13 ADL 16
14 ADL 16
15
```

```
DATE 19 MAR 2003
```

```
NACT *
```

```
REQ: prt
TYPE: 2616
TN   1 0 0 1
DATE
PAGE
DES
```

```
DES TEST2
TN   001 0 00 01
TYPE 2616
CDEN 8D
CUST 0
AOM  0
FDN
TGAR 0
LDN  NO
NCOS 0
SGRP 0
RNPG 0
SCI  0
```




SSU
XLST
SFLT NO
CAC_MFC 0
CLS CTD FBD WTA LPR MTD FND HTD ADD HFD
MWD LMPN RMMD SMWD AAD IMD XHD IRD NID OLD VCE DRG1
POD DSX VMD CMSD CCSD SWD LND CNDA
CFTD SFD MRD DDV CNID CDCA MSID DAPA BFED RCB
ICDD CDMD MCTD CLBD AUTU
GPUD DPUD DNDA CFXA ARHD CLTD ASCD
ABDD CFHD FICD NAID BUZZ AGRD MOAD
UDI RCC HBT
AHD IPND DDGA NAMA MIND PRSD NRWD NRCN NROD
DRDD EXR0
USRD ULAD RTDD RBDD RBHD PGND FLXD FTTC DNDY DNO3 MCBN
CPND_LANG ENG
HUNT
PLEV 02
AST
IAPG 0
AACS NO
ITNA NO
DGRP
MLWU_LANG 0
DNDR 0
KEY 00 SCR 5002 0 MARP
CPND
CPND_LANG ROMAN
NAME BIG ELMO
XPLN 13
DISPLAY_FMT FIRST, LAST
01 SCR 5012 0 MARP
CPND
CPND_LANG ROMAN
NAME MINI ELMO
XPLN 13
DISPLAY_FMT FIRST, LAST
02
03 CFW 12
04 AO6
05 TRN
06 DSP
07
08 ADL 16
09 ADL 16
10 ADL 16
11 ADL 16
12 ADL 16
13 ADL 16
14 ADL 16
15



DATE 19 MAR 2003

NACT *****

Configuring the Cisco 3640 Router

The following sample output shows the router configuration for interoperability with the PBX.

```
CHE_3640#sh run
Building configuration...

Current configuration : 22129 bytes
!
version 12.2
service timestamps debug datetime msec
service timestamps log datetime msec
service password-encryption
service compress-config
!
hostname "CHE_3640"
!
boot system slot0:c3640-is-mz.122-13.T
logging buffered 99999 debugging
no logging rate-limit
no logging console
enable secret 5 $1$FrhE$0JQrLNZcCVHNS5cpvhOVr.
enable password 7 09481B5D4956424A
!
memory-size iomem 10
voice-card 2
!
voice-card 3
!
ip subnet-zero
ip cef
!
isdn switch-type primary-net5
!
!
voice call carrier capacity active
voice rtp send-recv
!
voice service voip
fax protocol t38 ls-redundancy 0 hs-redundancy 0 fallback cisco
!
```



```
!  
fax interface-type fax-mail  
mta receive maximum-recipients 0  
!  
controller E1 3/0  
framing NO-CRC4  
pri-group timeslots 1-31  
!  
controller E1 3/1  
!  
!  
interface Ethernet0/0  
ip address 10.2.50.6 255.255.255.0  
half-duplex  
h323-gateway voip bind srcaddr 10.2.50.6  
!  
interface Serial3/0:15  
no ip address  
no logging event link-status  
isdn switch-type primary-net5  
isdn incoming-voice voice  
no cdp enable  
!  
ip classless  
ip route 0.0.0.0 0.0.0.0 10.2.50.1  
ip http server  
ip pim bidir-enable  
!  
!  
!  
snmp-server community public RO  
snmp-server community private RW  
snmp-server enable traps tty  
call rsvp-sync  
  
voice-port 1/0/0  
station-id name Phone_F  
!  
voice-port 1/0/1  
!  
!  
voice-port 3/0:15  
!  
!
```



```
mgcp profile default
!
dial-peer cor custom
!
dial-peer voice 999 voip
incoming called-number .
destination-pattern 1...
session target ipv4:10.2.50.4
fax rate 14400
!
dial-peer voice 888 pots
incoming called-number .
destination-pattern 5...
direct-inward-dial
port 3/0:15
prefix 5
!
dial-peer voice 9000 voip
destination-pattern 900.
session target ipv4:10.2.50.4
fax rate 14400
!
dial-peer voice 8000 pots
destination-pattern 8000
port 1/0/0
!
!
line con 0
line aux 0
line vty 0
password 7 020A0559
login
line vty 1 4
login
!
!
end
```



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