



Nortel Meridian Opt11C Release 25 using T1 QSIG to Cisco Unified CallManager 4.0

December 3, 2007 Revision 2

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Introduction

This is an Application Note for Connectivity of Nortel Meridian Opt11C Release 25 PBX with Cisco Unified CallManager (CUCM) Release 4.0 using Cisco 6608-T1 QSIG as MGCP Gateway.

The Network Topology diagram shows the test set-up for end-to-end interoperability with the Cisco Unified CallManager 4.0 connected to the PBX via 6608-T1 QSIG link as MGCP Gateway.

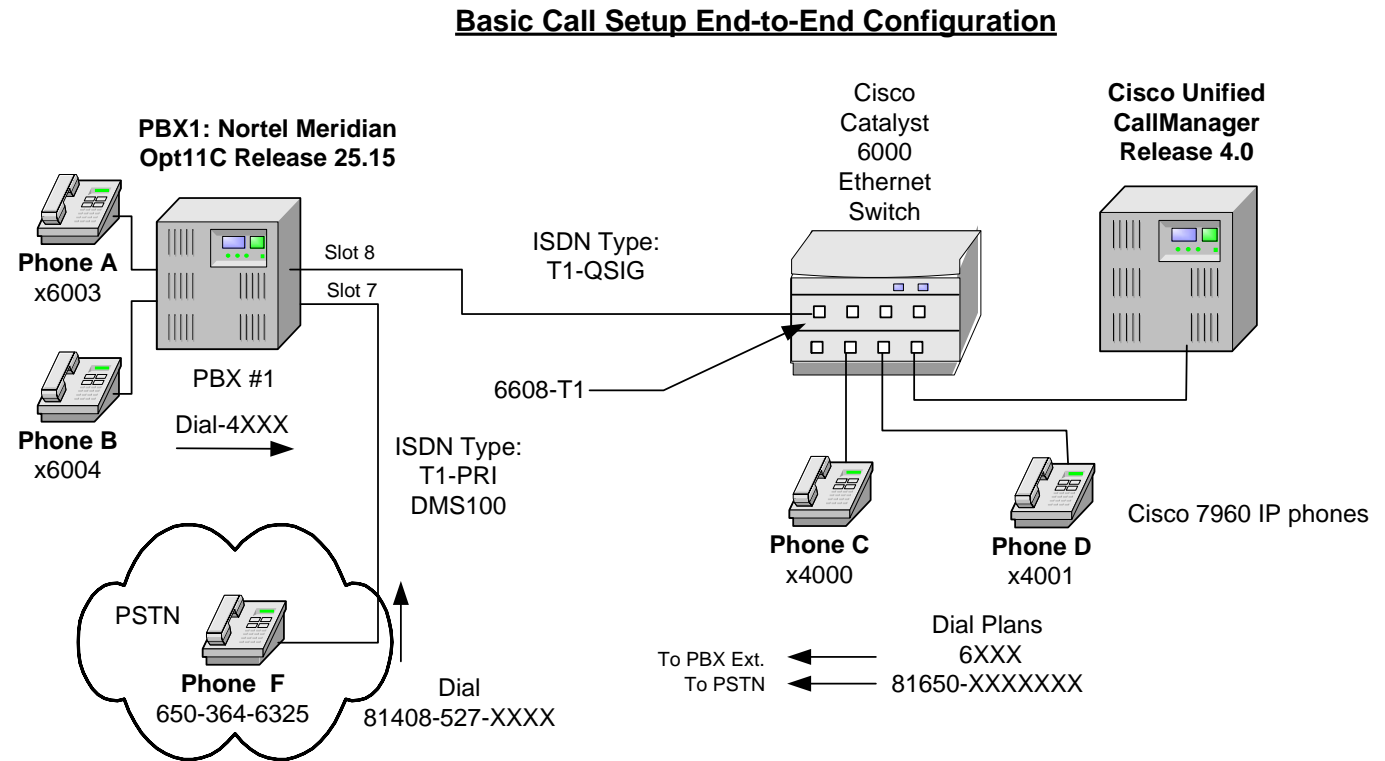
Connectivity is achieved by using the PRI ISO QSIG T1 protocol type on the MGCP gateway and ISGF switch type on the Nortel PBX.

Basic Calls worked fine in both directions with Calling/Connected Name and Calling/Connected Number features support.



Network Topology

Figure 1. Network Topology



Limitations

No Limitations found with supported features

System Components

Hardware Requirements

Cisco Hardware

Cisco Catalyst 6000 switch with 6608-T1 Gateway

Cisco Unified CallManager 4.0

Nortel Meridian Opt11C PBX.

Hardware: NTA09BA, 1.5 Mb DTI/PRI

Software Requirements

PBX Software Release 25

Cisco Unified CallManager 4.0

Cisco WS-X6608-T1 gateway Version 7.6(2)



Features

Features Supported

- CLIP-Calling Line (Number) Identification Presentation
- CLIR-Calling Line (Number) Identification Restriction
- CNIP-Calling Name Identification Presentation
- CNIR-Calling Name Identification Restriction
- COLP-Connected Line (Number) Identification Presentation
- COLR- Connected Line (Number) Identification Restriction
- CONP-Connected Name Identification Presentation
- CONR- Connected Name Identification Restriction
- CT-Call Transfer (by join)
- CFU-Call Forwarding Unconditional (by join)
- CFB-Call Forwarding Busy (by join)
- CFNR-Call Forwarding No Reply (by join)
- QSIG MWI- Message Waiting Indication (lamp ON, lamp OFF) supported by CUCM 4.0 but not tested¹

Features Not Supported

Cisco Unified CallManager 4.0 does not support sending Alerting Name or Busy Name Identification information

Configuration

Configuring the Nortel Meridian Opt11C PBX

Configure in the following sequence:

1. Configure Common Equipment.
2. Configure D-Channel.
3. Configure Route Data Block.
4. Configure Trunk.
5. Configure Coordinated Dialing Plan
6. Configure Dialing Plan for Tandem Call

¹ MWI is supported on CUCM 4.0 but was not tested because CUCM 4.0 was not configured with a messaging System at the time of testing therefore it is not known at this time whether QSIG MWI integration with Nortel Meridian PBX will work. MWI will be tested when the CUCM 4.0 is configured with Unity as the message center PINX and PBX users as remote subscribers.



Configuration Menus and Commands

Common equipment

```
>LD 22
PT2000
MARP NOT ACTIVATED
```

```
REQ prt
```

```
TYPE cequ
```

```
CEQU
```

```
MPED 8D
```

```
SUPL 000 004 008 012
```

```
016 032 036 040
```

```
044 048 064 068
```

```
072
```

```
DACS 04
```

```
DTCS
```

```
XCT 000
```

```
CONF 029 030 031 062
```

```
094 095
```

```
DLOP NUM DCH FRM LCMT YALM T1TE TRSH
```

```
PRI 007 24 ESF B8S FDL - 00
```

```
008 24 ESF B8S FDL - 00
```

```
PRI2 05 06
```

```
APVL
```

```
DTI2 03
```

```
MISP 002
```

```
REQ ****
```

```
>
```

Configure D-Channel

```
>ld 22
PT2000
MARP NOT ACTIVATED
```

```
REQ prt
```

```
TYPE DA
```

```
SCH0111
```

```
TYPE ADAN DCH 18
```

```
ADAN DCH 18
```

```
CTYP MSDL
```

```
CARD 08
```

```
PORT 1
```



```
DES t1_isgf
USR PRI
DCHL 8
OTBF 32
PARM RS422 DTE
DRAT 64KC
CLOK EXT
IFC ISGF
  PINX_CUST 0
  ISDN_MCNT 300
CLID OPT0
CO_TYPE STD
SIDE NET
CNEG 1
RLS ID **
RCAP COLP NDI CCBI CCNI PRI DV3I CTI
PR_TRIGS DIV 2 3
      CNG 2 3
PR_RTN NO
MBGA NO
OVLN YES
DIDD 0
OVLN NO
T310 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 108
```

```
TYPE RDB
```

```
CUST 00
```

```
DMOD
```

```
ROUT 108
```

```
DES T1_ISGF
```

```
TKTP TIE
```

```
NPID_TBL_NUM 0
```

```
ESN NO
```

```
RPA NO
```

```
CNVT NO
```

```
SAT NO
```

```
RCLS EXT
```



DTRK YES
BRIP NO
DGTP PRI
ISDN YES
MODE PRA
IFC ISGF
SBN NO
PNI 00000
NCNA NO
NCRD NO
CHTY BCH
CTYP UKWN
INAC NO
ISAR NO
CPFXS YES
DAPC NO
INTC NO
DSEL VOD
PTYT PRI
AUTO NO
DNIS NO
DCDR NO
ICOG IAO
SRCH RRB
TRMB YES
STEP
ACOD 508
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

PAGE 002

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
TIDY 508 108
SGRP 0
AACR NO

REQ: ****
>

Configure Trunk

>ld 20
PT0000
MARP NOT ACTIVATED

REQ: PRT

TYPE: TNB

TN 8 1

DATE

PAGE

DES

TN 008 01

TYPE TIE

CDEN SD

CUST 0

TRK PRI

PDCA 1

PCML MU

NCOS 0

RTMB 108 1

B-CHANNEL SIGNALING

TGAR 0

AST NO

IAPG 0

CLS UNR DTN CND WTA LPR APN THFD XREP BARD HKD

P10 VNL



TKID
DATE 8 MAR 2004

NACT ****
>

Configure Coordinated Dialing Plan

>>LD 87

ESN000

MEM AVAIL: (U/P): 1260909 USED U P: 92556 39174 TOT: 1392639
DISK RECS AVAIL: 463
REQ PRT

CUST 0

FEAT CDP

TYPE DSC

DSC 4

DSC 4

FLEN 0

DSP LSC

RRPA NO

RLI 18

NPA

NXX

MEM AVAIL: (U/P): 1260909 USED U P: 92556 39174 TOT: 1392639
DISK RECS AVAIL: 463
REQ ****

>
OVL000
>LD 86

ESN000

MEM AVAIL: (U/P): 1260909 USED U P: 92556 39174 TOT: 1392639
DISK RECS AVAIL: 463
REQ PRT

CUST 0

FEAT RLB

RLI 18

RLI 18
ENTR 0



```
LTER NO
ROUT 108
TOD 0 ON 1 ON 2 ON 3 ON
    4 ON 5 ON 6 ON 7 ON
VNS NO
CNV NO
EXP NO
FRL 0
DMI 0
FCI 0
FSNI 0
BNE NO
SBOC NRR
IDBB DBD
IOHQ NO
OHQ NO
CBQ NO

ISET 0
NALT 5
MFRL 0
OVLL 0

MEM AVAIL: (U/P): 1260909    USED U P: 92556 39174    TOT: 1392639
DISK RECS AVAIL: 463
REQ
DTC105

ESN004

REQ ****

>
```

Configure Dialing Plan for Tandem Call

Dial Plan Configuration when PBX received AC2 (8) + NPA (1408) digit string

```
>ld 90

ESN000

MEM AVAIL: (U/P): 1261180    USED U P: 92290 39169    TOT: 1392639
DISK RECS AVAIL: 463
REQ prt

CUST 0

FEAT net

TRAN ac2

TYPE npa

NPA 1408
```



NPA 1408
RLI 8
SDRR NONE
ITEI NONE

MEM AVAIL: (U/P): 1261180 USED U P: 92290 39169 TOT: 1392639
DISK RECS AVAIL: 463
REQ ****

>ld 86

ESN000

MEM AVAIL: (U/P): 1261180 USED U P: 92290 39169 TOT: 1392639
DISK RECS AVAIL: 463
REQ prt

CUST 0

FEAT rlb

RLI 8

RLI 8
ENTR 0
LTER NO
ROUT 108
TOD 0 ON 1 ON 2 ON 3 ON
4 ON 5 ON 6 ON 7 ON

VNS NO
CNV NO
EXP NO
FRL 0
DMI 8
FCI 0
FSNI 0
BNE NO
SBOC NRR
IDBB DBD
IOHQ NO
OHQ NO
CBQ NO

ISET 0
NALT 5
MFRL 0
OVLL 0

MEM AVAIL: (U/P): 1261180 USED U P: 92290 39169 TOT: 1392639
DISK RECS AVAIL: 463
REQ prt

CUST 0

FEAT dgt



DMI 8

DMI 8
DEL 7
CTYP UKWN

REQ ****

>
Dial Plan Configuration when PBX received AC2 (8) + NPA (1650) digit string

>ld 90

ESN000

MEM AVAIL: (U/P): 1261180 USED U P: 92290 39169 TOT: 1392639
DISK RECS AVAIL: 463
REQ prt

CUST 0

FEAT net

TRAN ac2

TYPE npa

NPA 1650

NPA 1650
RLI 7
SDRR NONE
ITEI NONE

MEM AVAIL: (U/P): 1261180 USED U P: 92290 39169 TOT: 1392639
DISK RECS AVAIL: 463
REQ ****

>
OVL000
>ld 86

ESN000

MEM AVAIL: (U/P): 1261180 USED U P: 92290 39169 TOT: 1392639
DISK RECS AVAIL: 463
REQ prt

CUST 0

FEAT rlb

RLI 7



RLI 7
ENTR 0
LTER NO
ROUT 107
TOD 0 ON 1 ON 2 ON 3 ON
4 ON 5 ON 6 ON 7 ON
VNS NO
CNV NO
EXP NO
FRL 0
DMI 7
FCI 0
FSNI 0
BNE NO
SBOC NRR
IDBB DBD
IOHQ NO
OHQ NO
CBQ NO

ISET 0
NALT 5
MFRL 0
OVLL 0

MEM AVAIL: (U/P): 1261180 USED U P: 92290 39169 TOT: 1392639
DISK RECS AVAIL: 463
REQ prt

CUST 0

FEAT dgt

DMI 7
DMI 7
DEL 1
CTYP NCHG

MEM AVAIL: (U/P): 1261180 USED U P: 92290 39169 TOT: 1392639
DISK RECS AVAIL: 463
REQ ****
>
>

Station Configuration for CLIP, CNIP, COLP, and CONP (Number and Name presentation)

>LD 11

SL1000
MARP NOT ACTIVATED

MEM AVAIL: (U/P): 1260844 USED U P: 92556 39239 TOT: 1392639
DISK RECS AVAIL: 463
TNS AVAIL: 2318 USED: 182 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

MARP NOT ACTIVATED

TN 1 0 0 2

DATE

PAGE

DES

DES TEST1
TN 001 0 00 02
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 FBA WTA LPR MTD FNA HTD ADD HFD
MWA 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 RCBF
ICDD CDMD MCTD CLBD AUTU
GPUD DPUD DNDA CFXA ARHD CLTD ASCD
ABDD CFHD FICD NAID BUZZ AGRD MOAD
UDI RCC HBTB 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
RCO 0
HUNT 6004
LHK 0
PLEV 02
AST
IAPG 0
AACS NO
ITNA NO
DGRP
MLWU_LANG 0
DNDR 0
KEY 00 SCR 6003 0 MARP
CPND



```
CPND_LANG ROMAN
NAME THE COUNT
XPLN 13
DISPLAY_FMT FIRST, LAST
01 SCR 5011 0
CPND
CPND_LANG ROMAN
NAME MINI BIRD
XPLN 27
DISPLAY_FMT FIRST, LAST
02 MIK
03 CFW 12 4001
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 RGA
15 MCK
DATE 9 MAR 2004
```

```
NACT ****
>
```

Station Configuration for CLIR, COLR-Calling/Connected Line Identification Restriction

```
>LD 11
```

```
SL1000
MARP NOT ACTIVATED
```

```
MEM AVAIL: (U/P): 1260844    USED U P: 92556 39239    TOT: 1392639
DISK RECS AVAIL: 463
TNS    AVAIL: 2318    USED: 182    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
```

```
MARP NOT ACTIVATED
```

```
TN 1 0 0 2
```

```
DATE
```



PAGE

DES

```
DES TEST1
TN 001 0 00 02
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 FBA WTA LPR MTD FNA HTD ADD HFD
MWA 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 RCBF
ICDD CDMD MCTD CLBD AUTU
GPUD DPUD DNDA CFXA ARHD CLTD ASCD
ABDD CFHD FICD NAID BUZZ AGRD MOAD
UDI RCC HBTD AHD IPND DDGD NAMA MIND PRSD NRWD NRCD NROD
DRDD EXR0
USRD ULAD RTDD RBDD RBHD PGND FLXD FTTC DNDY DNO3 MCBN
CPND_LANG ENG
RCO 0
HUNT 6004
LHK 0
PLEV 02
AST
IAPG 0
AACS NO
ITNA NO
DGRP
MLWU_LANG 0
DNDR 0
KEY 00 SCR 6003 0 MARP
      CPND
        CPND_LANG ROMAN
        NAME THE COUNT
        XPLN 13
        DISPLAY_FMT FIRST, LAST
01 SCR 5011 0
      CPND
        CPND_LANG ROMAN
        NAME MINI BIRD
        XPLN 27
        DISPLAY_FMT FIRST, LAST
02 MIK
03 CFW 12 4001
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 RGA
15 MCK
DATE 9 MAR 2004

NACT ****
>

Station Configuration for CNIR, CONR-Calling/Connected Name Identification Restriction

>LD 11

SL1000
MARP NOT ACTIVATED

MEM AVAIL: (U/P):	1260844	USED U P:	92556 39239	TOT:	1392639
DISK RECS AVAIL:	463				
TNS AVAIL:	2318	USED:	182	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

MARP NOT ACTIVATED

TN 1 0 0 2

DATE

PAGE

DES

DES TEST1
TN 001 0 00 02
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 FBA WTA LPR MTD FNA HTD ADD HFD
MWA 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 RCBF
ICDD CDMD MCTD CLBD AUTU
GPUD DPUD DNDA CFXA ARHD CLTD ASCD
ABDD CFHD FICD NAID BUZZ AGRD MOAD
UDI RCC HBTB AHD IPND DDGA NAMD MIND PRSD NRWD NRCD NROD
DRDD EXR0
USRD ULAD RTDD RBDD RBHD PGND FLXD FTTC DNDY DNO3 MCBN
CPND_LANG ENG
RCO 0
HUNT 6004
LHK 0
PLEV 02
AST
IAPG 0
AACS NO
ITNA NO
DGRP
MLWU_LANG 0
DNDR 0
KEY 00 SCR 6003 0      MARP
      CPND
      CPND_LANG ROMAN
      NAME THE COUNT
      XPLN 13
      DISPLAY_FMT FIRST, LAST
01 SCR 5011 0
      CPND
      CPND_LANG ROMAN
      NAME MINI BIRD
      XPLN 27
      DISPLAY_FMT FIRST, LAST
02 MIK
03 CFW 12 4001
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 RGA
15 MCK
DATE 9 MAR 2004
```

NACT ****

Station Configuration for CFB- Call Forward on Busy



CF-Busy on Nortel requires setting up HUNT DN on Nortel station configuration by changing CLS parameter "HTD" (Hunt denied) to "HTA" (Hunt allowed) and specifying a DN for HUNT parameter.

>LD 11

SL1000

MARP NOT ACTIVATED

MEM AVAIL: (U/P): 1260844 USED U P: 92556 39239 TOT: 1392639

DISK RECS AVAIL: 463

TNS AVAIL: 2318 USED: 182 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

MARP NOT ACTIVATED

TN 1 0 0 2

DATE

PAGE

DES

DES TEST1

TN 001 0 00 02

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 FBA WTA LPR MTD FNA **HTA** ADD HFD

MWA 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 RCBF

ICDD CDMD MCTD CLBD AUTU

GPUD DPUD DNDA CFXA ARHD CLTD ASCD

ABDD CFHD FICD NAID BUZZ AGRD MOAD

UDI RCC HBTD 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

RCO 0

HUNT 6004

LHK 0

PLEV 02

AST



```
IAPG 0
AACS NO
ITNA NO
DGRP
MLWU_LANG 0
DNDR 0
KEY 00 SCR 6003 0      MARP
      CPND
        CPND_LANG ROMAN
        NAME THE COUNT
        XPLN 13
        DISPLAY_FMT FIRST, LAST
01 SCR 5011 0
      CPND
        CPND_LANG ROMAN
        NAME MINI BIRD
        XPLN 27
        DISPLAY_FMT FIRST, LAST
02 MIK
03 CFW 12 4001
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 RGA
15 MCK
DATE 9 MAR 2004
```

Station Configuration for CFNR- Call Forward No Reply

LD 11

SL1000
MARP NOT ACTIVATED

```
MEM AVAIL: (U/P): 1260844      USED U P: 92556 39239      TOT: 1392639
DISK RECS AVAIL: 463
TNS      AVAIL: 2318      USED: 182      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

MARP NOT ACTIVATED

TN 1 0 0 2
DATE



```
PAGE
DES
DES TEST1
TN 001 0 00 02
TYPE 2616
CDEN 8D
CUST 0
AOM 0
FDN 6004
TGAR 0
LDN NO
NCOS 0
SGRP 0
RNPG 0
SCI 0
SSU
XLST
SFLT NO
CAC_MFC 0
CLS CTD FBA WTA LPR MTD FNA HTA ADD HFD
MWA 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 RCBF
ICDD CDMD MCTD CLBD AUTU
GPUD DPUD DNDA CFXA ARHD CLTD ASCD
ABDD CFHD FICD NAID BUZZ AGRD MOAD
UDI RCC HBTD 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
RCO 0
HUNT 6004
LHK 0
PLEV 02
AST
IAPG 0
AACS NO
ITNA NO
DGRP
MLWU_LANG 0
DNDR 0
KEY 00 SCR 6003 0 MARP
    CPND
        CPND_LANG ROMAN
        NAME THE COUNT
        XPLN 13
        DISPLAY_FMT FIRST, LAST
    01 SCR 5011 0
        CPND
            CPND_LANG ROMAN
            NAME MINI BIRD
            XPLN 27
            DISPLAY_FMT FIRST, LAST
    02 MIK
    03 CFW 12 4001
    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 RGA
15 MCK
DATE 9 MAR 2004



Configuring the Cisco Unified CallManager

6608-T1 Gateway Configuration

System Route Plan Service Feature Device User Application Help

Cisco CallManager Administration
For Cisco IP Telephony Solutions

CISCO SYSTEMS

Gateway Configuration

[Back to Find/List Gateways](#)
[Dependency Records](#)

Product : Cisco Catalyst 6000 T1 VoIP Gateway
Gateway : S0/DS1-0@SDA0001C9D93A98
Device Protocol: Digital Access PRI
Registration: Registered with Cisco CallManager 172.20.32.254
IP Address: [172.20.32.112](#)

Status: Ready

Device Information

MAC Address*	<input type="text" value="0001C9D93A98"/>
Description	<input type="text" value="SDA0001C9D93A98"/>
Device Pool*	<input type="text" value="Default"/>
Network Locale	<input type="text" value="United States"/>
Media Resource Group List	<input type="text" value="< None >"/>
Location	<input type="text" value="< None >"/>
AAR Group	<input type="text" value="< None >"/>
Load Information	<input type="text"/>


Multilevel Precedence and Preemption (MLPP) Information

MLPP Domain (e.g., "0000FF")	<input type="text"/>
MLPP Indication	<input type="text" value="Off"/>
MLPP Preemption	<input type="text" value="Disabled"/>

Interface Information

PRI Protocol Type*	<input type="text" value="PRI ISO QSIG T1"/>
Protocol Side*	<input type="text" value="User"/>
Channel Selection Order*	<input type="text" value="Top Down"/>
Channel IE Type*	<input type="text" value="Timeslot Number"/>

PCM Type*	<input type="text" value="μ-law"/>
Delay for first restart (1/8 sec ticks)	<input type="text" value="32"/>
Delay between restarts (1/8 sec ticks)	<input type="text" value="4"/>
<input checked="" type="checkbox"/> Inhibit restarts at PRI initialization	
<input checked="" type="checkbox"/> Enable status poll	
Call Routing Information	
Inbound Calls	
Significant Digits*	<input type="text" value="All"/>
Calling Search Space	<input type="text" value="Incoming Trunk"/>
AAR Calling Search Space	<input type="text" value="< None >"/>
Prefix DN	<input type="text"/>
Outbound Calls	
Calling Line ID Presentation*	<input type="text" value="Default"/>
Calling Party Selection*	<input type="text" value="Originator"/>
Called party IE number type unknown*	<input type="text" value="National"/>
Calling party IE number type unknown*	<input type="text" value="National"/>
Called Numbering Plan*	<input type="text" value="ISDN"/>
Calling Numbering Plan*	<input type="text" value="ISDN"/>
Number of digits to strip*	<input type="text" value="0"/>
Caller ID DN	<input type="text"/>
SMDI Base Port*	<input type="text" value="0"/>
PRI Protocol Type Specific Information	
<input checked="" type="checkbox"/> Display IE Delivery	
<input checked="" type="checkbox"/> Redirecting Number IE Delivery - Outbound	
<input type="checkbox"/> Redirecting Number IE Delivery - Inbound	
<input checked="" type="checkbox"/> Send Extra Leading Character In DisplayIE***	
<input type="checkbox"/> Setup non-ISDN Progress Indicator IE Enable****	

<input checked="" type="checkbox"/>	MCDN Channel Number Extension Bit Set to Zero**
<input checked="" type="checkbox"/>	Send Calling Name In Facility IE
<input type="checkbox"/>	Interface Identifier Present**
Interface Identifier Value**	<input type="text" value="0"/>
Connected Line ID Presentation (QSIG Inbound Call)*	<input type="text" value="Default"/>
Connected PBX Model	<input type="text" value="None"/>
Product Specific Configuration 	
Clock Reference*	<input type="text" value="Network"/>
TX-Level CSU*	<input type="text" value="0dB"/>
FDL Channel*	<input type="text" value="ATT 54016"/>
Framing*	<input type="text" value="ESF"/>
Audio Signal Adjustment into IP Network*	<input type="text" value="NoDbPadding"/>
Audio Signal Adjustment from IP Network*	<input type="text" value="NoDbPadding"/>
Yellow Alarm*	<input type="text" value="Bit2"/>
Zero Suppression*	<input type="text" value="B8ZS"/>
Digit On Duration(50-500ms)*	<input type="text" value="100"/>
Interdigit Duration(50-500msec)*	<input type="text" value="100"/>
SNMP Community String	<input type="text" value="public"/>
Disable SNMP Set operations*	<input type="checkbox"/>
Debug Port Enable*	<input checked="" type="checkbox"/>
Hold Tone Silence Duration*	<input type="text" value="0"/>
Port Used for Voice Calls*	<input checked="" type="checkbox"/>
Port Used for Modem Calls*	<input checked="" type="checkbox"/>
Port Used for Fax Calls*	<input checked="" type="checkbox"/>
Fax and Modem Parameters	
Fax Relay Enable*	<input checked="" type="checkbox"/>
Fax Error Correction Mode Override*	<input checked="" type="checkbox"/>
Maximum Fax Rate*	<input type="text" value="14400bps"/>

Maximum Fax Rate*	<input type="text" value="14400bps"/>
Fax Payload Size*	<input type="text" value="20"/>
Non Standard Facilities Country Code*	<input type="text" value="65535"/>
Non Standard Facilities Vendor Code*	<input type="text" value="65535"/>
Fax/Modem Packet Redundancy*	<input type="checkbox"/>
NSE Type*	<input type="text" value="Non-IOS Gateways"/>

Playout Delay Parameters

Initial Playout Delay*	<input type="text" value="40"/>
Minimum Playout Delay*	<input type="text" value="20"/>
Maximum Playout Delay*	<input type="text" value="150"/>

Echo Canceller Configuration

Echo TailLength (ms)*	<input type="text" value="32 ms"/>
Minimum ERL (db)*	<input type="text" value="6 db"/>

* indicates required item
** applicable to DMS-100 protocol only
*** applicable to DMS-100 protocol and DMS-250 protocol only
**** may be required to force ringback from some PBXs

[Back to Find/List Gateways](#)



Enbloc Route Pattern Configuration

Route Pattern/Hunt Pilot: 6XXX

Status: Ready
Note: Any update to this Route Pattern or Hunt Pilot automatically resets the associated gateway or Route/Hunt List

[Copy](#) [Update](#) [Delete](#)

Pattern Definition

Route Pattern/Hunt Pilot*

Partition

Description

Numbering Plan*

Route Filter

MLPP Precedence

Gateway or Route/Hunt List* (Edit)

Route Option

Route this pattern

Block this pattern

Provide Outside Dial Tone Allow Overlap Sending Urgent Priority

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask

Prefix Digits (Outgoing Calls)

Calling Line ID Presentation

Calling Name Presentation

Connected Party Transformations

Connected Line ID Presentation

Connected Name Presentation

Called Party Transformations

Discard Digits

Called Party Transform Mask

Prefix Digits (Outgoing Calls)

ISDN Network-Specific Facilities Information Element

Carrier Identification Code

Network Service Protocol



Overlap Sending Route Pattern Configuration

Route Pattern/Hunt Pilot: 9.X
Status: Ready
Note: Any update to this Route Pattern or Hunt Pilot automatically resets the associated gateway or Route/Hunt List

Pattern Definition

Route Pattern/Hunt Pilot*	<input type="text" value="9.X"/>	
Partition	<input type="text" value="< None >"/>	
Description	<input type="text"/>	
Numbering Plan*	<input type="text" value="North American Numbering Plan"/>	
Route Filter	<input type="text" value="< None >"/>	
MLPP Precedence	<input type="text" value="Default"/>	
Gateway or Route/Hunt List*	<input type="text" value="S0/DS1-0@SDA0001C9D93A98"/> (Edit)	
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern <input type="text" value="— Not Selected —"/>	
<input checked="" type="checkbox"/> Provide Outside Dial Tone	<input checked="" type="checkbox"/> Allow Overlap Sending	<input type="checkbox"/> Urgent Priority

Calling Party Transformations

<input type="checkbox"/> Use Calling Party's External Phone Number Mask	
Calling Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>
Calling Line ID Presentation	<input type="text" value="Default"/>
Calling Name Presentation	<input type="text" value="Default"/>

Connected Party Transformations

Connected Line ID Presentation	<input type="text" value="Default"/>
Connected Name Presentation	<input type="text" value="Default"/>

Called Party Transformations

Discard Digits	<input type="text" value="PreDot"/>
Called Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>

ISDN Network-Specific Facilities Information Element

Carrier Identification Code	<input type="text"/>				
Network Service Protocol	<input type="text" value="— Not Selected —"/>				
Network Service	<input type="text" value="— Not Selected —"/>	Service Parameter Name	<input type="text" value="< Not Exist >"/>	Service Parameter Value	<input type="text"/>



Translation Pattern for Incoming Calls

Translation Pattern Configuration

[Add a New Translation Pattern](#)
[Back to Find/List Translation Patterns](#)

Translation Pattern: 4XXX
Status: Ready

Pattern Definition

Translation Pattern	<input type="text" value="4XXX"/>
Partition	<input type="text" value="Incoming Trunk"/>
Description	<input type="text"/>
Numbering Plan*	<input type="text" value="North American Numbering Plan"/>
Route Filter	<input type="text" value=" < None >"/>
Calling Search Space	<input type="text" value="Phones"/>
MLPP Precedence	<input type="text" value="Default"/>
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern <input type="text" value=" — Not Selected —"/>
<input checked="" type="checkbox"/> Provide Outside Dial Tone	<input checked="" type="checkbox"/> Urgent Priority

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>
Calling Line ID Presentation	<input type="text" value="Default"/>
Calling Name Presentation	<input type="text" value="Default"/>

Connected Party Transformations

Connected Line ID Presentation	<input type="text" value="Default"/>
Connected Name Presentation	<input type="text" value="Default"/>

Called Party Transformations

Discard Digits	<input type="text" value=" < None >"/>
Called Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>

* indicates required item.



CLIR Route Pattern Configuration

Route Pattern/Hunt Pilot: 6XXX

Status: Update completed
Note: Any update to this Route Pattern or Hunt Pilot automatically resets the associated gateway or Route/Hunt List

Pattern Definition

Route Pattern/Hunt Pilot*

Partition

Description

Numbering Plan*

Route Filter

MLPP Precedence

Gateway or Route/Hunt List* (Edit)

Route Option

Route this pattern

Block this pattern

Provide Outside Dial Tone Allow Overlap Sending Urgent Priority

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask

Prefix Digits (Outgoing Calls)

Calling Line ID Presentation

Calling Name Presentation

Connected Party Transformations

Connected Line ID Presentation

Connected Name Presentation

Called Party Transformations

Discard Digits

Called Party Transform Mask

Prefix Digits (Outgoing Calls)

ISDN Network-Specific Facilities Information Element

Carrier Identification Code

Network Service Protocol

Network Service	Service Parameter Name	Service Parameter Value
<input type="text" value="— Not Selected —"/>	<input type="text" value="< Not Exist >"/>	<input type="text"/>



CNIR Route Pattern Configuration

Route Pattern/Hunt Pilot: 6XXX
Status: Update completed
Note: Any update to this Route Pattern or Hunt Pilot automatically resets the associated gateway or Route/Hunt List

Pattern Definition

Route Pattern/Hunt Pilot*	<input type="text" value="6XXX"/>	
Partition	< None >	
Description	<input type="text"/>	
Numbering Plan*	North American Numbering Plan	
Route Filter	< None >	
MLPP Precedence	Default	
Gateway or Route/Hunt List*	S0/DS1-0@SDA0001C9D93A98 (Edit)	
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern <input type="text" value="— Not Selected —"/>	
<input checked="" type="checkbox"/> Provide Outside Dial Tone	<input type="checkbox"/> Allow Overlap Sending	<input type="checkbox"/> Urgent Priority

Calling Party Transformations

<input type="checkbox"/> Use Calling Party's External Phone Number Mask	
Calling Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>
Calling Line ID Presentation	Default
Calling Name Presentation	Restricted

Connected Party Transformations

Connected Line ID Presentation	Default
Connected Name Presentation	Default

Called Party Transformations

Discard Digits	< None >
Called Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>

ISDN Network-Specific Facilities Information Element

Carrier Identification Code	<input type="text"/>	
Network Service Protocol	— Not Selected —	
Network Service	Service Parameter Name	Service Parameter Value
— Not Selected —	< Not Exist >	<input type="text"/>



COLR Translation Pattern Configuration

Translation Pattern Configuration

[Add a New Translation Pattern](#)
[Back to Find/List Translation Patterns](#)

Translation Pattern: 4XXX
Status: Update completed

Pattern Definition

Translation Pattern	<input type="text" value="4XXX"/>
Partition	<input type="text" value="Incoming Trunk"/>
Description	<input type="text"/>
Numbering Plan*	<input type="text" value="North American Numbering Plan"/>
Route Filter	<input type="text" value="< None >"/>
Calling Search Space	<input type="text" value="Phones"/>
MLPP Precedence	<input type="text" value="Default"/>
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern <input type="text" value="— Not Selected —"/>

Provide Outside Dial Tone Urgent Priority

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>
Calling Line ID Presentation	<input type="text" value="Default"/>
Calling Name Presentation	<input type="text" value="Default"/>

Connected Party Transformations

Connected Line ID Presentation	<input type="text" value="Restricted"/>
Connected Name Presentation	<input type="text" value="Default"/>

Called Party Transformations

Discard Digits	<input type="text" value="< None >"/>
Called Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>

* indicates required item.



CONR Translation Pattern Configuration

Translation Pattern Configuration

[Add a New Translation Pattern](#)
[Back to Find/List Translation Patterns](#)

Translation Pattern: 4XXX
Status: Update completed

Pattern Definition

Translation Pattern	<input type="text" value="4XXX"/>
Partition	<input type="text" value="Incoming Trunk"/>
Description	<input type="text"/>
Numbering Plan*	<input type="text" value="North American Numbering Plan"/>
Route Filter	<input type="text" value="< None >"/>
Calling Search Space	<input type="text" value="Phones"/>
MLPP Precedence	<input type="text" value="Default"/>
Route Option	<input checked="" type="radio"/> Route this pattern <input type="radio"/> Block this pattern <input type="text" value="— Not Selected —"/>

Provide Outside Dial Tone Urgent Priority

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>
Calling Line ID Presentation	<input type="text" value="Default"/>
Calling Name Presentation	<input type="text" value="Default"/>

Connected Party Transformations

Connected Line ID Presentation	<input type="text" value="Default"/>
Connected Name Presentation	<input type="text" value="Restricted"/>

Called Party Transformations

Discard Digits	<input type="text" value="< None >"/>
Called Party Transform Mask	<input type="text"/>
Prefix Digits (Outgoing Calls)	<input type="text"/>

* indicates required item.



PSTN Route Pattern Configuration

Route Pattern/Hunt Pilot: 81650XXXXXX

Status: Ready
Note: Any update to this Route Pattern or Hunt Pilot automatically resets the associated gateway or Route/Hunt List

Pattern Definition

Route Pattern/Hunt Pilot*

Partition

Description

Numbering Plan*

Route Filter

MLPP Precedence

Gateway or Route/Hunt List* [\(Edit\)](#)

Route Option

Route this pattern

Block this pattern

Provide Outside Dial Tone Allow Overlap Sending Urgent Priority

Calling Party Transformations

Use Calling Party's External Phone Number Mask

Calling Party Transform Mask

Prefix Digits (Outgoing Calls)

Calling Line ID Presentation

Calling Name Presentation

Connected Party Transformations

Connected Line ID Presentation

Connected Name Presentation

Called Party Transformations

Discard Digits

Called Party Transform Mask

Prefix Digits (Outgoing Calls)

ISDN Network-Specific Facilities Information Element

Carrier Identification Code

Network Service Protocol

Network Service	Service Parameter Name	Service Parameter Value
<input type="text" value="— Not Selected —"/>	<input type="text" value="< Not Exist >"/>	<input type="text"/>



7960 IP phone Configuration

Phone Configuration

[Add a new phone](#)
[Add/Update Speed Dials](#)
[Subscribe/Unsubscribe Services](#)
[Dependency Records](#)
[Back to Find/List Phones](#)

Directory Numbers

Base Phone

- Line 1 - 4000 in Phones
- Line 2 - Add new DN

Phone: SEP000B5FD22FE8 (Auto 4000)
Registration: Registered with Cisco CallManager 172.20.32.254
IP Address: [172.20.32.102](#)
Status: Ready

Phone Configuration (Model = Cisco 7960)

Device Information

MAC Address*	<input type="text" value="000B5FD22FE8"/>
Description	<input type="text" value="Auto 4000"/>
Owner User ID	<input type="text"/> (Select User ID)
Device Pool*	<input type="text" value="Default"/> (View details)
Calling Search Space	<input type="text" value="< None >"/>
AAR Calling Search Space	<input type="text" value="< None >"/>
Media Resource Group List	<input type="text" value="< None >"/>
User Hold Audio Source	<input type="text" value="< None >"/>
Network Hold Audio Source	<input type="text" value="< None >"/>
Location	<input type="text" value="< None >"/>
User Locale	<input type="text" value="< None >"/>
Network Locale	<input type="text" value="< None >"/>
Device Security Mode	<input type="text" value="Use System Default"/>
Built In Bridge	<input type="text" value="Default"/>
Privacy	<input type="text" value="Default"/>

Phone Button Template Information


Phone Button Template*	<input type="text" value="Standard 7960"/> (View button list)
------------------------	---

Softkey Template Information

Softkey Template	<input type="text" value="< None >"/>
------------------	---

Expansion Module Information

Module 1	<input type="text" value="< None >"/>
Module 2	<input type="text" value="< None >"/>

Firmware Load Information (leave blank to use default)	
Phone Load Name	<input type="text"/>
Module 1 Load Name	<input type="text"/> (Module 1 selection required)
Module 2 Load Name	<input type="text"/> (Module 2 selection required)
Cisco IP Phone - External Data Locations (leave blank to use default)	
Information	<input type="text"/>
Directory	<input type="text"/>
Messages	<input type="text"/>
Services	<input type="text"/>
Authentication Server	<input type="text"/>
Proxy Server	<input type="text"/>
Idle	<input type="text"/>
Idle Timer (seconds)	<input type="text"/>
Extension Mobility (Device Profile) Information	
<input type="checkbox"/> Enable Extension Mobility Feature	
Log Out Profile	<input type="text" value="-- Not Selected --"/>
Log In User ID	< None >
Log In Time	< None >
Log Out Time	< None >
Multilevel Precedence and Preemption (MLPP) Information	
MLPP Domain	<input type="text"/> (e.g., "0000FF")
MLPP Indication	<input type="text" value="Default"/>
MLPP Preemption	<input type="text" value="Default"/>
Product Specific Configuration 	
Disable Speakerphone	<input type="checkbox"/>
Disable Speakerphone and Headset	<input type="checkbox"/>
Forwarding Delay*	<input type="text" value="Disabled"/>
PC Port*	<input type="text" value="Enabled"/>
Settings Access*	<input type="text" value="Enabled"/>
Gratuitous ARP*	<input type="text" value="Enabled"/>
PC Voice VLAN Access*	<input type="text" value="Enabled"/>



Directory Number Configuration

[Configure Device \(SEP000B5FD22FE8\)](#)
[Dependency Records](#)

Associated With

SEP000B5FD22FE8
7960 (Line 1)

Directory Number: 4000 (Phones)

Status: Ready
Note: Any update to this Directory Number automatically resets the associated devices

Directory Number

Directory Number*
Partition

Directory Number Settings

Voice Mail Profile
(Choose <None> to use default)
Calling Search Space
AAR Group
User Hold Audio Source
Network Hold Audio Source
Auto Answer

Call Forward and Pickup Settings

	Voice Mail Destination	Calling Search Space
Forward All <input type="checkbox"/>	<input type="text"/>	<input type="text" value=" < None >"/>
Forward Busy <input type="checkbox"/>	<input type="text"/>	<input type="text" value=" < None >"/>
Forward No Answer <input type="checkbox"/>	<input type="text"/>	<input type="text" value=" < None >"/>
No Answer Ring Duration <input type="text"/>	(seconds)	
Call Pickup Group <input type="text"/>	<input type="text" value=" < None >"/>	

MLPP Alternate Party Settings

Target (Destination)
Calling Search Space
No Answer Ring Duration (seconds)

Line Settings for this Device

Display (Internal Caller ID)
Line Text Label
External Phone Number Mask

Message Waiting Lamp Policy	<input type="text" value="Use System Policy"/>
Ring Setting (Phone Idle)	<input type="text" value="Use System Default"/>
Ring Setting (Phone Active)**	<input type="text" value="Use System Default"/>
Multiple Call / Call Waiting Settings	
Maximum Number of Calls*	<input type="text" value="4"/> (1 - 200)
Busy Trigger*	<input type="text" value="2"/> (<= Max. Calls)
Forwarded Call Information Display	
<input checked="" type="checkbox"/> Caller Name	<input checked="" type="checkbox"/> Caller Number
<input checked="" type="checkbox"/> Redirected Number	<input checked="" type="checkbox"/> Dialed Number
<p>* indicates required item; changes to Line or Directory Number settings require restart. ** Ring Setting (Phone Active) applies to this line when any line on the phone has a call in progress.</p> <p>Note: If you are using a language other than English for Display (Internal Caller ID) or Line Text Label text, make sure the correct character set (shown below) is selected. Text displays incorrectly if the wrong characterset is selected. (English characters are included in all character sets.)</p>	
Character Set	<input type="text" value="Western European (Latin 1)"/>



Acronyms

Acronym	Definitions
CUCM	Cisco Unified CallManager
CFB	Call Forwarding Busy
CFNR	Call Forwarding No Reply
CFU	Call Forwarding Unconditional
CLIP	Calling Line (Number) Identification Presentation
CLIR	Calling Line (Number) Identification Restriction
CNIP	Calling Name Identification Presentation
CNIR	Calling Name Identification Restriction
COLP	Connected Line (Number) Identification Presentation
COLR	Connected Line (Number) Identification Restriction
CONP	Connected Name Identification Presentation
CONR	Connected Name Identification Restriction
CT	Call Transfer
PSTN	Public Switched Telephone Network



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