Application Note

Siemens HiPath 4000 Release 1.0 to a Cisco IAD243X using E1-ISDN NET5 with SIP

January 11, 2007 Initial Version

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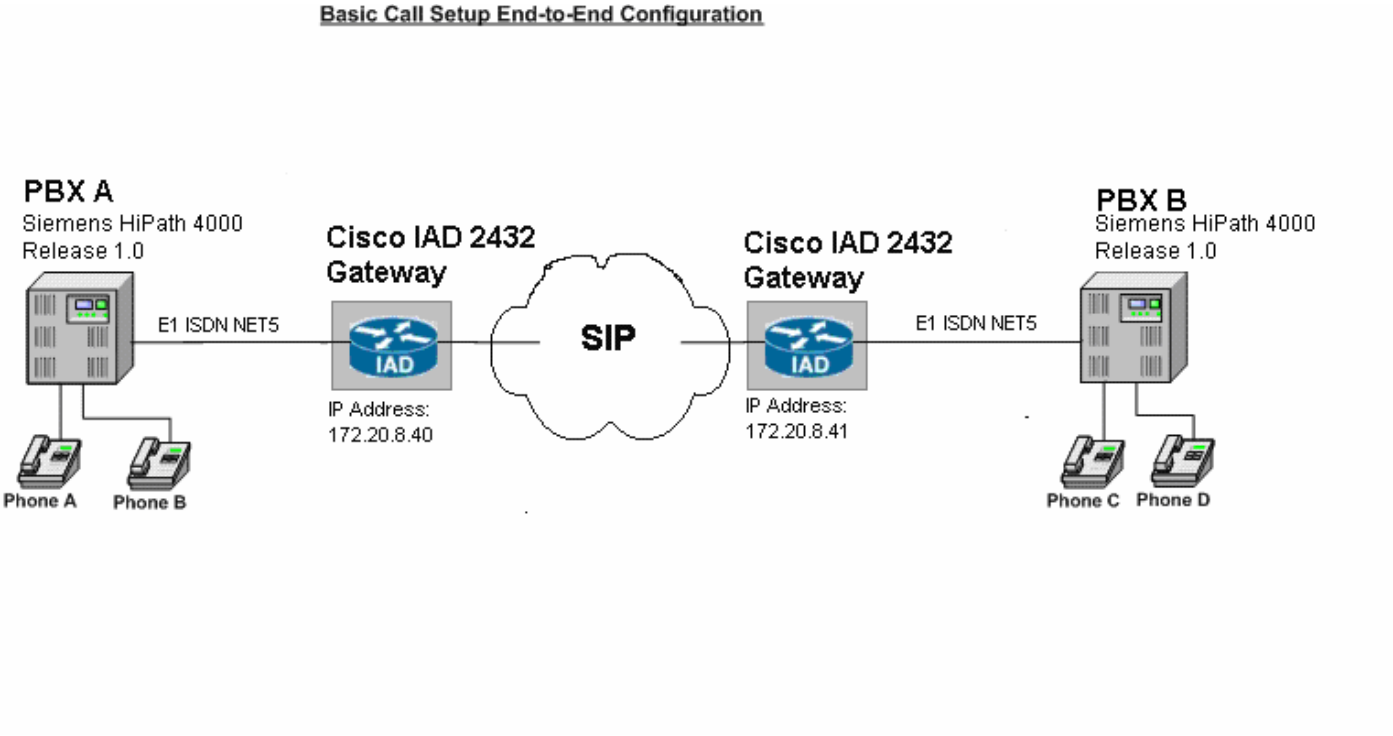
Introduction

This is an application note for connectivity to a Siemens HiPath 4000 Release 1.0 with a Cisco IAD243X Gateway via E1 ISDN NET5-to-SIP communication (10/100baseT).

The network topology diagram (Figure 1) shows the test setup for end-to-end interoperability with the Cisco IAD243X Gateway connected to the PBX via NET5 (E1 PRI). IP trunk connectivity between the Cisco IAD243X's is achieved by using SIP protocol.

Network Topology

Figure 1. Basic Call Setup



Limitations

On Call Forward No Answer local (e.g. Phone A calls Phone C CFNA to Phone D); the Cisco IAD243X must be set to Q921/Q931 Network side. If the Cisco IAD 243X is set to Q921/Q931 user side CFNA will not work.

Connected number (COLP) does not interoperate This is an Cisco IAD2432 limitation.

Hardware Requirements

2 Cisco IAD2432 24FXS

1 Cisco Catalyst switch (CAT6500)

(1) Siemens HiPath 40000

DIU-N2

Software Requirements

Siemens HiPath 4000 Release 1.0

Cisco IOS Release: c2430-ik9o3s-mz-124-9.T1

Features

Features Supported

Basic end-to-end calls with CLIP (Calling Number)

Calling Number Restricted

Overlap Receiving

Call Transfer – Local and Network/External

Call on-hold

Call Forward (Unconditional, Busy and No answer) – local and network/external

3-way Conference

DTMF end-to-end

Features Not Supported

Calling Name and Connected Name presentation

Connected Number presentation

Configuration

Configuring the Siemens HiPath 4000 PBX

1. Add the new access code to Dialing Plans using WABE + LDPLN.
2. Add the new trunk board using BCSU.
3. Configure Class of Trunk using COT.
4. Configure Class of Parameter for device handler using COP.
5. Configure Class of Service using COSSU.
6. Add the new trunk group access code using BUEND.
7. Configure trunk using TDCSU.
8. Configure Reference Clock using REFTA.
9. Configure trunk Least Cost Routing using LDAT + RICHT.
10. Configure LCR Out-dial Rules using LODR.
11. Enable In-Band DTMF signaling for the Digital Stations using SBCSU.

Configuring the Hipath 4000 PBX

DPLN

```
  <dis-wabe:gen;
DIS-WABE:GEN;
H500:  AMO WABE  STARTED
```

DIGIT INTERPRETATION		VALID FOR ALL DIAL PLANS	
CODE	CALL PROGRESS STATE 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO *=OWN NODE
0	. .**** ..*** **... ..... .*	CO	R
001 - 009	*	NETRTE	
111	. .**** ***** **... ..... .*	TIE	
12	. .**** ***** **... ..... .*	TIE	R
13 - 14	. .**** ***** **... ..... .*	TIE	
21	. ...* ..	KNOVRKY	
22	. ...* ..	DNDKY	
222	. .**** ***** **... ..... .*	TIE	
23	. ...* ..	FWDKY	
24	. ...* ..	MBKY	
25	. ...* ..	MSGRKY	
26	. ...* ..	DAKY	
27	. ...* ..	DSSKY	
28	. ...* ..	VCRKY	
29	. ...* ..	VCKY	
30	. ...* ..	CONFKY	

DIGIT INTERPRETATION		VALID FOR ALL DIAL PLANS	
CODE	CALL PROGRESS STATE 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO *=OWN NODE
3000 - 3010	. .**** ***** **... ..... .*	STN	
			DESTNO 30
			DNNO 0- 0-222
3011 - 3020	. .**** ***** **... ..... .*	STN	
			DESTNO 31
			DNNO 0- 0- 31
3021 - 3030	. .**** ***** **... ..... .*	STN	
			DESTNO 32
			DNNO 0- 0- 32
3031 - 3040	. .**** ***** **... ..... .*	STN	
			DESTNO 33
			DNNO 0- 0- 33
3041 - 3050	. .**** ***** **... ..... .*	STN	
			DESTNO 35
			DNNO 0- 0- 35
31	. ...* ..	NAMEKY	
32	. ...* ..	PARKKY	

DIGIT INTERPRETATION		VALID FOR ALL DIAL PLANS	
CODE	CALL PROGRESS STATE 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO *=OWN NODE
33	. ...* ..	CCKY	
34	. ...* ..	HTKY	
35	. ...* ..	STKY	
36	. ...* ..	REMKY	
36 - 37	. .**** ..*** **... ..... .*	CO	
38	. ...* ..	TIMEKY	

39	. .**** ***** **... ..... .*	TIE	
4000 - 4050	. .**** ***** **... ..... .*	STN	
			DESTNO 111
			DNNO 0- 0-111
4051 - 4566	. .**** ***** **... ..... .*	STN	
			DESTNO 222
			DNNO 0- 0-222
4567	. .**** ***** **... ..... .*	STN	
			DESTNO 34
			DNNO 0- 0-200

DIGIT INTERPRETATION	VALID FOR ALL DIAL PLANS		
CODE	CALL PROGRESS STATE 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO *=OWN NODE
4568 - 4999	. .**** ***** **... ..... .*	STN	
			DESTNO 222
			DNNO 0- 0-222
5000 - 5040	. .**** ***** **... ..... .*	STN	
			DESTNO 0
			DNNO 0- 0-555*
5500 - 5501	. .**** ***** **... ..... .*	STN	
			DESTNO 56
			DNNO 0- 0-560
555	. .**** ***** **... ..... .*	OWNNODE	
560	. .**** ***** **... ..... .*	TIE	
59	. .**** ***** **... ..... .*	TIE	
6000 - 6009	. .**** ***** **... ..... .*	STN	R
			DESTNO 0
			DNNO 0- 0-555*

DIGIT INTERPRETATION	VALID FOR ALL DIAL PLANS		
CODE	CALL PROGRESS STATE 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO *=OWN NODE
7000 - 7002	. .**** ***** **... ..... .*	STN	
			DESTNO 56
			DNNO 0- 0-560
8000 - 8050	. .**** ***** **... ..... .*	STN	
			DESTNO 222
			DNNO 0- 0-222
8060	. .**** ***** **... ..... .*	TIE	
8070	. .**** ***** **... ..... .*	TIE	
83	. .**** ..*** **... ..... .*	SPDC1	
84	. .**** ..*** **... ..... .*	SPDC2	
88	. ...*.. ....*	SCONSI	R
89	. ...*.	SCONSCO	R
9	. .**** ***** **... ..... .*	TIE	
*13	. ....*	AHTVCE	
*15	. *.... ..**. ....*	SPLIT	
*16	. ....* ....*	AREM	
*17	. *.... ..**.	TRACE	

DIGIT INTERPRETATION	VALID FOR ALL DIAL PLANS		
CODE	CALL PROGRESS STATE 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT ANALYSIS RESULT	RESERVED/CONVERT DNI/ADD-INFO *=OWN NODE
*18	. ....*	ACOSX	
*19	. *....	KNOVR	
*20	. ....*	ADND	
*25	. ....*	FWDTERM	

```
  | *29            |. ....* ..... ....* ..... ..| AFFWDVCE |                 |
  ------------------------------------------------------------------------------

AMO-WABE -111       DIALLING PLANS, FEATURE ACCESS CODES
DISPLAY COMPLETED;
```

BCSU

PRI Board

```
<DISPLAY-BCSU:TYPE=TBL,LTG=1,LTU=2,SLOT=49;
DISPLAY-BCSU:TYPE=TBL,LTG=1,LTU=2,SLOT=49;
H500:  AMO BCSU  STARTED

 ADDRESS :  LTG  1   LTU 2    SOURCE GROUP 1
-----+-----------+---------+---+---+-+------------+-----+--------+------------+
     | ASSIGNED  | MODULE  |FCT|HWY| | INSERTED   |     |        | MODULE     |
 PEN | MODULE    | TYPE    |ID |BDL| | MODULE     |STATE| HW-INFO| STATUS     |
-----+-----------+---------+---+---+-+------------+-----+--------+------------+
  49 | Q2196-X     DIU-N2     1  A | | Q2196-X    |  1  | -06 -  | READY      |

AMO-BCSU -111       BOARD CONFIGURATION, SWITCHING UNIT
DISPLAY COMPLETED;
```

Class of Trunk, COT

```
  <dis-cot:21;
DIS-COT:21;
H500:  AMO COT   STARTED

   COT:  21  INFO:
   DEVICE: INDEP        SOURCE: DB
   PARAMETER:
        PRIORITY FOR AC WILL BE DETERMINED FROM MESSAGE              PRI
        RECALL IF USER HANGS UP IN CONSULTATION CALL                 RCL
        TRUNK CALL TRANSFER                                          XFER
        TRUNK SIGNALING ANSWER                                       ANS
        CHANGEOVER FROM HOLD TO RING TONE                            CHRT
        KNOCKING OVERRIDE POSSIBLE                                   KNOR
        CALL EXTEND FOR BUSY, RING OR CALL STATE                     CEBC
        NETWORKWIDE AUTOMATIC CALLBACK ON BUSY                       CBBN
        NETWORKWIDE AUTOMATIC CALLBACK ON FREE                       CBFN
        DON'T RELEASE CALL TO BUSY HUNT GROUP                        BSHT
        CONNECTION TO ROUTE OPTIMIZATION NODE                        ROPT
        TSC-SIGNALING FOR NETWORKWIDE FEATURES (MANDATORY)           TSCS
        INCOMING CDR BY ZONE OR FROM LINE                            ICZL
        AOC PER CALL (AUTOMATICAL OR ON REQUEST), MAND. CORNET-NQ    AOCC
        LINE WITH IMPLICIT NUMBERS                                   LINO
        NO TONE                                                      NTON

AMO-COT  -111       CLASS OF TRUNK FOR CALL PROCESSING
DISPLAY COMPLETED;
```

Class of Parameter for Device Handler, COP

```
  <DISPLAY-COP:COPNO=21;
DISPLAY-COP:COPNO=21;
H500:  AMO COP   STARTED

   COP:  21  INFO:
   DEVICE: INDEP        SOURCE: DB
   PARAMETER:
        LINE WITH END-OF-DIAL                                          EOD
        SPECIAL MODE                                                   SFRM
        CODE CALLING RELEASE AFTER EVERY TASK                          CCR
        REGISTRATION OF LAYER 3 ADVISORIES                             L3AR
        MAKE/BREAK RATIO FOR DTMF 1 (PULSE=80MS,PAUSE=80MS)            DTM1

   CO TRUNK ACCESS:
        TRUNK ACCESS                                                   TA

   TOLL ACCESS:
        TRUNK ACCESS                                                   TA

AMO-COP  -111       CLASS OF PARAMETER FOR DEVICE HANDLER
DISPLAY COMPLETED;
```

Class of Service, COSSU

```
  <DISPLAY-COSSU:TYPE=COS,COS=10;
DISPLAY-COSSU:TYPE=COS,COS=10;
H500:  AMO COSSU STARTED
   +------+-----------------+---------------+-----------------+
   | COS  |      VOICE      |      FAX      |       DTE       |
   +------+-----------------+---------------+-----------------+
   |   10 |>                                                  |
   |      |         TA      |      NOCO     |       NOCO      |
   |      |      TSUID      |     NOTIE     |      NOTIE      |
   |      |     TNOTCR      |               |                 |
   |      |     RKOABS      |               |                 |
   |      |     CDRINT      |               |                 |
   |      |       CDRS      |               |                 |
   |      |       CDRC      |               |                 |
   |      |     COSXCD      |               |                 |
   |      |        VCE      |               |                 |
   |      |     FWDNWK      |               |                 |
   |      |        MSN      |               |                 |
   |      |     FWDECA      |               |                 |
   |      |        CFB      |               |                 |
   |      |       CFNR      |               |                 |
   |      |     FWDEXT      |               |                 |
   |      |                 |               |                 |
   +------+-----------------+---------------+-----------------+
AMO-COSSU-111       CLASSES OF SERVICE
DISPLAY COMPLETED;
```

```
  <DISPLAY-COSSU:TYPE=LCOSV,LCOSV=1;
DISPLAY-COSSU:TYPE=LCOSV,LCOSV=1;
H500:  AMO COSSU STARTED
   +----+-------------------------------------------------------------------+-----+
   |LCOS|                              LAUTH                                |     |
   |  V |         1         2         3         4         5         6      |     |
   |    |12345678901234567890123456789012345678901234567890123456789012345|COPIN|
   |    |>SERVICE INFORMATION                                               | NUM |
   +----+----+----|----+----|----+----|----+----|----+----|----+----|----+-----+
   |   1|X..................................................................|  0  |
   |    |>LCR ATTENDANT FOR VOICE                                           |     |
   +----+-------------------------------------------------------------------+-----+

AMO-COSSU-111       CLASSES OF SERVICE
DISPLAY COMPLETED;
  <DISPLAY-COSSU:TYPE=LCOSD,LCOSD=1;
DISPLAY-COSSU:TYPE=LCOSD,LCOSD=1;
H500:  AMO COSSU STARTED
   +----+-------------------------------------------------------------------+-----+
   |LCOS|                              LAUTH                                |     |
   |  D |         1         2         3         4         5         6      |     |
   |    |12345678901234567890123456789012345678901234567890123456789012345|COPIN|
   |    |>SERVICE INFORMATION                                               | NUM |
   +----+----+----|----+----|----+----|----+----|----+----|----+----|----+-----+
   |   1|X..................................................................|  .  |
   +----+-------------------------------------------------------------------+-----+

AMO-COSSU-111       CLASSES OF SERVICE
DISPLAY COMPLETED;
```

Trunk Group Access Code, BUEND

```
  <DISPLAY-BUEND:TGRP=20,FORMAT=L;
DISPLAY-BUEND:TGRP=20,FORMAT=L;
H500:  AMO BUEND STARTED

+------------------------------ FORMAT = L -----------------------------------+
|  TGRP NUMBER :    20   TGRP NAME   : PRI PSSV1          MAXIMUM NO.   :   70 |
|                        CHARCON     : NEUTRAL                                 |
|  SUBGROUP NO.:     3   DEVICE TYPE : S2CONN            TRACENO       :    0 |
|  RESERVED    :     N   SEARCH MODE : ASCENDING         ACD THRESHOLD :    * |
|  NUMBER OF ASSOCIATED ROUTES       : 2                 PRIORITY      :    2 |
|  TDDRFLAG    :    ON  TDDRTHRESHOLD: 3                SOURCEGROUPIDX :    1 |
|  GDTRRULE    :     0      ACDPMGRP : 0                                      |
|  THE FOLLOWING TRUNKS (LTG-LTU-SLOT-CCT) HAVE BEEN ALLOCATED:                |
+------------------------------------------------------------------------------+
|   1- 2- 49-0          1 |  1- 2- 49-0          2 |  1- 2- 49-0          3 |
|   1- 2- 49-0          4 |  1- 2- 49-0          5 |  1- 2- 49-0          6 |
|   1- 2- 49-0          7 |  1- 2- 49-0          8 |  1- 2- 49-0          9 |
|   1- 2- 49-0         10 |  1- 2- 49-0         11 |  1- 2- 49-0         12 |
|   1- 2- 49-0         13 |  1- 2- 49-0         14 |  1- 2- 49-0         15 |
|   1- 2- 49-0         16 |  1- 2- 49-0         17 |  1- 2- 49-0         18 |
|   1- 2- 49-0         19 |  1- 2- 49-0         20 |  1- 2- 49-0         21 |
|   1- 2- 49-0         22 |  1- 2- 49-0         23 |  1- 2- 49-0         24 |
|   1- 2- 49-0         25 |  1- 2- 49-0         26 |  1- 2- 49-0         27 |
|   1- 2- 49-0         28 |  1- 2- 49-0         29 |  1- 2- 49-0         30 |
+------------------------------------------------------------------------------+

AMO-BUEND-111       TRUNK GROUP
DISPLAY COMPLETED;
```

Trunk Configuration, TDCSU

For Master-side Configuration

```
  <DISPLAY-TDCSU:PEN1=1-2-49-0;
DISPLAY-TDCSU:PEN1=1-2-49-0;
H500:  AMO TDCSU STARTED
  +------------------------ DIGITAL TRUNK (FORMAT=L) -------------------------+
  | DEV      = S2CONN        PEN      =  1-02-049-0   TGRP     = 20           |
  |-------------------------------------------------------------------------|
  | PROTVAR  = ETSI          INS      = Y             SRCHMODE = ASC          |
  | COTNO    = 21            COPNO    = 21            DPLN     = 0            |
  | ITR      = 1             COS      = 10            LCOSV    = 1            |
  | LCOSD    = 1             CCT      = HICOM S2      DESTNO   = 1            |
  | SEGMENT  = 1             DEDSCC   =               DEDSVC   = NONE         |
  | FACILITY =               DITIDX   =               SRTIDX   =              |
  | TRTBL    = GDTR          SIDANI   = N             ATNTYP   = TIE          |
  | CBMATTR  = NONE          NWMUXTIM = 10            TCHARG   = N            |
  | SUPPRESS = 0             DGTPR    =               CHIMAP   = N            |
  | ISDNIP   =               ISDNNP   =                                       |
  | PNPL2P   =               PNPL1P   =               PNPAC    =              |
  | TRACOUNT = 31            SATCOUNT = MANY          NNO      = 1  -1  -300  |
  | ALARMNO  = 0             FIDX     = 1             CARRIER  = 1            |
  | ZONE     = EMPTY         COTX     = 21            FWDX     = 5            |
  | DOMTYPE  =               DOMAINNO =               TPROFNO  =              |
  | INIGHT   =                                        CCHDL    =              |
  | UUSCCX   = 16            UUSCCY   = 8             FNIDX    = 1            |
  | CLASSMRK = EC     & G711   & G729OPT             SRCGRP   =              |
  | TCCID    =                                                                |
  |-------------------------------------------------------------------------|
  | BCNEG    = N             BCGR     = 1             LWPAR    = 1            |
  | LWPP     = 0             LWLT     = 0             LWPS     = 0            |
  | LWR1     = 0             LWR2     = 0                                     |
  | SVCDOM   =                                                               |
  | BCHAN    =  1 && 30                                                      |
  |                                                                          |
  +-------------------------------------------------------------------------+
  AMOUNT OF B-CHANNELS IN THIS DISPLAY-OUTPUT: 30

AMO-TDCSU-111       DIGITAL TRUNKS
DISPLAY COMPLETED;

<DISPLAY-LWPAR:FORMAT=L,TYPE=DIUS2,BLNO=1;
DISPLAY-LWPAR:FORMAT=L,TYPE=DIUS2,BLNO=1;
H500:  AMO LWPAR STARTED

   +-------------------------------------------------------------------+
   | LOADWARE PARAMETERS     CIRCUIT TYPE: DIUS2  SOURCE:DB    BLOCK:    1 |
   +-------------------------------------------------------------------+
   | LNTYPE   = COPPER         VERSION  = S2           QUAL     =  ON      |
   | MASTER   = Y              DCHAN1   = 16           DCHAN2   = 0        |
   | PATTERN  = D5H            QUAL1    = 10  SEC.     QUAL2    = 10  MIN. |
   | SMD      = Y              PERMACT  = Y            FCBAB    = DFH      |
   | CDG      = N              FIXEDTEI = 0            CNTRNR   = 255      |
   | TEIVERIF = N              CRC4REP  = N                                |
   | DEV      = INDEP                                                      |
   | INFO     =                                                            |
   +-------------------------------------------------------------------+

AMO-LWPAR-111       LOADWARE PARAMETERS FOR NETWORKING MODULES
DISPLAY COMPLETED;
```

For Slave-side Configuration

```
  <DISPLAY-TDCSU:PEN1=1-2-49-0;
DISPLAY-TDCSU:PEN1=1-2-49-0;
H500:  AMO TDCSU STARTED
  +----------------------- DIGITAL TRUNK (FORMAT=L) -------------------------+
  | DEV      = S2CONN        PEN      =  1-02-049-0   TGRP     = 20          |
  |-------------------------------------------------------------------------|
  | PROTVAR  = ETSI          INS      = Y             SRCHMODE = ASC         |
  | COTNO    = 21            COPNO    = 21            DPLN     = 0           |
  | ITR      = 1             COS      = 10            LCOSV    = 1           |
  | LCOSD    = 1             CCT      = HICOM S2      DESTNO   = 1           |
  | SEGMENT  = 1             DEDSCC   =               DEDSVC   = NONE        |
  | FACILITY =               DITIDX   =               SRTIDX   =             |
  | TRTBL    = GDTR          SIDANI   = N             ATNTYP   = TIE         |
  | CBMATTR  = NONE          NWMUXTIM = 10            TCHARG   = N           |
  | SUPPRESS = 0             DGTPR    =               CHIMAP   = N           |
  | ISDNIP   =               ISDNNP   =                                      |
  | PNPL2P   =               PNPL1P   =               PNPAC    =             |
  | TRACOUNT = 31            SATCOUNT = MANY          NNO      = 1  -1  -300 |
  | ALARMNO  = 0             FIDX     = 1             CARRIER  = 1           |
  | ZONE     = EMPTY         COTX     = 21            FWDX     = 5           |
  | DOMTYPE  =               DOMAINNO =               TPROFNO  =             |
  | INIGHT   =                                        CCHDL    =             |
  | UUSCCX   = 16            UUSCCY   = 8             FNIDX    = 1           |
  | CLASSMRK = EC     & G711   & G729OPT              SRCGRP   =             |
  | TCCID    =                                                              |
  |-------------------------------------------------------------------------|
  | BCNEG    = N             BCGR     = 1             LWPAR    = 0           |
  | LWPP     = 0             LWLT     = 0             LWPS     = 0           |
  | LWR1     = 0             LWR2     = 0                                    |
  | SVCDOM   =                                                              |
  | BCHAN    =  1 && 30                                                     |
  |                                                                         |
  +-------------------------------------------------------------------------+
  AMOUNT OF B-CHANNELS IN THIS DISPLAY-OUTPUT: 30

AMO-TDCSU-111       DIGITAL TRUNKS
DISPLAY COMPLETED;

<DISPLAY-LWPAR:FORMAT=L,TYPE=DIUS2,BLNO=0;
DISPLAY-LWPAR:FORMAT=L,TYPE=DIUS2,BLNO=0;
H500:  AMO LWPAR STARTED

   +-------------------------------------------------------------------+
   | LOADWARE PARAMETERS     CIRCUIT TYPE: DIUS2  SOURCE:DB    BLOCK:    0 |
   +-------------------------------------------------------------------+
   | LNTYPE   = COPPER         VERSION  = S2           QUAL     =  ON      |
   | MASTER   = N              DCHAN1   = 16           DCHAN2   = 0        |
   | PATTERN  = D5H            QUAL1    = 10  SEC.     QUAL2    = 10  MIN. |
   | SMD      = N              PERMACT  = Y            FCBAB    = DFH      |
   | CDG      = N              FIXEDTEI = 0            CNTRNR   = 255      |
   | TEIVERIF = N              CRC4REP  = N                                |
   | DEV      = INDEP                                                      |
   | INFO     =                                                            |
   +-------------------------------------------------------------------+

AMO-LWPAR-111       LOADWARE PARAMETERS FOR NETWORKING MODULES
DISPLAY COMPLETED;
```

Configuring the Cisco IAD2432 24FXS

```
Ericsson-1#sh run
Building configuration...

*Mar  6 19:04:55.133: %SYS-5-CONFIG_I: Configured from console by vty0 (172.20.1
10.100)
Current configuration : 2367 bytes
!
version 12.4
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname Ericsson-1
!
boot-start-marker
boot system flash:c2430-ik9o3s-mz-124-9.T1.bin
boot-end-marker
!
card type e1 1
logging buffered 10000000 debugging
no logging console
enable secret 5 $1$WJPz$ZoIKHvDdxxTEDUc2AwOoM0
!
no aaa new-model
!
resource policy
!
network-clock-participate E1 1/0
network-clock-participate E1 1/1
network-clock-select 1 E1 1/0
!
!
no ip domain lookup
!
!
!
isdn switch-type primary-qsig
isdn gateway-max-interworking
!
voice-card 0
!
!
!
!
!
voice service voip
 notify redirect ip2pots
!
controller E1 1/0
 pri-group timeslots 1-31
!
controller E1 1/1
```

```
 mode cas
 framing NO-CRC4
!
!
!
!
!
!
interface FastEthernet0/0
 ip address 172.20.8.40 255.255.255.0
 ip broadcast-address 0.0.0.0
 duplex auto
 speed auto
!
interface FastEthernet0/1
 no ip address
 ip broadcast-address 0.0.0.0
 shutdown
 duplex auto
 speed auto
!
interface Serial1/0:15
 no ip address
 encapsulation hdlc
 isdn switch-type primary-net5
 isdn overlap-receiving
 isdn protocol-emulate network
 isdn incoming-voice voice
 isdn T310 120000
 no cdp enable
!
ip default-gateway 172.20.8.1
ip http server
no ip http secure-server
!
ip route 0.0.0.0 0.0.0.0 172.20.8.1
!
!
!
tftp-server flash:c2430-is-mz.sb93109
!
!
control-plane
!
!
!
voice-port 1/0:15
!
voice-port 2/0
!
voice-port 2/1
!
voice-port 2/2
!
voice-port 2/3
!
voice-port 2/4
!
voice-port 2/5
```

```
!
voice-port 2/6
!
voice-port 2/7
!
voice-port 2/8
!
voice-port 2/9
!
voice-port 2/10
!
voice-port 2/11
!
voice-port 2/12
!
voice-port 2/13
!
voice-port 2/14
!
voice-port 2/15
!
voice-port 2/16
!
voice-port 2/17
!
voice-port 2/18
!
voice-port 2/19
!
voice-port 2/20
!
voice-port 2/21
!
voice-port 2/22
!
voice-port 2/23
!
!
!
!
dial-peer voice 1100 pots
 destination-pattern 11..
 supplementary-service pass-through
 direct-inward-dial
 port 1/0:15
 forward-digits all
!
dial-peer voice 4200 voip
 destination-pattern 42..
 session protocol sipv2
 session target ipv4:172.20.8.41
 dtmf-relay rtp-nte
 supplementary-service pass-through
!
!
gateway
 timer receive-rtp 1200
!
sip-ua
```

```
!
!
!
line con 0
 password cisco
 login
line aux 0
line vty 0 4
 exec-timeout 0 0
 password cisco
 login
!
end
```

Ericsson-1#

Acronyms

Acronym	Definitions
IAD	Integrated Access Device
SIP	Session Initiation Protocol

Important Information

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