

Cisco 2651-PBX Interoperability: Siemens Hicom 330E with E1 ISDN PRI Signaling

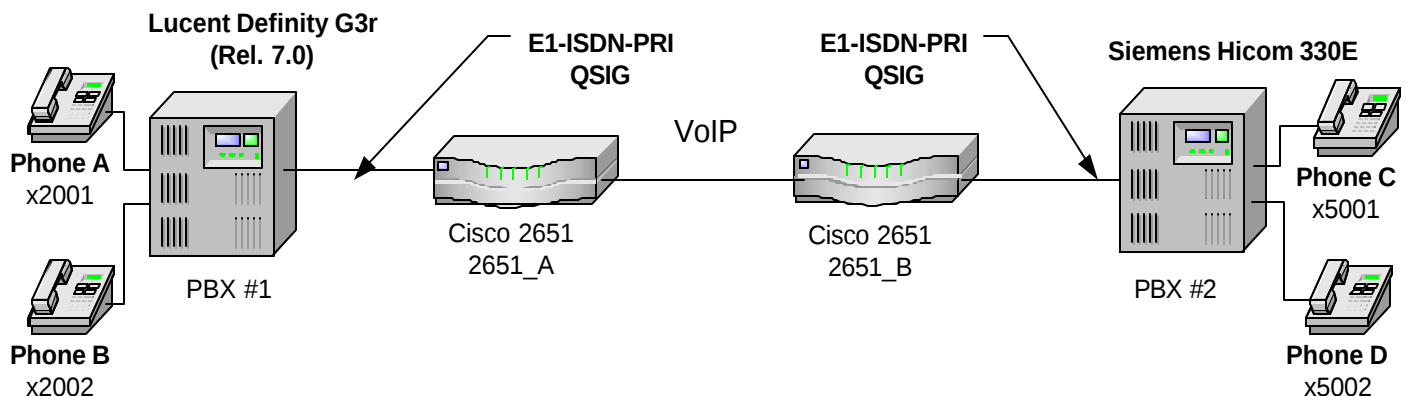
Introduction

This document describes the interoperability and configuration of a Cisco 2651 voice gateway with a Siemens Hicom 330E using E1 ISDN PRI signaling.

Network Topology

This diagram represents the various configurations used for testing.

Basic Call Setup End-to-End Configuration



Limitations

- To assure that calling name is delivered and presented on both sides, both PBXs must be configured for the same type of supplementary services.
- The Siemens Hicom 330E supports both “USER” and “NETWORK” protocol sides.
- The Cisco 2651 router ISDN switch-type setting primary-qsig supports both protocol sides by using the “isdn protocol-emulate network/user” command.
- The “Network/user” or Master/Slave choice for the Siemens Hicom 330 E PBX is made by deactivating the B channels/D-channel (<dea-dssu). A change command is then issued to the Reference clock (<cha-refta) to get to the Master/Slave selection (Pri=0 for Master, 11 for slave). Now the trunk is changed (<cha-tdcsu) to get to Device type prompt (Dev=s2conn), (Bcgrp=1), and loadware parameters (Lwpar=1 for User, 4 for Network). The D-channel, and B-channels are then reactivated (<act-dssu), after the settings are changed.



System Components

Hardware Requirements

- Cisco hardware—Cisco 2651 with 2MFT-E1
- PBX hardware—DIU-N2

Software Requirements

- Cisco software release—IOS™ Version 12.2
- PBX software release—version 3.1

Configuration

Configuring the Siemens Hicom 330E

Configuration Menus and Commands

DPLN

```
<dis-wabe
```

```
TYPE = gen
```

```
CD =
```

```
DPLN = 0;
```

```
DIS-WABE:GEN, , 0;
```

```
H500: AMO WABE STARTED
```

DIGIT INTERPRETATION				VALID FOR ALL DIAL PLANS			
CODE		CALL PROGRESS STATE				DIGIT	RESERVED/CONVERT
		1 1111 11112 22				ANALYSIS	DNI/ADD-INFO
		0 12345 67890 12345 67890 12				RESULT	*=OWN NODE
001	- 002	*				NETRTE	R
11		 *				MBKY	
3001		. . **** *				STN	R
							DESTNO 0
							DNNO 1- 1-150*
3007		 *				MBKY	
3007		. . **** *				STN	
							DESTNO 0
							DNNO 1- 1-150*
4100	- 4500	. . **** *				STN	R
							DESTNO 72
							DNNO 0- 0- 0
DIGIT INTERPRETATION				VALID FOR ALL DIAL PLANS			
CODE		CALL PROGRESS STATE				DIGIT	RESERVED/CONVERT
		1 1111 11112 22				ANALYSIS	DNI/ADD-INFO
		0 12345 67890 12345 67890 12				RESULT	*=OWN NODE
5000	- 5007	. . **** *				STN	



5008 - 5009		STN	DESTNO 0 DNNO 1- 1-150*
5010		ATNDIND	DESTNO 99
800		ATNDDID	DNNO 0- 0- 0
854		NETW	R
*66	 *	SIGNON	DESTNO 2 DNNO 0- 0- 0

DIGIT INTERPRETATION VALID FOR ALL DIAL PLANS

CODE	CALL PROGRESS STATE 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT	RESERVED/CONVERT
		ANALYSIS RESULT	DNI/ADD-INFO *=OWN NODE
*91	 *	MBOFF	
#66	 *	SIGNOFF	
#91	 *	MBON	
##22		DAKY	
##24		DSSKY	
##25		FWDKY	
##26		HTKY	
##27		KNOVRKY	
##28		MBKY	
##29		MSGRKY	
##35		TIMEKY	
##36		VCKY	

DIGIT INTERPRETATION VALID FOR ALL DIAL PLANS

CODE	CALL PROGRESS STATE 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT	RESERVED/CONVERT
		ANALYSIS RESULT	DNI/ADD-INFO *=OWN NODE
##37		VCRKY	
##38		CKKY	
##39		CONFKY	
##41		NAMEKY	
##42		PARKKY	
##43		REMKY	
##44		STKY	
##45		CBKKY	
##46		CONSKY	
##47		DNDKY	
##48		EXHOLDKY	
##49		HOLDKY	

DIGIT INTERPRETATION VALID FOR ALL DIAL PLANS

CODE	CALL PROGRESS STATE 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT	RESERVED/CONVERT
		ANALYSIS RESULT	DNI/ADD-INFO *=OWN NODE
##50		IUSEKY	
##51		LNRKY	



##52	 *	..	PRIVKY	
##53	 *	..	RLSKY	
##54	 *	..	SNRKY	
##55	 *	..	TRNSKY	
##56	 *	..	RCTOFFKY	
##57	 *	..	TOGGLEKY	

DIGIT INTERPRETATION	DPLN 0
----------------------	--------

CODE	CALL PROGRESS STATE				DIGIT ANALYSIS	RESERVED/CONVERT DNI/ADD-INFO
	1	11111	11112	22		
	0	12345	67890	12345	67890 12	*=OWN NODE
0	 *				ATNDDID	
0	 *				ATND	
150	 *				OWNNODE	
2	 *				TIE	
31	 *				TIE	
33	 *				TIE	
37 - 38	 *				TIE	
40	 *				TIE	
702	 *				TIE	R
9	 *				CO	
*0	 *				ACBK	
*10	 *				CCMANS	R

DIGIT INTERPRETATION	DPLN 0
----------------------	--------

CODE	CALL PROGRESS STATE				DIGIT ANALYSIS	RESERVED/CONVERT DNI/ADD-INFO
	1	11111	11112	22		
	0	12345	67890	12345	67890 12	*=OWN NODE
*11	 *				AFWDVCE	
*12	 *				AFWDDTE	
*13	 *				AFWDDWD	
*14	 *				AFWDREM	
						CFREMVAR CFU CFREMSE VOICE
*15	 *				APRIV	
*16	 *				PUGDIS	
*17	 *				SPLIT	
*18	 *				TRACE	
*19	 *				AREM	
*20	 *				NOPT	

DIGIT INTERPRETATION	DPLN 0
----------------------	--------

CODE	CALL PROGRESS STATE				DIGIT ANALYSIS	RESERVED/CONVERT DNI/ADD-INFO
	1	11111	11112	22		
	0	12345	67890	12345	67890 12	*=OWN NODE
*21	 *				AFFWDVCE	
*22	 *				AFFWDDTE	
*23	 *				CALLPARK	
*24	 *				DISUON	
*3	 *				PUDIR	
*40	 *				CCANS	R



*41	 *	CCDIS	
*43	. * . * . *	DTE	
*44	. * . * . *	FWDREM	
			CFREMVAR CFU
			CFREMSE VOICE
*45	 *	CCMEETME	

DIGIT INTERPRETATION	DPLN 0
----------------------	--------

CODE	CALL PROGRESS STATE 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT	RESERVED/CONVERT
		ANALYSIS RESULT	DNI/ADD-INFO *=OWN NODE
*46	. * . * . *	CCSCD	R
*47	 *	CCSURG	
*48	 *	CCVCE	
*49	 *	ACOSX	
*50	 * . *	FWDIGNOR	
*51	 *	ADND	
*52	 *	AHTVCE	
*53	. * . * . *	CCMSURG	R
*54	 *	SPD	
*55	. * . . * . *	BABYLSNG	
*56	. * . * . *	CCMS	R
*57	 *	CCS	

DIGIT INTERPRETATION	DPLN 0
----------------------	--------

CODE	CALL PROGRESS STATE 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT	RESERVED/CONVERT
		ANALYSIS RESULT	DNI/ADD-INFO *=OWN NODE
*58	. * . * . *	CCSN	R
*59	 *	CCSTN	
*60	. *	KNOVR	
*61	. * . * . *	SPDC1	
*62	. * . * . *	SPDC2	
*63	. * . * . *	SPDI	
*64	 * *	SPDIPROG	
*69	. * *	EOVR	
*7	. * . . * *	LNR	
*81	 * . * . . . *	APIN1	
*82	 * . * . . . *	APIN2	
*83	 * . * . . . *	APIN3	

DIGIT INTERPRETATION	DPLN 0
----------------------	--------

CODE	CALL PROGRESS STATE 1 11111 11112 22 0 12345 67890 12345 67890 12	DIGIT	RESERVED/CONVERT
		ANALYSIS RESULT	DNI/ADD-INFO *=OWN NODE
*84	 * . * . . . *	APIN4	
*85	 * . * . . . *	APIN5	
*88	 * *	CTLS	
*89	 * *	TESTLN	
*9	. *	CONF3	
**	 *	PU	
*#50	. * . . * . * . . . *	ACDLOGON	



*#51	. * . . . * *	ACDAV	
*#52	. * . . . * *	ACDWORK	
*#53	. * . . . * *	ACC	
*#54	 *	MONSLNT	
*#55	 *	MONTONE	

DIGIT INTERPRETATION	DPLN 0
----------------------	--------

CODE	CALL PROGRESS STATE 1 1111 1112 22	DIGIT ANALYSIS	RESERVED/CONVERT DNI/ADD-INFO
	0 12345 67890 12345 67890 12	RESULT	*=OWN NODE

*#60	. * . . . *	ACDPGS	
*#61	. * . . . *	ACDPQS	
*#62	 *	ACDEMMSG	
*#63	 *	ACDSHMSG	
*#71	. * . . . *	CAFAV	
*#72	. * . . . *	CAFGRV	
*#74	. * . . . *	CAFAFWD	
#0	 *	DCBK	
#11	 *	DFWDVCE	
#12	 *	DFWDDTE	

DIGIT INTERPRETATION	DPLN 0
----------------------	--------

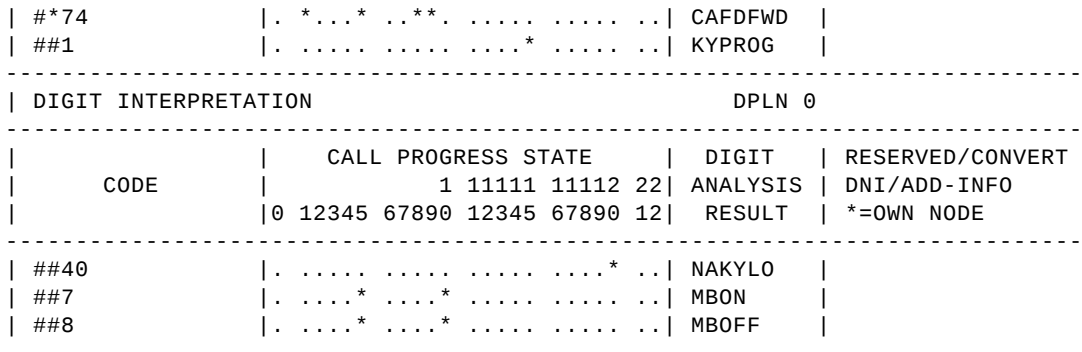
CODE	CALL PROGRESS STATE 1 1111 1112 22	DIGIT ANALYSIS	RESERVED/CONVERT DNI/ADD-INFO
	0 12345 67890 12345 67890 12	RESULT	*=OWN NODE

#14	 * *	DFWDREM	
			CFREMVAR CFU CFREMSE VOICE
#15	. * . . . *	DPRIV	
#19	 *	DREM	
#21	 *	DFWDVCE	
#22	 *	DFWDDTE	
#24	 *	DISUOFF	
#49	 *	DCOSX	
#51	 *	DDND	
#52	 *	DHTVCE	
#74	 *	DIGIDAT	

DIGIT INTERPRETATION	DPLN 0
----------------------	--------

CODE	CALL PROGRESS STATE 1 1111 1112 22	DIGIT ANALYSIS	RESERVED/CONVERT DNI/ADD-INFO
	0 12345 67890 12345 67890 12	RESULT	*=OWN NODE

#8	 * *	DPIN	
#92	 * *	MBOFF	
*#50	. * . . . * *	ACDLOGOF	
*#51	. * . . . * *	ACDNAV	
*#60	. * . . . * *	ACDSGS	
*#61	. * . . . * *	ACDSQS	
*#70	. * . . . * *	CAFLOGOF	
*#71	. * . . . * *	CAFNAV	
*#72	. * . . . * *	CAFGRNAV	
*#73	. * . . . * *	CAFGROFF	



```
DISPLAY COMPLETED;>
```

```
<dis-ldpln
```

TYPE = ldp

M40: APPLICABLE GROUP CONDITION: MAXIMUM OF 1 OUT OF 2 PARAMETERS

```
LDPNO = 47;
```

DIS-LDPLN:LDP, 47;

H500: AMO LDPLN STARTED

LDPNO : 47	LDP : 37-XXXX					
	SPC : 6					
	DPLN	LRTE	LAUTH	DPLN	LRTE	LAUTH
	0	37	1	8		
	1			9		
	2			10		
	3			11		
	4			12		
	5			13		
	6			14		
	7			15		

AMO-LDPLN-196 ADMINISTRATION LCR DIALPLAN

```
DISPLAY COMPLETED;
```



Overlap Sending dial plan, DPLN

```
<dis-ldpln
TYPE = ldp
M40: APPLICABLE GROUP CONDITION: MAXIMUM OF 1 OUT OF 2 PARAMETERS
LDPNO = 47;
DIS-LDPLN:LDP,47;
H500: AMO LDPLN STARTED
```

+-----+									
LDPNO : 47		LDP : 37-X							
		SPC : 6							
+-----+									
		DPLN	LRTE	LAUTH			DPLN	LRTE	LAUTH
+-----+									
		0	37	1			8		
		1					9		
		2					10		
		3					11		
		4					12		
		5					13		
		6					14		
		7					15		
+-----+									

AMO-LDPLN-196 ADMINISTRATION LCR DIALPLAN

DISPLAY COMPLETED;

BCSU

```
<dis-bcsu
TYPE = tbl
LTG = 1
LTU = 1
SLOT = 73;
DIS-BCSU:TBL,1,1,73;
H500: AMO BCSU STARTED
```

ADDRESS : LTG 1 LTU 1

+-----+									
	ASSIGNED	MODULE	FCT	HWY	INSERTED			MODULE	
PEN	MODULE	TYPE	ID	BDL	MODULE	STATE	HW-INFO	STATUS	
+-----+									



```
73 | Q2196-X      DIU-N2      1 A | | Q2196-X      | 1 | -04 - | READY |
AM0-BCSU -162      BOARD CONFIGURATION, SWITCHING UNIT
```

DISPLAY COMPLETED;

Class of Trunk, COT

<dis-cot

COTNO = 4;

DIS-COT:4;

H500: AMO COT STARTED

COT: 4 INFO: 4:Q931 EXTERNAL

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
END-OF-DIAL FOR BLOCK IS SET	BLOC
SEND NO NODE NUMBER TO PARTNER	LWNC
INCOMING CIRCUIT FROM SYSTEM WITHOUT LCR	NLCR
TSC-SIGNALING FOR NETWORKWIDE FEATURES (MANDATORY)	TSCS
INCOMING CDR BY ZONE OR FROM LINE	ICZL
INCOMING CIRCUIT FROM SYSTEM WITHOUT LCR (DATA)	NLRD
INTERWORKING CALLBACK - NO ANSWER AND MAILBOX CALLBACK	IWCB
AOC PER CALL (AUTOMATICAL OR ON REQUEST), MAND. CORNET-NQ	AOCC
CONTROLLED TRUNK AND LINE SELECTION	CTLS
NO TONE	NTON

AM0-COT -162 CLASS OF TRUNK FOR CALL PROCESSING

DISPLAY COMPLETED;

Class of Parameter for device handler, COP

<disp-cop

COPNO = 4;

DISP-COP:4;

H500: AMO COP STARTED

COP: 4 INFO: 4:Q931

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

AMO-COP -162 CLASS OF PARAMETER FOR DEVICE HANDLER

DISPLAY COMPLETED;

Class of Service, COSSU

<dis-cossu

TYPE = cos

COS = 32;

DIS-COSSU: COS, 32;

H500: AMO COSSU STARTED

COS	VOICE	FAX	TTX	VTX	DTE
32	>32:TRUNKS				
	TA	NOCO	NOCO	NOCO	TA
	TNOTCR	NOTIE	NOTIE	NOTIE	TNOTCR
					BASIC
					MSN
					CDRINT
					MULTRA

AMO-COSSU-162 CLASSES OF SERVICE, SWITCHING UNIT

DISPLAY COMPLETED;

<dis-cossu

TYPE = lcos

LCOS = 31;

DIS-COSSU: LCOS, 31;

H500: AMO COSSU STARTED

THE LCR CLASSMARKS ARE CONTAINED IN THE FOLLOWING LCOS:

LCOS	LCOSV	LCOSD
12345678901234567890123456789012	12345678901234567890123456789012	12345678901234567890123456789012
>SERVICE INFORMATION		
31	XX	XX

AMO-COSSU-162 CLASSES OF SERVICE, SWITCHING UNIT

DISPLAY COMPLETED;

Trunk group access code, BUEND

<dis-buend



TGRP = 37;

DIS-BUEND:37;
H500: AMO BUEND STARTED

```
+-----+
| TGRP NUMBER : 37 TGRP NAME : PRI MAXIMUM NO. : 30 |
| SUBGROUP NO.: 10 DEVICE TYPE : S2CONN TRACENO : 0 |
| RESERVED : N SEARCH MODE : CIRCULAR ACD THRESHOLD : * |
| NUMBER OF ASSOCIATED ROUTES : 2 PRIORITY : 1 |
| THE FOLLOWING TRUNKS (LTG-LTU-SLOT-CCT) HAVE BEEN ALLOCATED: |
+-----+
| 1- 1- 73-0 B-CHL: 1 | 1- 1- 73-0 B-CHL: 2 | 1- 1- 73-0 B-CHL: 3 |
| 1- 1- 73-0 B-CHL: 4 | 1- 1- 73-0 B-CHL: 5 | 1- 1- 73-0 B-CHL: 6 |
| 1- 1- 73-0 B-CHL: 7 | 1- 1- 73-0 B-CHL: 8 | 1- 1- 73-0 B-CHL: 9 |
| 1- 1- 73-0 B-CHL: 10 | 1- 1- 73-0 B-CHL: 11 | 1- 1- 73-0 B-CHL: 12 |
| 1- 1- 73-0 B-CHL: 13 | 1- 1- 73-0 B-CHL: 14 | 1- 1- 73-0 B-CHL: 15 |
| 1- 1- 73-0 B-CHL: 16 | 1- 1- 73-0 B-CHL: 17 | 1- 1- 73-0 B-CHL: 18 |
| 1- 1- 73-0 B-CHL: 19 | 1- 1- 73-0 B-CHL: 20 | 1- 1- 73-0 B-CHL: 21 |
| 1- 1- 73-0 B-CHL: 22 | 1- 1- 73-0 B-CHL: 23 | 1- 1- 73-0 B-CHL: 24 |
| 1- 1- 73-0 B-CHL: 25 | 1- 1- 73-0 B-CHL: 26 | 1- 1- 73-0 B-CHL: 27 |
| 1- 1- 73-0 B-CHL: 28 | 1- 1- 73-0 B-CHL: 29 | 1- 1- 73-0 B-CHL: 30 |
+-----+
AMO-BUEND-162 TRUNK GROUP
```

DISPLAY COMPLETED;

Trunk Configuration, TDCSU

For Master side configuration

<dis-tdcsu

PEN1 = 1-1-73-0;

DIS-TDCSU:1-1-73-0;
H500: AMO TDCSU STARTED

```
+-----+
|          DEV = S2CONN          PEN = 1-01-073-0          |
+-----+
| COTNO = 4 COPNO = 4 DPLN = 0 |
| ITR = 0 COS = 32 LCOSV = 31 |
| LCOSD = 31 CCT = PRI DESTNO = 99 |
| PROTVAR = PSS1V2 SEGMENT = 1 TCHARG = N |
| SUPPRESS = 0 DGTPR = CHIMAP = N |
| ISDNCC = ISDNAC = ISDNLC = |
| ISDNIP = ISDNNP = |
| PNPL2C = PNPL1C = PNPLC = |
| PNPL2P = PNPL1P = PNPAC = |
| TRACOUNT = 31 SATCOUNT = MANY NNO = 1 -1 -999 |
| ALARMNO = 2 FIDX = 1 CARRIER = 1 |
| ZONE = EMPTY COTX = 4 FWDX = 10 |
| DOMTYPE = DOMAINNO = TPROFNO = |
| INIGHT = |
| CCHDL = UUSCCX = 16 UUSCCY = 8 |
+-----+
| TGRP = 37 SRCHMODE = CIR BCNEG = N |
+-----+
```



BCGR	= 1	INS	= Y	LWPAR	= 4
LWPP	= 0	LWLT	= 0	LWPS	= 0
LWR1	= 0	LWR2	= 0		
BCHAN	1 && 30				

AMOUNT OF B-CHANNELS IN THIS DISPLAY-OUTPUT: 30

AM0-TDCSU-162 DIGITAL TRUNKS
DISPLAY COMPLETED;

<dis-lwpar

INFOPAT = 4

FORMAT = 1

DEV = ;

DIS-LWPAR:4,L,;
H500: AM0 LWPAR STARTED

LOADWARE PARAMETERS CIRCUIT TYPE: DIUS2 SOURCE:DB BLOCK: 4					
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	= Y	FIXEDTEI	= 0	CNTRNR	= 255
TEIVERIF	= N	CRC4REP	= N		
DEV	= INDEP				
INFO	= 4:COPPER-MASTER CLOCK(DPNSS A-END)				

AM0-LWPAR-162 LOADWARE PARAMETERS FOR NETWORKING MODULES

DISPLAY COMPLETED;

For Slave side configuration

<dis-tdcsu

PEN1 = 1-1-73-0;

DIS-TDCSU:1-1-73-0;
H500: AM0 TDCSU STARTED

DIGITAL TRUNK (FORMAT=L)					
DEV = S2CONN			PEN = 1-01-073-0		
COTNO	= 4	COPNO	= 4	DPLN	= 0
ITR	= 0	COS	= 32	LCOSV	= 31
LCOSD	= 31	CCT	= PRI	DESTNO	= 99
PROTVAR	= PSS1V2	SEGMENT	= 1	TCHARG	= N
SUPPRESS	= 0	DGTPR	=	CHIMAP	= N
ISDNCC	=	ISDNAC	=	ISDNLC	=

	ISDNIP	=		ISDNNP	=				
	PNPL2C	=		PNPL1C	=		PNPLC	=	
	PNPL2P	=		PNPL1P	=		PNPAC	=	
	TRACOUNT	=	31	SATCOUNT	=	MANY	NNO	=	1 -1 -999
	ALARMNO	=	2	FIDX	=	1	CARRIER	=	1
	ZONE	=	EMPTY	COTX	=	4	FWDX	=	10
	DOMTYPE	=		DOMAINNO	=		TPROFNO	=	
	INIGHT	=							
	CCHDL	=		UUSCCX	=	16	UUSCCY	=	8

	TGRP	=	37	SRCHMODE	=	CIR	BCNEG	=	N
	BCGR	=	1	INS	=	Y	LWPAR	=	1
	LWPP	=	0	LWLT	=	0	LWPS	=	0
	LWR1	=	0	LWR2	=	0			
	BCHAN		1 && 30						
+-----									
AMOUNT OF B-CHANNELS IN THIS DISPLAY-OUTPUT: 30									

```
AM0-TDCSU-162      DIGITAL TRUNKS
DISPLAY COMPLETED;
```

<dis-lwpar

INFOPAT = 1

FORMAT = 1

DEV = ;

```
DIS-LWPAR:1,L,;  
H500:  AMO LWPAR STARTED
```

LOADWARE PARAMETERS		CIRCUIT TYPE: DIUS2	SOURCE:DB	BLOCK:	1
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	= 1:COPPER-DERIVE CLOCK FROM LINE(I421)				

AMO-LWPAR-162 LOADWARE PARAMETERS FOR NETWORKING MODULES

```
DISPLAY COMPLETED;
```

Reference Clock Configuration, REFTA

For Master side configuration

```
<dis-refta
```

```
TYPE = circuit
```



PEN = 1-1-73-0;

DIS-REFTA:CIRCUIT,1-1-73-0;

H500: AMO REFTA STARTED

R E F E R E N C E C L O C K C I R C U I T S							
PEN	MODULE	DEVICE	PRI	ERROR	BLOCK	SUPP.	READY
							BUT
							ASYN.
1- 1- 73- 0	DIU-N2	S2CONN	0	17575	N		N

AMO-REFTA-162 REFERENCE CLOCK TABLE
DISPLAY COMPLETED;

For Slave side configuration

<dis-refta

TYPE = circuit

PEN = 1-1-73-0;

DIS-REFTA:CIRCUIT,1-1-73-0;

H500: AMO REFTA STARTED

R E F E R E N C E C L O C K C I R C U I T S							
PEN	MODULE	DEVICE	PRI	ERROR	BLOCK	SUPP.	READY
							BUT
							ASYN.
1- 1- 73- 0	DIU-N2	S2CONN	11	17575	N		N

AMO-REFTA-162 REFERENCE CLOCK TABLE
DISPLAY COMPLETED;

Trunk Least Cost Routing Configuration

LDAT

<dis-ldat

TYPE = lcr

LROUTE = 37;

DIS-LDAT:LCR,37;

H500: AMO LDAT STARTED

LROUTE = 37	LDPLN	NAME = PRI TEST	SERVICE = ALL
TYPE = LCR		DNNO OF ROUTE = 1 -1 -999	
SERVICE INFO =			



```
+-----+-----+-----+-----+-----+-----+-----+-----+
|      |      |      |      |      | SCHEDULE | CARRIER | BAND |      |
| LRTEL | LVAL | TGRP | ODR | LAUTH | ABCDEFGH |      ZONE | WDTH | LATTR |
+-----+-----+-----+-----+-----+-----+-----+-----+
|      1 |      1 |      37 |      1 |      1 | ***** |      1 | EMPTY |      1 |      NONE |
+-----+-----+-----+-----+-----+-----+-----+-----+
```

AM0-LDAT -162 LCR-DIRECTIONS
DISPLAY COMPLETED;

RIGHT

<dis-richt

MODE = lrte

LRTE = 37;

DIS-RIGHT:LRTE,37;
H500: AMO RIGHT STARTED

```
+-----+
| LRTE = 37      NAME = PRI TEST      SRVC = ALL |
| DNNO = 1 -1 -999 |
| ROUTOPT = NO    REROUT = YES  PLB = NO    FWDBL = NO |
| MFV: CNV=FIX    DSP=WITHOUT TEXT=      PULS=PP300 |
| ROUTENO =      4 BUGS = LIN      MAINGROUP =      4 |
| INFO = |
+-----+
| TGRP = 37  LDAT      PRI      SUBGROUP = 10 |
+-----+
```

AM0-RICHT-162 TRUNK ROUTING
DISPLAY COMPLETED;

LCR Out-dial Rules,LODR

<dis-lodr

ODR = 1

INFOPAT = ;

DIS-LODR:1;
H500: AMO LODR STARTED

```
+-----+
| ODR      POSITION  CMD      PARAMETER |
+-----+
|      1      |      1  ECHO      2 |
|      |      2  END |
+-----+
| INFO:PSTN |
+-----+
```

H03: THE NEXT FREE ODR IS 4
AM0-LODR -162 ADMINISTRATION OF LCR OUTDIAL RULES
DISPLAY COMPLETED;



Configuring the Cisco 2651

2651_B#**show running-configuration**

Using 1543 out of 29688 bytes

```
!  
version 12.2  
no service single-slot-reload-enable  
service timestamps debug uptime  
service timestamps log uptime  
no service password-encryption  
!  
hostname 2651_B  
!  
no logging buffered  
logging rate-limit console 10 except errors  
!  
memory-size iomem 15  
voice-card 1  
!  
ip subnet-zero  
!  
!  
no ip finger  
!  
no ip dhcp-client network-discovery  
isdn switch-type primary-qsig  
call rsvp-sync  
!  
!  
!  
!  
!  
!  
controller E1 1/0  
  pri-group timeslots 1-31  
!  
controller E1 1/1  
  shutdown  
!  
!  
interface FastEthernet0/0  
  mac-address 000d.000d.0001  
  ip address 101.1.1.2 255.255.0.0  
  load-interval 30  
  no keepalive  
  shutdown  
  speed 100  
  full-duplex  
!
```



```
interface FastEthernet0/1
  ip address 10.1.1.1 255.255.255.0
  duplex auto
  speed auto
!
interface Serial1/0:15
  no ip address
  no logging event link-status
  isdn switch-type primary-qsig
  isdn incoming-voice voice
  isdn T203 30000
  isdn T310 60000
  isdn bchan-number-order ascending
  no cdp enable
!
ip kerberos source-interface any
ip classless
ip http server
!
!
snmp-server engineID local 800000009030000024B135820
snmp-server packetize 4096
snmp-server manager
!
voice-port 1/0:15
!
dial-peer cor custom
!
!
!
dial-peer voice 1 pots
  destination-pattern 5...
  direct-inward-dial
  port 1/0:15
  prefix 5
!
dial-peer voice 2 voip
  destination-pattern 2...
  progress_ind setup enable 1
  session target ipv4:10.1.1.2
!
!
line con 0
  exec-timeout 0 0
  transport input none
line aux 0
  exec-timeout 0 0
line vty 0 4
  exec-timeout 0 0
  login
```



```
line vty 5 15
  exec-timeout 0 0
  login
!
scheduler allocate 3996 1000
end
```

Important Information

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