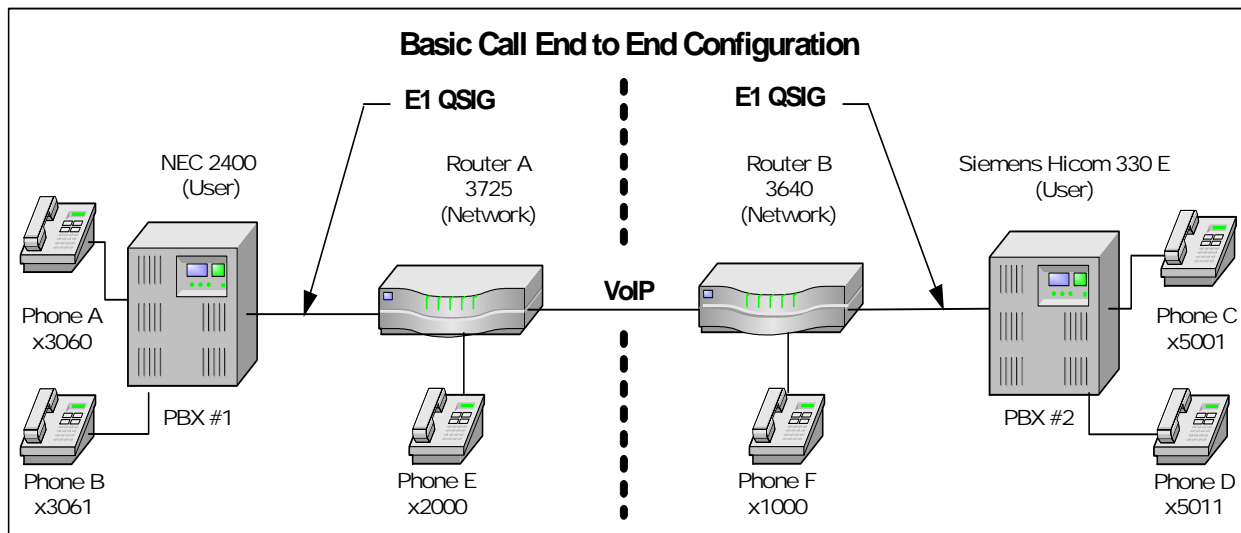


# Cisco 3640 Gateway-PBX Interoperability: Siemens Hicom 300E PBX using E1 QSIG with H.323

## Introduction

This application note describes the interoperability of the Cisco 3640 router and the Siemens Hicom 330 E Rel 3.1 PBX using E1 QSIG. The network topology diagram shows the end-to-end interoperability.

## Network Topology



## Limitations

If the Siemens PBX is set to send Advice of Charge IE, the receiving PBX will fail to display Calling Name.

## System Components

### Hardware Requirements

- Cisco 3640 Router with NM-HDV and 1MFT-E1
- Siemens Hicom 330 E PBX with DIUN2 circuit card

### Software Requirements

- Cisco 3640 12.2.(12.12T)
- Siemens Hicom 330 E Software Release 3.1

## Features Supported

- Calling Name Identification Presentation
- Calling Number Identification Presentation
- Connected Name Identification Presentation



Connected Number Identification Presentation

Configuration

**Configuring the Siemens PBX**

<dis-ansu

DIS-ANSU;

H500: AMO ANSU STARTED

APS TYPE	NAME	SP REFERENCE NO.
SWU RES-CODE	S0-EK0SC	P30252B4200S00103
SWU RES-TEXT	S0-TKXSX	P30252B4250S00103
SWU AMO-CODE	B0-EK0BC	P30252B4200B00103

SYSTEM NUMBER	DB SUBSYSTEM NAME
L31900Q2999A00001	DB_SUSY_ZDBCCDSF
L31900Q2999A00001	DB_SUSY_ZDBCCDS0
L31900Q2999A00001	DB_SUSY_ZDBCCDS1
L31900Q2999A00001	DB_SUSY_ZDBCCDS2
L31900Q2999A00001	DB_SUSY_ZDBCCDS3
L31900Q2999A00001	DB_SUSY_ZDBCCDSA
L31900Q2999A00001	DB_SUSY_ZDBCCDSB
L31900Q2999A00001	DB_SUSY_ZDBCCDSC
L31900Q2999A00001	DB_SUSY_ZDBCCDSD

AMO-ANSU -49 ENTERING THE SYSTEM NUMBERS INTO THE SWU DATABASE

DISPLAY COMPLETED;



<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

PEN	ASSIGNED MODULE	MODULE TYPE	FCT ID	HWY BDL	INSERTED MODULE	STATE	HW-INFO	MODULE STATUS
73	Q2196-X	DIU-N2	1	A	Q2196-X	1	-04 -	READY

AMO-BCSU -49 BOARD CONFIGURATION, SWITCHING UNIT

DISPLAY COMPLETED;



<dis-buend

TGRP = 37;

DIS-BUEND:37;

H500: AMO BUEND STARTED

```
----- FORMAT = L -----
| TGRP NUMBER : 37   TGRP NAME   : PRI TEST           MAXIMUM NO. : 30 |
| SUBGROUP NO.: 10   DEVICE TYPE : S2CONN           TRACENO     : 0   |
| RESERVED    : N    SEARCH MODE : CIRCULAR         ACD THRESHOLD : *  |
| NUMBER OF ASSOCIATED ROUTES : 1                   PRIORITY    : 2   |
| 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-49 TRUNK GROUP

DISPLAY COMPLETED;



<dis-tdcsu

PEN1 = 1-1-73-0;

DIS-TDCSU:1-1-73-0;

H500: AMO TDCSU STARTED

----- DIGITAL TRUNK (FORMAT=L) -----					
DEV = S2CONN			PEN = 1-01-073-0		
COTNO	= 4	COPNO	= 4	DPLN	= 0
ITR	= 0	COS	= 31	LCOSV	= 32
LCOSD	= 32	CCT	=	DESTNO	= 0
PROTVAR	= ECMA1	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	=
ALARMNO	= 0	FIDX	= 1	CARRIER	= 1
ZONE	= EMPTY	COTX	= 4	FWDX	= 1
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

AMO-TDCSU-49 DIGITAL TRUNKS

DISPLAY COMPLETED;



```
<dis-cossu
```

```
TYPE = cos
```

```
COS = 31;
```

```
DIS-COSSU: COS, 31;
```

```
H500: AMO COSSU STARTED
```

COS	VOICE	FAX	TTX	VTX	DTE
31	>31: OPERATOR/ATTENDANT				
	TA	NOCO	NOCO	NOCO	NOCO
	TSUID	NOTIE	NOTIE	NOTIE	NOTIE
	TNOTCR				
	RKOABS				
	CDRINT				
	CDRS				
	CDRC				
	COSXCD				
	VCE				
	FWDNWK				
	REOVR				
	MSN				
	FWDBSY				
	NOPTCD				
	FWDECA				
	FWDEXT				

```
AMO-COSSU-49          CLASSES OF SERVICE, SWITCHING UNIT
```

```
DISPLAY COMPLETED;
```

### Configuring the Cisco 3640 Router

```
Router# show running-config
```

```
Building configuration...
```

```
Current configuration : 1724 bytes
```

```
!  
version 12.2  
service timestamps debug datetime msec  
service timestamps log datetime msec  
no service password-encryption  
!  
hostname 3640_A  
!  
boot system slot0:  
logging buffered 1000000 debugging  
no logging console  
!  
voice-card 3
```



```
!  
ip subnet-zero  
!  
!  
no ip domain lookup  
!  
isdn switch-type primary-qsig  
!  
!  
!  
!  
!  
!  
!  
!  
mta receive maximum-recipients 0  
!  
controller E1 3/0  
  pri-group timeslots 1-31  
!  
!  
!  
interface Ethernet0/0  
  ip address 10.1.1.23 255.255.255.0  
  no ip mroute-cache  
  half-duplex  
!  
interface Ethernet0/1  
  no ip address  
  no ip mroute-cache  
  shutdown  
  half-duplex  
!  
interface Serial3/0:15  
  no ip address  
  no logging event link-status  
  isdn switch-type primary-qsig  
  isdn protocol-emulate network  
  isdn incoming-voice voice  
  no isdn T309-enable  
  isdn negotiate-bchan  
  no cdp enable  
!  
ip classless  
no ip http server  
ip pim bidir-enable  
!  
!  
!  
call rsvp-sync  
!  
voice-port 2/0/0  
!  
voice-port 2/0/1  
!  
voice-port 2/1/0  
!  
voice-port 2/1/1  
!  
voice-port 3/0:15
```



```
!  
!  
mgcp profile default  
!  
!  
dial-peer cor custom  
!  
!  
dial-peer voice 1000 pots  
  destination-pattern 1000  
  port 2/0/0  
!  
dial-peer voice 1001 pots  
  destination-pattern 1001  
  port 2/0/1  
!  
dial-peer voice 3060 voip  
  destination-pattern 306.  
  session target ipv4:10.1.1.21  
!  
dial-peer voice 4 pots  
  destination-pattern 9999  
  direct-inward-dial  
  forward-digits all  
!  
dial-peer voice 3000 pots  
  destination-pattern 305.  
  direct-inward-dial  
  port 3/0:15  
  forward-digits all  
!  
dial-peer voice 2000 voip  
  destination-pattern 200.  
  session target ipv4:10.1.1.21  
!  
dial-peer voice 5000 pots  
  destination-pattern 50..  
  direct-inward-dial  
  port 3/0:15  
  forward-digits all  
!  
!  
line con 0  
  exec-timeout 0 0  
line aux 0  
line vty 0 4  
  password cisco  
  login  
!  
!  
end
```





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