Cisco 7200 Series Router-PBX Interoperability: Siemens Hicom 330E and PA-VXC-2TE1 + E1 Card with ISDN PRI

This document describes the interoperability and configuration of a Cisco 7200 series router with a Siemens Hicom 330E with ISDN PRI signaling. It includes the following sections:

- System Components
- Configuration Tasks
- Caveats

System Components

<table>
<thead>
<tr>
<th>PBX Model</th>
<th>Siemens Hicom 300 E</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBX Release</td>
<td>Version 3.1</td>
</tr>
<tr>
<td>Telephony Signaling</td>
<td>E1 PRI</td>
</tr>
<tr>
<td>Voice Gateway</td>
<td>Cisco 7200 series router</td>
</tr>
<tr>
<td>Gateway Release</td>
<td>Cisco IOS Release 12.2(1)</td>
</tr>
<tr>
<td>VoX Protocol</td>
<td>H.323</td>
</tr>
</tbody>
</table>

Configuration Tasks

See the following sections for configuration tasks for this feature:

- Set Up
- Siemens Hicom 330E PBX Configuration
- Call Manager Configuration
Set Up

This section includes the following information:
- Connectivity Diagrams
- Set Up Notes

Connectivity Diagrams

Figure 1: Test Configuration

Figure 1 represents the configuration used for testing: a Siemens Hicom 330E PBX was connected via an E1 PRI link to a Cisco 7200 series router.

Set Up Notes

- The Cisco 7200 series router with ISDN switch type setting of `isdn switch-type primary-net5` supports both protocol sides by using the `isdn protocol-emulate network/user` command.
- Configuring the Siemens Hicom 330E operation to be Network side sets the Layers 2 & 3 protocol side setting to Network as well. Therefore, the Cisco 7200 series router should be set to User protocol side by issuing the command: `isdn protocol-emulate user`. 
Siemens Hicom 330E PBX Configuration

Use the following information to configure the Siemens Hicom 330E PBX:

- Siemens Hicom 330E PBX Version Information
- Siemens Hicom 330E PBX Sample Configuration

Siemens Hicom 330E PBX Version Information

- Hardware: 330E.

Siemens Hicom 330E PBX Sample Configuration

Use the following examples to configure the Siemens Hicom 330E PBX:

- Trunk Configuration
- Route Configuration
- Board Configuration
- Least Cost Routing Configuration
- Class Of Service
- System Information

Trunk Configuration

<dis-tdcsu
PEN1 = 1-1-73-0
PEN2 = ;
DIS-TDCSU:1-1-73-0,;
H500: AMO TDCSU STARTED

<table>
<thead>
<tr>
<th>DEV = S2CONN</th>
<th>PEN = 1-01-073-0</th>
</tr>
</thead>
<tbody>
<tr>
<td>COTNO = 4</td>
<td>COPNO = 4</td>
</tr>
<tr>
<td>LCOSE = 31</td>
<td>PEN1 = 1-01-073-0</td>
</tr>
<tr>
<td>PROTVAR = ETSI</td>
<td>SEGMENT = 1</td>
</tr>
<tr>
<td>SUPPRESS = 0</td>
<td>DGTPR =</td>
</tr>
<tr>
<td>ISDNCC = -</td>
<td>ISDNAC = ISDNLC</td>
</tr>
<tr>
<td>ISDNSIP = -</td>
<td>ISDNSNSP =</td>
</tr>
<tr>
<td>PNL2C = -</td>
<td>PNL1C = PNL1P =</td>
</tr>
<tr>
<td>PNL2P = -</td>
<td>PNL2P = PNL2P =</td>
</tr>
<tr>
<td>TRACCOUNT = 31</td>
<td>SATACCOUNT = MANY</td>
</tr>
<tr>
<td>ALCARTN = 2</td>
<td>DIDX = 1</td>
</tr>
<tr>
<td>ZONE = EMPTY</td>
<td>COTX = 4</td>
</tr>
<tr>
<td>DOMTYPE = -</td>
<td>DOMAINNO =</td>
</tr>
<tr>
<td>INIGHT = -</td>
<td>UUSCCX = 16</td>
</tr>
<tr>
<td>CCHDL = -</td>
<td>UUSCCY = 8</td>
</tr>
<tr>
<td>TGRP = 37</td>
<td>SRCHMODE = CIR</td>
</tr>
<tr>
<td>BCRGR = 1</td>
<td>INS = Y</td>
</tr>
<tr>
<td>LWPP = 0</td>
<td>LWLT = 0</td>
</tr>
<tr>
<td>LWR1 = 0</td>
<td>LWR2 = 0</td>
</tr>
<tr>
<td>BCHAN 1 &amp; 2</td>
<td></td>
</tr>
</tbody>
</table>

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

AMO-TDCSU-210 DIGITAL TRUNKS

DISPLAY COMPLETED;
<dis-buend
TGRP = 37
FORMAT = 1
DIS-BUEND:37,L;
H500: AMO BUEND STARTED

+------------------------------- FORMAT = L -----------------------------------+
| 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       :   1                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-REFTA-210 REFERENCE CLOCK CIRCUITS

DISPLAY COMPLETED;
<dis-refta
TYPE = circuit
PEN = 1-1-73-0
KIND = ;
DIS-REFTA:CIRCUIT,1-1-73-0,;
H500: AMO REFTA STARTED

<table>
<thead>
<tr>
<th>PEN</th>
<th>MODULE</th>
<th>DEVICE</th>
<th>PRI</th>
<th>ERROR</th>
<th>BLOCK</th>
<th>SUPP.</th>
<th>READY BUT ASYN.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-1-73-0</td>
<td>DIU-N2</td>
<td>S2CONN</td>
<td>0</td>
<td>65535</td>
<td>N</td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>

AMO-REFTA-210 REFERENCE CLOCK TABLE
Route Configuration

<dis-richt
MODE = all
DIS-RICHT:ALL;
H500: AMO RICHT STARTED

<table>
<thead>
<tr>
<th>LRTE</th>
<th>NAME</th>
<th>SRVC</th>
<th>DESTNO</th>
<th>REROUT</th>
<th>PLB</th>
<th>FWDBL</th>
<th>MAINGROUP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CENTRAL OFFICE</td>
<td>ALL</td>
<td>99</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>PRI TEST</td>
<td>ALL</td>
<td>999</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>4</td>
</tr>
<tr>
<td>1-1</td>
<td>BRISLAVE</td>
<td>ALL</td>
<td>1</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>BRI TRUNK</td>
<td>ALL</td>
<td>99</td>
<td>NO</td>
<td>NO</td>
<td>NO</td>
<td>3</td>
</tr>
</tbody>
</table>

AMO-RICHT-210 TRUNK ROUTING

DISPLAY COMPLETED;

Board Configuration

<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

<table>
<thead>
<tr>
<th>PEN</th>
<th>ASSIGNED</th>
<th>MODULE</th>
<th>TYPE</th>
<th>FCT</th>
<th>HWY</th>
<th>INSERTED</th>
<th>STATE</th>
<th>HW-INFO</th>
<th>MODULE</th>
</tr>
</thead>
<tbody>
<tr>
<td>73</td>
<td>Q2196-X</td>
<td>DIU-N2</td>
<td>DIU-N2</td>
<td>1</td>
<td>A</td>
<td>Q2196-X</td>
<td>1</td>
<td>04</td>
<td>READY</td>
</tr>
</tbody>
</table>

AMO-BCSU -210 BOARD CONFIGURATION, SWITCHING UNIT
DISPLAY COMPLETED;

STATION PHONE CONFIGURATION
<dis-sbcsu
STNO = 5001
TYPE = termdata
DIS-SBCSU:5001,TERMDATA;
H500: AMO SBCSU STARTED

------------------------------------------------------------------------ USER DATA  -----------------------------------------------
STNO  =5001 OPT =OPTI COS1 =7 DPLN =0 SPDI =Y
MAINO =5001 CONN =DIR COS2 =7 ITR =0 SPDC1 =0
PEN   = 1-1 79-2  LCOSV1 =31 COSX =0 SPDC2 =1
INS   =Y STD =3 LCOSV2 =31 SERVID =0 CBKMAX=5
SECN  =N LCOSD1 =31 DSTNA =N RCBK =N
SSTNO =N LCOSD2 =31 DSTNB =Y RCBKNA =N
TRACE =N LFOSD1 =31 SERV1 =N
ALARMNO =0 HMUSIC =0 API =N TEXTSET=ENGLISH
EXTBUS =0 REP =0 OPTICOM =N
CALLLOG =NONE IDCR =N OPTICA =N
HSKEY =NORMAL LCO =N
DVCFG =-OPTISSET TSI =1 SOPTIDX = DPRT =
          DOPTIDX = DPROT =
          FOPTIDX = FPRT =
          TOPTIDX = TPROT =
          VOPTIDX = VPROT =

------------------------------------------------------------------------ ACTIVATION IDENTIFIERS FOR FEATURES ---------------------
FWDS :N FWDT :N FWDV :N FWDF :N FWDD :N
HTOS :N HTOT :N HTOV :N HTOD :N
DND  :N VCP :Y CWT :N TCLOGIN:N

ESSTN :
PUGR : HUNTING GROUP : N
KEYSYS :N NIGHT OPTION : N ASSOCIATED STN : N

------------------------------------------------------------------------ SUBSCRIBER ATTRIBUTES (AMO SDAT) -------------------------------------
NONE
------------------------------------------------------------------------
AMO-SBCSU-210 STATION AND S0-BUS CONFIGURATION OF SWITCHING UNIT
DISPLAY COMPLETED;
Least Cost Routing Configuration

<dis-ldat
TYPE = lcr
LROUTE = ;
DIS-LDAT:LCR,;
H500: AMO LDAT STARTED

+--------------------------------------------------------------------------+
| LROUTE = 1     LDPLN      NAME = CENTRAL OFFICE           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 |    30 | 1  1 |   1 | ******** | 1    EMPTY |  1 |    NONE |
+--------------------------------------------------------------------------+

+--------------------------------------------------------------------------+
| LROUTE = 31    LDPLN      NAME = E&M                      SERVICE =  VCE |
| TYPE = LCR                                   DNNO OF ROUTE  = 1 -1  -999 |
| SERVICE INFO =                                                           |
|       |       |       |     |     | SCHEDULE | CARRIER    |BAND|         |
| LRTEL |  LVAL |  TGRP | ODR |LAUTH| ABCDEFGH |       ZONE |WDTH|   LATTR |
+-------+-------+-------+-----+-----+----------+------------+----+---------+
|     1 |     1 |    31 | 1  1 |   1 | ******** | 1    EMPTY |  1 |    NONE |
+--------------------------------------------------------------------------+

+--------------------------------------------------------------------------+
| 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 | ******** | 1    EMPTY |  1 |    NONE |
|     2 |     1 |    38 | 1  1 |   1 | ******** | 1    EMPTY |  1 |    NONE |
+--------------------------------------------------------------------------+

+--------------------------------------------------------------------------+
| LROUTE = 40    LDPLN      NAME = BRI TRUNK                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 |    40 | 1  1 |   1 | ******** | 1    EMPTY |  1 |    NONE |
+--------------------------------------------------------------------------+

AMO-LDAT -210       LCR-DIRECTIONS
DISPLAY COMPLETED;
Class Of Service

<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
- RECALL IF USER HANGS UP IN CONSULTATION CALL
- TRUNK CALL TRANSFER
- TRUNK SIGNALING ANSWER
- CHANGEOVER FROM HOLD TO RING TONE
- KNOCKING OVERRIDE POSSIBLE
- CALL EXTEND FOR BUSY, RING OR CALL STATE
- NETWORKWIDE AUTOMATIC CALLBACK ON BUSY
- NETWORKWIDE AUTOMATIC CALLBACK ON FREE
- DON’T RELEASE CALL TO BUSY HUNT GROUP
- SEND NO MODE NUMBER TO PARTNER
- INCOMING CIRCUIT FROM SYSTEM WITHOUT LCR
- TSC-SIGNALING FOR NETWORKWIDE FEATURES (MANDATORY)
- INCOMING CDR BY ZONE OR FROM LINE
- INCOMING CIRCUIT FROM SYSTEM WITHOUT LCR (DATA)
- AOC PER CALL (AUTOMATICAL OR ON REQUEST), MAND. CORNET-NQ
- CONTROLLED TRUNK AND LINE SELECTION
- NO TONE

AMO-COT -210 CLASS OF TRUNK FOR CALL PROCESSING
DISPLAY COMPLETED;

<dis-cop

COPNO = 4;
DIS-COP:4;
H500: AMO COP STARTED

COP: 4 INFO: 4:Q931
DEVICE: INDEP SOURCE: DB

PARAMETER:

- SPECIAL MODE
- REGISTRATION OF LAYER 3 ADVISORIES

AMO-COP -210 CLASS OF PARAMETER FOR DEVICE HANDLER
DISPLAY COMPLETED;

<dis-cossu

TYPE = cos

COS = 3

FORMAT = ;
DIS-COSSU:COS,3,;

H500: AMO COSSU STARTED

<table>
<thead>
<tr>
<th>COS</th>
<th>VOICE</th>
<th>FAX</th>
<th>TTX</th>
<th>VTX</th>
<th>DTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>3:STANDARD - FWDBSY</td>
<td>NOCO</td>
<td>NOTIE</td>
<td>NOTIE</td>
<td>TA</td>
</tr>
<tr>
<td></td>
<td>TA</td>
<td>NOCO</td>
<td>NOTIE</td>
<td>NOTIE</td>
<td>TNOTCR</td>
</tr>
<tr>
<td></td>
<td>TSUID</td>
<td>NOTIE</td>
<td>TNOTCR</td>
<td>BASIC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CDRINT</td>
<td>CDRINT</td>
<td>MSN</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CDRC</td>
<td>CDRC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COSXCD</td>
<td>COSXCD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VCE</td>
<td>VCE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DATA</td>
<td>DATA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FWDNWK</td>
<td>FWDNWK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MSN</td>
<td>MSN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FWDBSY</td>
<td>FWDBSY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FWDEXT</td>
<td>FWDEXT</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AMO-COSSU-210 CLASSES OF SERVICE, SWITCHING UNIT
DISPLAY COMPLETED;
<dis-cossu

TYPE = cos

COS = 7;

DIS-COSSU:COS,7;

H500: AMO COSSU STARTED

<table>
<thead>
<tr>
<th>COS</th>
<th>VOICE</th>
<th>FAX</th>
<th>TTX</th>
<th>VTX</th>
<th>DTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>7:STANDARD/FWDNWK - NOANSA&amp;FWDBSY</td>
<td>NOANSA&amp;FWDBSY</td>
<td>NOTIE</td>
<td>NOTIE</td>
<td>TA</td>
</tr>
<tr>
<td></td>
<td>TA</td>
<td>NOANSA&amp;FWDBSY</td>
<td>NOANSA&amp;FWDBSY</td>
<td>NOTIE</td>
<td>TNOTCR</td>
</tr>
<tr>
<td></td>
<td>TSUID</td>
<td>NOTIE</td>
<td>TNOTCR</td>
<td>BASIC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CDRINT</td>
<td>CDRINT</td>
<td>MSN</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CDRS</td>
<td>CDRS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CDRC</td>
<td>CDRC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>COSXCD</td>
<td>COSXCD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>VCE</td>
<td>VCE</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DATA</td>
<td>DATA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>NOANSA</td>
<td>NOANSA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FWDNWK</td>
<td>FWDNWK</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MSN</td>
<td>MSN</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FWDBSY</td>
<td>FWDBSY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FWDECA</td>
<td>FWDECA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>FWDEXT</td>
<td>FWDEXT</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

AMO-COSSU-210 CLASSES OF SERVICE, SWITCHING UNIT
DISPLAY COMPLETED;
System Information

<dis-dbc

VERBOSE = ?

VERBOSE : LIST OF ACTIVE DB SUBSYSTEMS

CHARACTERISTIC : OPTIONAL

POSSIBLE VALUES
: Y YES

N NO

VERBOSE -

DIS-DBC;

H500: AMO DBC STARTED

+------------------------------------------------------------------+
| SYSTEM CLASSIFICATION : SYSTEM 80 (H80 )                         |
| HARDWARE ASSEMBLY     : EXTENDED COMPACT CXE (CXE )               |
| DEVELOPMENT LINE      : EUROPE DEVELOPMENT (H300)                |
| OPERATING MODE        : SIMPLEX                                   |
| RESTART TYPE          : SYM                                        |
| HW-ARCHITECTURE       : 330E                                      |
| HW-ARCHITECTURE TYPE  : 4                                        |
| 'NO OF' HW VALUES     |
|   LTG'S     : 1  LTU'S          : 4  LOG.LINES : 8000  MTS BD /GSN: 1 |
|   SIUP'S/LTU: 4  TMD24'S PER LTU: 4  PHYS.PORTS: 2688  HWY /MTS BD: 64 |
|   HDLC /DCL : 5  PBC /DCL       : 1  PBC'S     : 17           |
| LOG. SIU LINES        : 26                                       |
| LOG. CONF LINES       : 35                                       |
| LOG. DCL LINES        : 36                                       |
| DB DIMENSIONING-NAME  : 350EMSTD                                 |
|                      : CONF-TABLE VERSION: 1                      |
| DB SUSY'S:            |
|   SWITCH NUMBER : L31900Q2999A00001                             |
| LOCATION         : CUSTOMER                                     |
| BAPPL            : 6ECXM48                                     |
| DBAPPL           : 6ECXM48                                     |
| SYSTEM_ID        : PKP091000                                   |
+------------------------------------------------------------------+

amo-dbc -210 DATABASE CONFIGURATION

DISPLAY COMPLETED;
Cisco 7200 Series Router Configuration

The following is the configuration of the Cisco 7000 series router connected to the Siemens Hicom 330E PBX ISDN E1 interface:

- Cisco 7200 Series Router Version Information
- Cisco 7200 Series Router Sample Configuration

Cisco 7200 Series Router Version Information

- Cisco IOS™ (C7200-JS-M), Version 12.2(1).
- Cisco 7206VXR (NPE300) processor (revision D) with 122880K/40960K bytes of memory.

Router# show version
Cisco Internetwork Operating System Software
IOS (tm) 7200 Software (C7200-JS-M), Version 12.2(1), RELEASE SOFTWARE (fc2)
Copyright (c) 1986-2001 by cisco Systems, Inc.
Compiled Thu 26-Apr-01 22:10 by cmong
Image text-base: 0x60008960, data-base: 0x616B0000

ROM: System Bootstrap, Version 12.0(19990210:195103) [12.0XE 105], DEVELOPMENT SOFTWARE
VXR1 uptime is 30 minutes
System returned to ROM by power-on
System image file is "slot0:c7200-js-mz.122-1"
cisco 7206VXR (NPE300) processor (revision D) with 122880K/40960K bytes of memory.
Processor board ID 16075926
R7000 CPU at 262Mhz, Implementation 39, Rev 1.0, 256KB L2, 2048KB L3 Cache
6 slot VXR midplane, Version 2.0

Last reset from power-on
Bridging software.
X.25 software, Version 3.0.0.
SuperLAT software (copyright 1990 by Meridian Technology Corp).
TN3270 Emulation software.
Primary Rate ISDN software, Version 1.1.
Channelized E1, Version 1.0.
4 Ethernet/IEEE 802.3 interface(s)
1 FastEthernet/IEEE 802.3 interface(s)
31 Serial network interface(s)
2 Channelized E1/PRI port(s)
1 Voice resource(s)
125K bytes of non-volatile configuration memory.
4096K bytes of Flash internal SIMM (Sector size 256K).
Configuration register is 0x0
Cisco 7200 Series Router Sample Configuration

The following is a sample configuration of the Cisco 7200 series router directly connected to Siemens Hicom 330E PBX ISDN E1 interface.

Router#show run
Building configuration...

Current configuration : 1467 bytes
!
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname VXr1
!
card type e1 1
logging rate-limit console 10 except errors
!
frame-clock-select 1 E1 1/0
dspint DSPfarm1/0
!
ip subnet-zero
!
no ip finger
!
no ip dhcp-client network-discovery
isdn switch-type primary-net5
call rsvp-sync
!
!
controller E1 1/0
!pri-group timeslots 1-31
!controller E1 1/1
!
interface FastEthernet0/0
ip address 18.0.0.1 255.255.255.0
no ip mroute-cache
duplex full
fair-queue
!
interface Serial1/0:15
no ip address
no logging event link-status
isdn switch-type primary-net5
isdn protocol-emulate network
isdn incoming-voice modem
isdn guard-timer 3000
isdn t203 30000
isdn t310 60000
isdn bchan-number-order ascending
no cdp enable
!
interface Ethernet6/0
ip address dhcp
duplex half
!
interface Ethernet6/1
no ip address
shutdown
duplex half
!
interface Ethernet6/2
  no ip address
  shutdown
duplex half
!
interface Ethernet6/3
  no ip address
  shutdown
duplex half
!
ip kerberos source-interface any
ip classless
no ip http server
!
!
voice-port 1/0:15
!
dial-peer voice 1 pots
destination-pattern 5...
direct-inward-dial
port 1/0:15
prefix 5
!
dial-peer voice 2 voip
destination-pattern 3...
session target ipv4:18.0.0.2
!
!
gatekeeper
shutdown
!
line con 0
  transport input none
line aux 0
line vty 0 4
  login
line vty 5 15
  login
!
end

Router# show version
Cisco Internetwork Operating System Software
IOS (tm) 7200 Software (C7200-JS-M), Version 12.2(1), RELEASE SOFTWARE (fc2)
Copyright (c) 1986-2001 by cisco Systems, Inc.
Compiled Thu 26-Apr-01 22:10 by cmong
Image text-base: 0x60008960, data-base: 0x616B0000
ROM: System Bootstrap, Version 12.0(19990210:195103) [12.0XE 105], DEVELOPMENT SOFTWARE
VXR1 uptime is 30 minutes
System returned to ROM by power-on
System image file is "slot0:c7200-js-mz.122-1"
cisco 7206VXR (NPE300) processor (revision D) with 122880K/40960K bytes of memory.
Processor board ID 16075926
R7000 CPU at 252Mhz, Implementation 39, Rev 1.0, 256KB L2, 2048KB L3 Cache
6 slot VXR midplane, Version 2.0
Last reset from power-on
Bridging software.
X.25 software, Version 3.0.0.
SuperLAT software (copyright 1990 by Meridian Technology Corp).
TN3270 Emulation software.
Primary Rate ISDN software, Version 1.1.
Channelized E1, Version 1.0.
Cisco 7200 Series Router-PBX Interoperability: Siemens Hicom 330E

4 Ethernet/IEEE 802.3 interface(s)
1 FastEthernet/IEEE 802.3 interface(s)
31 Serial network interface(s)
2 Channelized E1/PRI port(s)
1 Voice resource(s)
125K bytes of non-volatile configuration memory.
4096K bytes of Flash internal SIMM (Sector size 256K).
Configuration register is 0x0

Router#sho diag
Slot 0:
  Fast-ethernet on C7200 I/O card with MII or RJ45 Port adapter, 1 port
  Port adapter is analyzed
  Port adapter insertion time 00:30:32 ago
  EEPROM contents at hardware discovery:
    Hardware revision 2.1          Board revision B0
    Serial number     15788289   Part number    73-4092-03
    Test history      0x0          RMA number     00-00-00
    EEPROM format version 1
    EEPROM contents (hex):
      0x20: 01 83 02 01 00 F0 E9 01 49 0F FC 03 00 00 00 00
      0x30: 58 00 00 00 00 04 16 00 00 FF FF FF FF FF FF

Slot 1:
  VXC-2TE1+ Port adapter, 2 ports
  Port adapter is analyzed
  Port adapter insertion time 00:30:31 ago
  EEPROM contents at hardware discovery:
    Hardware Revision        : 0.2
    PCB Serial Number        : MIC05012P67
    Part Number              : 73-5340-03
    Board Revision           : A0
    RMA Test History         : 00
    RMA Number               : 0-0-0-0
    RMA History              : 00
    Deviation Number         : 0-0
    Product Number           : PA-VXC-2TE1+
    Top Assy. Part Number    : 8034-08469-01
    EEPROM format version 4
    EEPROM contents (hex):
      0x00: 04 FF 40 02 11 41 00 02 C1 8B 4D 49 43 30 35 30
      0x10: 31 32 50 36 37 82 49 14 DC 03 42 41 30 32 80 81
      0x20: 00 00 00 04 00 80 00 00 00 00 CB 94 50 41 2D
      0x30: 56 58 43 2D 32 54 31 45 31 2B 20 20 20 20 20
      0x40: 20 C0 46 1F 62 00 21 15 01 FF FF FF FF FF FF FF
      0x50: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
      0x60: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
      0x70: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF

Slot 6:
  Ethernet Port adapter, 4 ports
  Port adapter is analyzed
  Port adapter insertion time 00:30:32 ago
  EEPROM contents at hardware discovery:
    Hardware revision 1.14        Board revision A0
    Serial number     11530208   Part number    73-1556-08
    Test history      0x0         RMA number     00-00-00
    EEPROM format version 1
    EEPROM contents (hex):
      0x20: 01 02 01 0E 00 AF EF E0 49 06 14 08 00 00 00 00
      0x30: 50 00 00 00 99 01 16 00 FF FF FF FF FF FF FF FF

Router#clear counters
Clear "show interface" counters on all interfaces [confirm]
Router#00:30:48: %CLEAR-5-COUNTERS: Clear counter on all interfaces by console
Router#sho controllers e1 1/0
E1 1/0 is up.
Applique type is Channelized E1 - balanced
No alarms detected.
alarm-trigger is not set
Framing is CRC4, Line Code is HDB3, Clock Source is Line.
International Bit: 1, National Bits: 1111
Active xconns: 0
Data in current interval (17 seconds elapsed):
  0 Line Code Violations, 0 Path Code Violations
  0 Slip Secs, 0 Fr Loss Secs, 0 Line Err Secs, 0 Degraded Mins
  0 Errored Secs, 0 Bursty Err Secs, 0 Severely Err Secs, 0 Unavail Secs

Caveats

- None