

Cisco 3745 Router - PBX Interoperability: Ericsson Webswitch using E1 PRI with H.323

Introduction

This note describes the interoperability of the Ericsson Webswitch and the Cisco 3745 router using E1 PRI.

Tandem trunking to an analog station connected to an FXS port on the router was also tested.

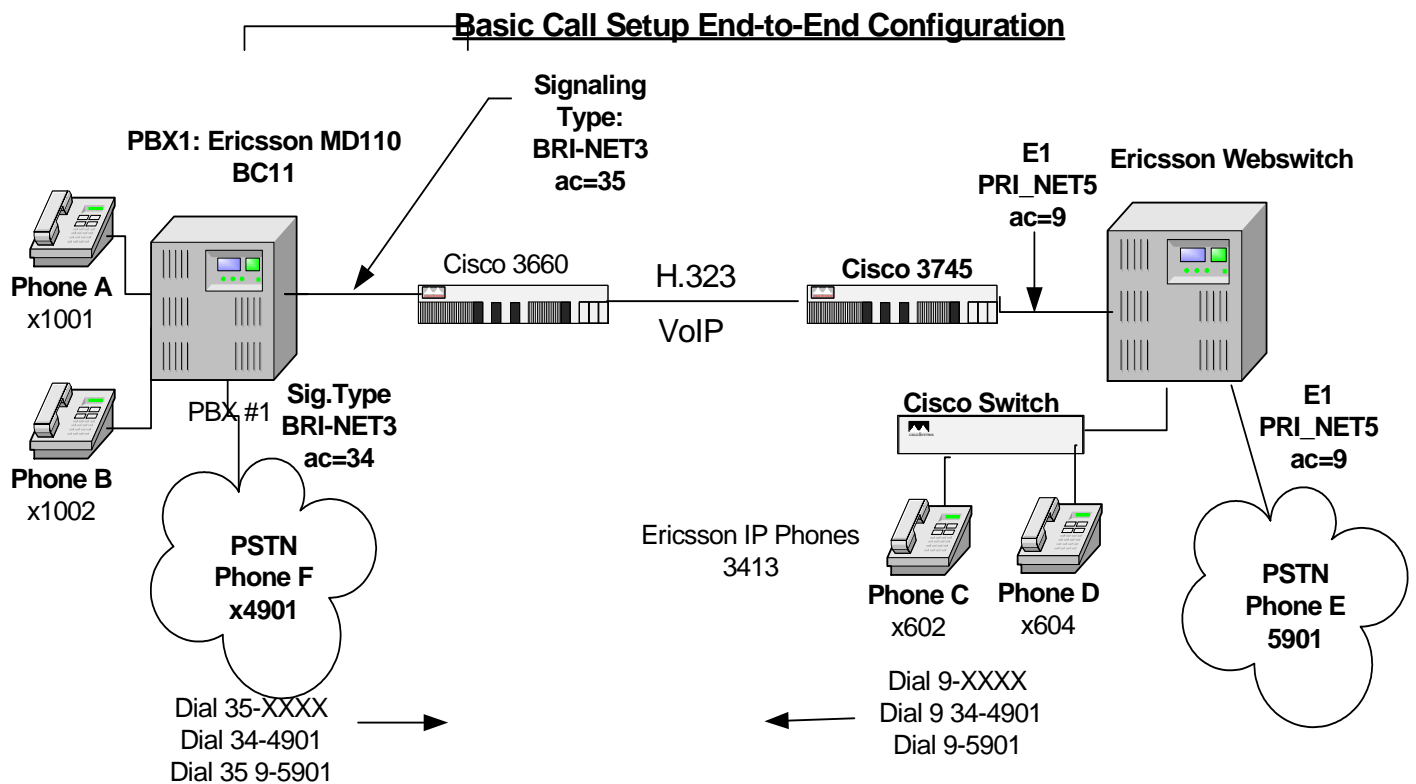
It is **crucial** that the dial peer configuration for the router pointing to the Ethernet H.323 link, include one of the G711 codec type.

Otherwise, the conferencing features will work in one direction only.

The network topology diagram shows the end-to-end interoperability.

Network Topology

Figure 1. Network Topology





Limitations

Calling name is not supported.

Codec type (G711) must be specified for the dial peer pointing to the H323 link to support network conferencing. System Components

Hardware Requirements

Cisco 3745 router

Cisco Catalyst 3500 Switch

Ericsson Webswitch

Ericsson E1 Interface Module

Software Requirements

Cisco IOS Release 12.2(13)T

Ericsson Webswitch v.3.0

Features Not Supported

Calling name is not supported.

Call forwarding could not be made to work with the Net3 ISDN protocol on the Ericsson Switch.

Configuration

Configuring the Ericsson Webswitch

Configure the Ericsson Webswitch using the following screens as a reference.



Net Manager - SYSTEM0001 - First IP:10.1.1.199

File Edit View Help

Ring Groups
Hunt Groups
Operator Groups
WebSwitches
Cisco test 10.1.1.199
Voice Mail
Class Of Service
H.323 Trunks
E1 ISDN Trunks
E1 ISDN Trunk 0000
E1 ISDN Trunk 0001
E1 ISDN Trunk 0002
E1 ISDN Trunk 0003
E1 ISDN Trunk 0004
E1 ISDN Trunk 0005
E1 ISDN Trunk 0006
E1 ISDN Trunk 0007
E1 ISDN Trunk 0008
E1 ISDN Trunk 0009
E1 ISDN Trunk 0010
E1 ISDN Trunk 0011
E1 ISDN Trunk 0012
E1 ISDN Trunk 0013
E1 ISDN Trunk 0014
E1 ISDN Trunk 0015
E1 ISDN Trunk 0016

E1 ISDN Trunks

Slot 0

E1 ISDN Trunk Driver Settings

ISDN Version: ETSI Euro-ISDN

User/Network: User Side

Frame Format: MFF

Enable CRC-4

Number Plan: Private Numbering Plan

Malicious Call ID

Charging

Channel Negotiation

Outgoing Call Settings

Digit Sending: Overlap

Minimum Number Length: 0

Number Completion Timeout (ms): 5000

Own Local Prefix: []

Own National Prefix: []

International Prefix: []

National Prefix: []

Incoming Call Settings

Number of Digits: []

Line Clock Mode

Slave

Master

For Help, press F1



Net Manager - SYSTEM0001 - First IP:10.1.1.199

File Edit View Help

Ring Groups
Hunt Groups
Operator Groups
WebSwitches
Cisco test 10.1.1.199
Voice Mail
Class Of Service
H.323 Trunks
E1 ISDN Trunks
E1 ISDN Trunk 0000
E1 ISDN Trunk 0001
E1 ISDN Trunk 0002
E1 ISDN Trunk 0003
E1 ISDN Trunk 0004
E1 ISDN Trunk 0005
E1 ISDN Trunk 0006
E1 ISDN Trunk 0007
E1 ISDN Trunk 0008
E1 ISDN Trunk 0009
E1 ISDN Trunk 0010
E1 ISDN Trunk 0011
E1 ISDN Trunk 0012
E1 ISDN Trunk 0013
E1 ISDN Trunk 0014
E1 ISDN Trunk 0015
E1 ISDN Trunk 0016

WebSwitch

General Hardware Features SLAC

Name: Cisco test

System Access ID: 01

Model: 2000M2

IP Address: 10 . 1 . 1 . 199

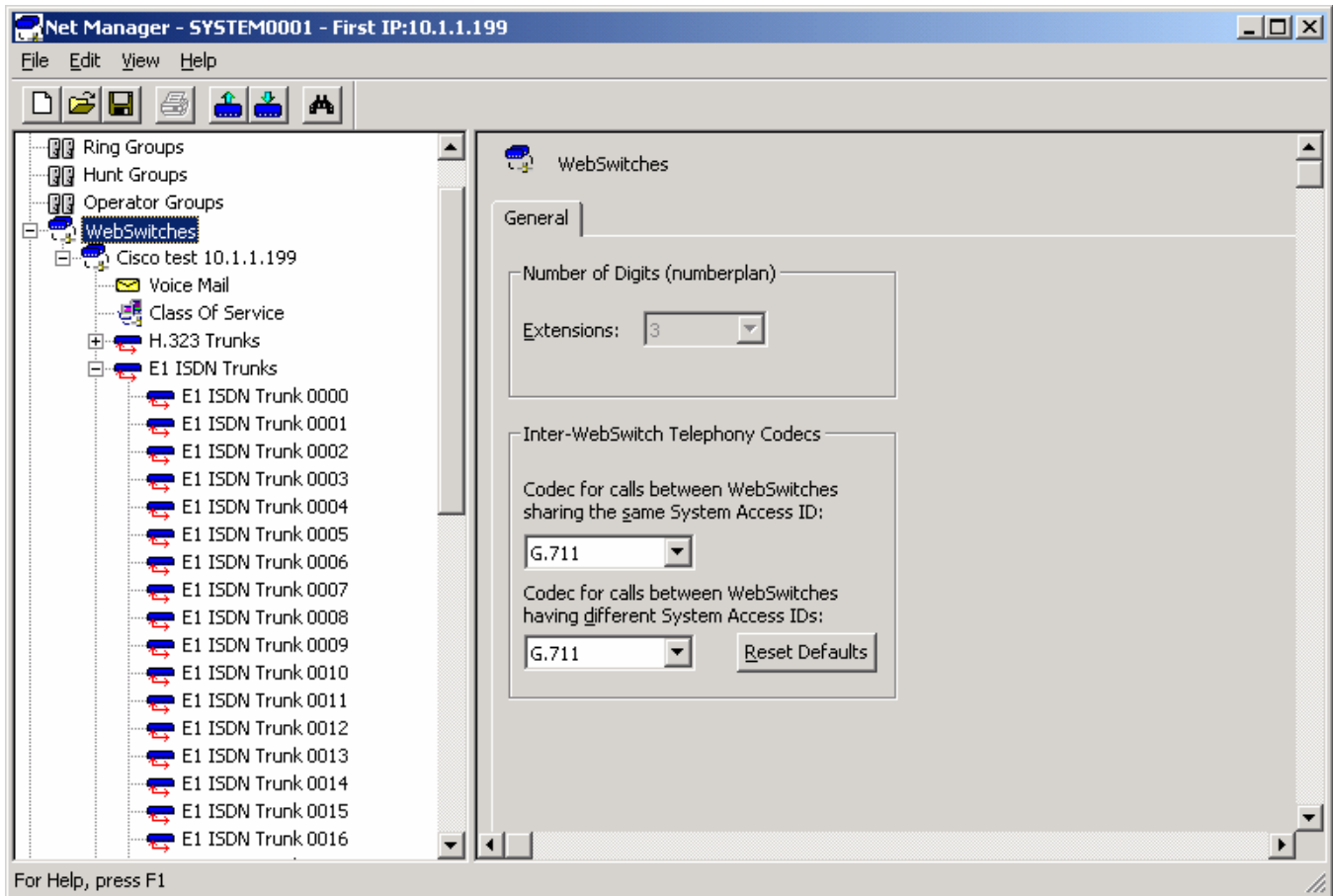
E-mail Address:

Advanced Settings...

Target Country: United Kingdom

Language: English (System Default a-law)

For Help, press F1





Net Manager - SYSTEM0001 - First IP:10.1.1.199

File Edit View Help

Auto Attendants
Audio Channel Services
Ring Groups
Hunt Groups
Operator Groups
WebSwitches
Cisco test 10.1.1.199
Voice Mail
Class Of Service
H.323 Trunks
E1 ISDN Trunks
E1 ISDN Trunk 0000
E1 ISDN Trunk 0001
E1 ISDN Trunk 0002
E1 ISDN Trunk 0003
E1 ISDN Trunk 0004
E1 ISDN Trunk 0005
E1 ISDN Trunk 0006
E1 ISDN Trunk 0007
E1 ISDN Trunk 0008
E1 ISDN Trunk 0009
E1 ISDN Trunk 0010
E1 ISDN Trunk 0011
E1 ISDN Trunk 0012
E1 ISDN Trunk 0013
E1 ISDN Trunk 0014

Class Of Service

General

Packet Properties

Voice Stream Data: 6 - Voice

Network Management: 7 - Network Control

Signaling: 3 - Excellent Effort

For Help, press F1



Configuring the Cisco 3745 Router

The following sample output shows the router configuration for interoperability with the PBX.

```
Router#sh running-config

Current configuration : 1784 bytes
!
version 12.2
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
!
hostname "3745-T"
!
boot system flash c3745-jsx-mz.122-13.T.bin
!
voice-card 1
  dspfarm
!
ip subnet-zero
!
isdn switch-type primary-net5
!
mta receive maximum-recipients 0
!
controller E1 1/0
  clock source internal
  pri-group timeslots 1-30
!
controller E1 1/1
!
interface FastEthernet0/0
  ip address 10.1.1.230 255.255.255.0
  speed auto
  half-duplex
!
interface FastEthernet0/1
  no ip address
  shutdown
  duplex auto
  speed auto
!
interface Serial1/0:15
  no ip address
  no logging event link-status
  isdn switch-type primary-net5
  isdn overlap-receiving
  isdn protocol-emulate network
  isdn incoming-voice voice
  no isdn outgoing display-ie
  no cdp enable
!
router rip
  network 10.0.0.0
!
ip classless
ip http server
!
call rsvp-sync
!
voice-port 1/0:15
!
voice-port 2/0/0
!
voice-port 2/0/1
!
voice-port 2/1/0
!
voice-port 2/1/1
```



```
!  
mgcp profile default  
!  
dial-peer cor custom  
!  
dial-peer voice 5901 pots  
  destination-pattern 5901  
  port 2/0/0  
  forward-digits all  
!  
dial-peer voice 600 pots  
  destination-pattern 60.  
  direct-inward-dial  
  port 1/0:15  
  forward-digits all  
!  
dial-peer voice 1000 voip  
  destination-pattern 490.  
  session target ipv4:10.1.1.205  
  codec g711alaw  
!  
dial-peer voice 1002 voip  
  destination-pattern 100.  
  session target ipv4:10.1.1.205  
  codec g711alaw  
!  
dial-peer voice 10 voip  
  destination-pattern 34....  
  session target ipv4:10.1.1.205  
  codec g711alaw  
!  
dial-peer voice 601 pots  
  destination-pattern 9....  
  direct-inward-dial  
  port 1/0:15  
  forward-digits all  
!  
gatekeeper  
  shutdown  
!  
line con 0  
  exec-timeout 0 0  
line aux 0  
line vty 0  
  exec-timeout 0 0  
  login  
line vty 1 4  
  login  
!  
end
```

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