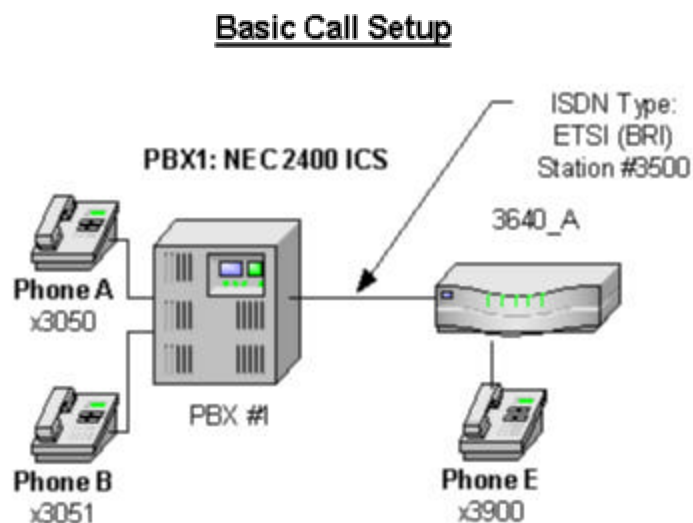


# Cisco 3640 Gateway-PBX Interoperability: NEC 2400 ICS PBX Using BRI for an MGCP Gateway

## Introduction

- This document describes the connectivity of a NEC 2400 ICS PBX using the NEC PA-8ILC card to a Cisco 3640 gateway with VIC-2BRI-NT/TE card via an ISDN BRI link. The NEC 2400 PA-8ILC card was connected to a VIC-2BRI-NT/TE card on the Cisco 3640 gateway.

## Network Topology



## Limitations

- The NEC PA-8ILC is designed to support only ISDN BRI station (user) connections. This card does not provide a BRI trunk connection required for toll bypass connection to a Cisco voice gateway. Customers with an NEC PBX must use an ISDN PRI card with Cisco voice gateways or another trunk type, such as T1/E1 CAS or analog CO or E&M.
- The NEC provides support only for BRI stations or data terminals; therefore the NEC is always configured as network side.
- To configure operation for the Cisco 3640 BRI voice port as clock master (NT) or clock slave (TE), `isdn layer1-emulate` command is used and must be set for user side.

## System Components

### Hardware Requirements

- Cisco 3640 Gateway
- NEC 2400 ICS PBX.

### Software Requirements

- Cisco IOS Software Release c3640-js-mz.122-2.t1.bin



## Configuration

### Configuring the Cisco 3640 Gateway

The following is the configuration of the Cisco 3640 gateway directly connected to NEC 2400 ICS PBX:

```
version 12.2
no parser cache
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
no service dhcp
!
hostname 3640_A
!
boot system flash
logging rate-limit console 10 except errors
!
!
!
voice-card 1
!
ip subnet-zero
!
!
no ip domain-lookup
ip host whiz 171.69.1.162
ip host dirt 171.69.1.129
ip host danube 171.69.17.14
!
no ip dhcp-client network-discovery
isdn switch-type basic-net3
call rsvp-sync
!
!
!
!
!
!
controller E1 1/0
shutdown
framing NO-CRC4
ds0-group 1 timeslots 1 type r2-analog r2-compelled
cas-custom 1
!
controller E1 1/1
shutdown
pri-group timeslots 1-31
!
!
!
interface Tunnell
no ip address
!
interface Ethernet0/0
ip address 100.100.100.1 255.255.255.0
no ip mroute-cache
half-duplex
no cdp enable
!
```



```
interface Ethernet0/1
 ip address 171.69.231.23 255.255.255.0
 no ip mroute-cache
 half-duplex
 no cdp enable
!
interface Serial1/1:15
 no ip address
 no logging event link-status
 shutdown
 isdn switch-type primary-net5
 isdn overlap-receiving
 isdn protocol-emulate network
 isdn incoming-voice voice
 no isdn T309-enable
 isdn T321 0
 isdn T203 30000
 isdn T310 60000
 isdn bchan-number-order ascending
 no cdp enable
!
interface BRI3/0
 no ip address
 no ip route-cache
 no ip mroute-cache
 isdn switch-type basic-net3
 isdn overlap-receiving
 isdn incoming-voice voice
 isdn static-tei 0
 isdn skipsend-idverify
!
interface BRI3/1
 no ip address
 isdn switch-type basic-net3
 isdn T310 120000
 isdn skipsend-idverify
!
ip classless
no ip http server
!
dialer-list 1 protocol ip permit
no cdp run
!
!
!
snmp-server manager
!
voice-port 1/0:1
!
voice-port 1/1:15
!
voice-port 2/0/0
!
voice-port 2/0/1
!
voice-port 3/0/0
 compand-type a-law
!
voice-port 3/0/1
!
dial-peer cor custom
!
```



```
!  
!  
dial-peer voice 2 pots  
  destination-pattern 4200  
  port 2/0/0  
!  
dial-peer voice 4 voip  
  destination-pattern 39..  
  session target ipv4:100.100.100.2  
!  
dial-peer voice 8 pots  
  destination-pattern 4100  
  port 2/0/1  
!  
dial-peer voice 30 voip  
  destination-pattern 305.  
  session target ipv4:100.100.100.2  
!  
dial-peer voice 3000 pots  
  destination-pattern 3000  
  port 3/0/0  
  prefix 3000  
!  
!  
line con 0  
line aux 0  
line vty 0 4  
  no login  
!  
!  
end
```

### Configuring the NEC 2400 ICS PBX

- The NEC was configured for Point-to-Point configuration by setting all switches on SW04 to ON. All other switches on the PA-8ILC card were set to their standard configuration.
- BRI Bearer channels must be assigned station numbers and set for TEC=23, SFC=1, and RSC=1 in ASDT.
- Refer to the *NEAX2400 IMS PA-8ILC Installation for ISDN BRI Interface* Engineering Technical Information document for additional information.

### Important Information

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