

X.25 on the D Channel

Document ID: 14213

Document contributed by Johan Claes from Belgacom.

Introduction

Prerequisites

- Requirements

- Components Used

- Conventions

Background Information

Configure

- Network Diagram

- Configurations

Verify

Troubleshoot

- Troubleshooting Commands

NetPro Discussion Forums – Featured Conversations

Related Information

Introduction

This document presents a sample configuration of X.25 on the ISDN D channel.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

For more information on document conventions, refer to Cisco Technical Tips Conventions.

Background Information

X.25 on the D channel is a feature that was introduced in Cisco IOS® Software release 11.2(4)F. Hence, it is also available in 11.3 and higher IOS main releases. To view the original feature description, see Release Notes for Cisco IOS Release 11.2F.

Currently, the IOS software allows two ways to transport X.25 traffic on the ISDN D channel:

- The first method is the aforementioned X.25 on the D channel feature, available since IOS version 11.2(4)F. The sample configuration shown in this document corresponds to this first method.
- The second method is the X.25 on ISDN using Always On/Direct ISDN (AO/DI) feature, available since IOS version 11.3(3)T.

To configure X.25 traffic over an ISDN D channel, refer to the Configuring X.25 on ISDN and Configuring X.25 on ISDN using Always On/Dynamic ISDN (AO/DI) chapters in the Dial Solutions Configuration Guide.

For a complete description of the commands, refer to the X.25 on ISDN Commands and X.25 on ISDN using Always On/Dynamic ISDN (AO/DI) Commands chapters in the Dial Solutions Command Reference.

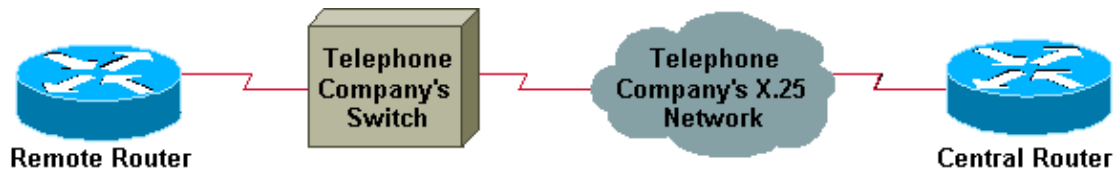
Configure

In this section, you are presented with the information to configure the features described in this document.

Note: To find additional information on the commands used in this document, use the Command Lookup Tool (registered customers only) .

Network Diagram

This document uses this network setup:



The Telephone Company's switch must provide the X.25 on the ISDN D channel service. In the sample configuration shown below, the static terminal endpoint identifier (TEI) configured must also be given by the Telephone Company.

Configurations

This document uses these configurations:

Remote Router
<pre> version 12.0 service timestamps debug uptime service timestamps log uptime no service password-encryption ! hostname remote ! enable password cisco ! ip subnet-zero isdn switch-type basic-net3 x25 routing ! interface BRI0 no ip address no ip directed-broadcast </pre>

```

dialer load-threshold 1 either
isdn switch-type basic-net3
isdn x25 static-tei 1
isdn x25 dchannel
no fair-queue
!
interface BRI0:0
ip address 192.168.1.1 255.255.255.252
no ip directed-broadcast
no ip mroute-cache
x25 address 12503372501
x25 htc 2
x25 idle 1
x25 map ip 192.168.1.2 2231146
!
ip classless
!
end

```

Central Router

```

version 12.0
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
service udp-small-servers
service tcp-small-servers
!
hostname central
!
enable password cisco
!

ip subnet-zero
x25 routing
!
interface Serial0
bandwidth 9600
ip address 192.168.1.2 255.255.255.252
no ip directed-broadcast
encapsulation x25
no ip route-cache
no ip mroute-cache
x25 address 2231146
x25 map ip 192.168.1.1 12503372501 no-outgoing
lapb T1 1000
!
ip classless
!
end

central#

```

Verify

This section provides information you can use to confirm your configuration is working properly.

Certain **show** commands are supported by the Output Interpreter Tool (registered customers only) , which allows you to view an analysis of **show** command output.

- **show x25 vc** Display information about active switched virtual circuits (SVCs) and permanent virtual circuits (PVCs).

- **show x25 map** Display information about configured address maps.

```
remote#ping 192.168.1.2
Type escape sequence to abort.
Sending 5, 100-byte ICMP Echos to 192.168.1.2, timeout is 2 seconds:
!!!!! Success rate is 100 percent (5/5), round-trip min/avg/max = 392/412/428 ms
remote#
```

```
remote#show x25 vc
SVC 2, State: D1, Interface: BRI0:0
Started 00:01:08, last input 00:00:32, output 00:00:32
Connects 2231146 <-> ip 192.168.1.2
Call PID cisco, Data PID none
Window size input: 2,      output: 2
Packet size input: 128, output: 128
PS: 3? PR: 3? ACK: 2 Remote PR: 3? RCNT: 1 RNR: no
P/D state timeouts: 0 timer (secs): 27
data bytes 1900/1900 packets 19/19 Resets 0/0 RNRs 0/0 REJs 0/0 INTs 0/0
remote#
```

```
remote#show x25 map
BRI0:0: X.121 2231146 <-> ip 192.168.1.2
permanent, 0 VC:
```

Troubleshoot

Troubleshooting Commands

Note: Before issuing **debug** commands, refer to Important Information on Debug Commands.

- **debug x25** Display information about all X.25 traffic or a specific X.25 service class.

Output from the **debug x25** command is shown here:

```
remote#
00:13:44: BRI0:0-D: X.25 O R1 Call (18) 8 lci 2
00:13:44:   From (11): 12503372501 To (7): 2231146
00:13:44:   Facilities: (0)
00:13:44:   Call User Data (4): 0xCC000000 (ip)
00:13:44: BRI0:0-D: X.25 I R1 Call Confirm (14) 8 lci 2
00:13:44:   From (11): 12503372501 To (7): 2231146
00:13:44:   Facilities: (0)
remote#
```

NetPro Discussion Forums – Featured Conversations

Networking Professionals Connection is a forum for networking professionals to share questions, suggestions, and information about networking solutions, products, and technologies. The featured links are some of the most recent conversations available in this technology.

NetPro Discussion Forums – Featured Conversations for WAN

Network Infrastructure: WAN, Routing, and Switching

Related Information

- **X.25 and LAPB Commands**
 - **Technical Support – Cisco Systems**
-

[Contacts & Feedback](#) | [Help](#) | [Site Map](#)

© 2008 – 2009 Cisco Systems, Inc. All rights reserved. [Terms & Conditions](#) | [Privacy Statement](#) | [Cookie Policy](#) | [Trademarks of Cisco Systems, Inc.](#)

Updated: Jun 01, 2005

Document ID: 14213
