

DLSw+ with Frame Relay Encapsulation for Multipoint SDLC with PU 2.0 and PU 2.1

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Introduction

This document provides a sample configuration for Data-Link Switching Plus (DLSw+) with Frame Relay encapsulation for multipoint Synchronous Data Link Control (SDLC) with Physical Unit (PU) 2.0 and PU 2.1.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on these software versions:

- Cisco IOS?? Software Release 11.1 or later

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 the Cisco Technical Tips Conventions.

Configure

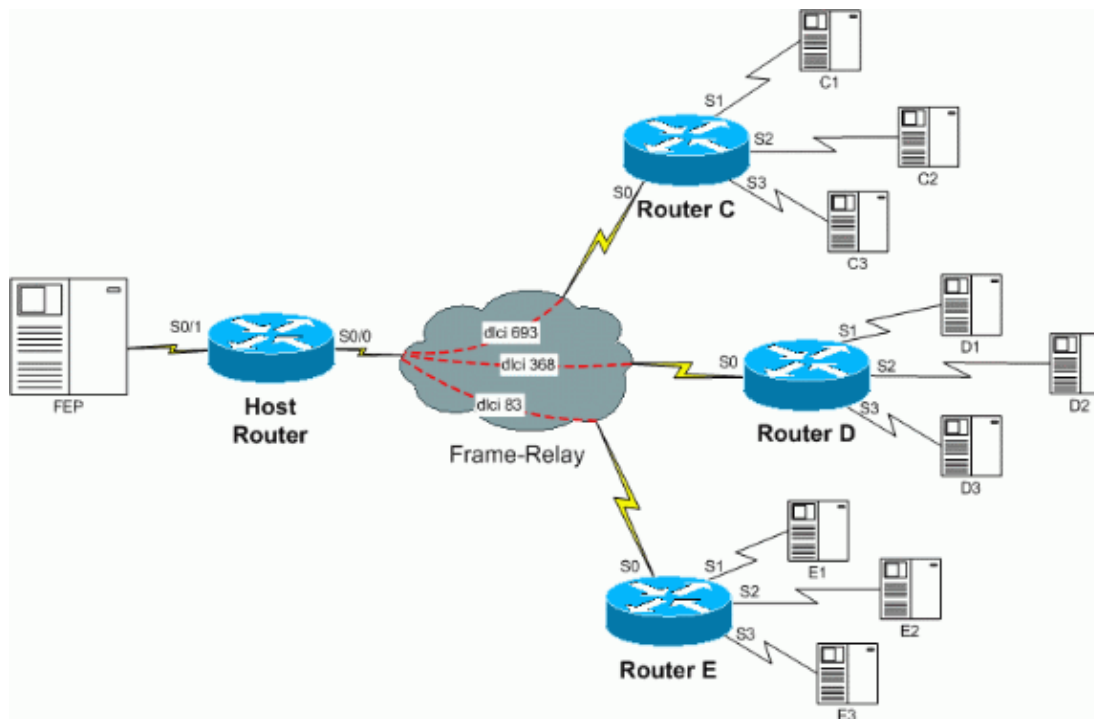
In this section, you are presented with the information to configure the features described in this document.

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:



Configurations

This document uses these configurations:

```
Host Router
!
dlsw local-peer peer-id 117.10.0.10
dlsw remote-peer 0 frame-relay interface Serial0/0 368
dlsw remote-peer 0 frame-relay interface Serial0/0 693
dlsw remote-peer 0 frame-relay interface Serial0/0 83
!
interface Serial0/0
description Frame-Relay interface IETF
no ip address
encapsulation frame-relay
no ip route-cache
no ip mroute-cache
frame-relay map dlsw 83
frame-relay map dlsw 693
frame-relay map dlsw 368
frame-relay lmi-type ansi
!
interface Serial0/1
description FEP Connection
no ip address
encapsulation sdhc
no ip route-cache
no keepalive
nrzi-encoding
clockrate 56000
sdhc role secondary
sdhc vmac 4000.5555.0000
```

```
sdhc address C1
sdhc xid C1 01700001
sdhc partner 4000.0693.01c1 C1
sdhc address C2
sdhc xid C2 01700001
sdhc partner 4000.0693.02c2 C2
sdhc address C3 xid-pass
sdhc partner 4000.0693.03c3 C3
sdhc address D1
sdhc xid D1 01700001
sdhc partner 4000.0368.01d1 D1
sdhc address D2
sdhc xid D2 01700001
sdhc partner 4000.0368.02d2 D2
sdhc address D3 xid-pass
sdhc partner 4000.0368.03d3 D3
sdhc address E1
sdhc xid E1 01700001
sdhc partner 4000.0083.01e1 E1
sdhc address E2
sdhc xid E2 01700001
sdhc partner 4000.0083.02e2 E2
sdhc address E3 xid-pass
sdhc partner 4000.0083.03e3 E3
sdhc dlsw C1 C2 C3 D1 D2 D3 E1 E2 E3
!
```

**Router
C**

```
!
dlsw local-peer peer-id 10.150.4.93
dlsw remote-peer 0 frame-relay interface Serial0 693
!
interface Serial0
  description Frame-Relay interface dlci 693
  no ip address
  encapsulation frame-relay IETF
  no ip route-cache
  no ip mroute-cache
  frame-relay map dlsw 693
  frame-relay lmi-type ansi
!
interface Serial1
  description Controller PU type 2.0 address C1
  no ip address
  encapsulation sdhc
  no ip route-cache
  no keepalive
  nrzi-encoding
  clockrate 9600
  sdhc role primary
  sdhc vmac 4000.0693.0100
  sdhc address C1
  sdhc xid C1 01700001
  sdhc partner 4000.5555.00c1 C1
  sdhc dlsw C1
!
interface Serial2
  description Controller PU type 2.0 address C2
  no ip address
  encapsulation sdhc
  no keepalive
  nrzi-encoding
  clockrate 9600
  sdhc role primary
  sdhc vmac 4000.0693.0200
  sdhc address C2
  sdhc xid C2 01700001
```

```
sdhc partner 4000.5555.00c2 C2
sdhc dlsd C2
!
interface Serial3
description Controller PU type 2.1 address C3
no ip address
encapsulation sdhc
no keepalive
nrzi-encoding
clockrate 9600
sdhc role prim-xid-poll
sdhc vmac 4000.0693.0300
sdhc address C3
sdhc partner 4000.5555.00c3 C3
sdhc dlsd C3
!
```

**Router
D**

```
!
dlsd local-peer peer-id 10.150.2.168
dlsd remote-peer 0 frame-relay interface Serial0 368
!
interface Serial0
description Frame-Relay interface dlci 368
no ip address
encapsulation frame-relay IETF
no ip route-cache
no ip mroute-cache
frame-relay map dlsd 368
frame-relay lmi-type ansi
!
interface Serial1
description Controller PU type 2.0 address D1
no ip address
encapsulation sdhc
no ip route-cache
no keepalive
nrzi-encoding
clockrate 9600
sdhc role primary
sdhc vmac 4000.0368.0100
sdhc address D1
sdhc xid D1 01700001
sdhc partner 4000.5555.00d1 D1
sdhc dlsd D1
!
interface Serial2
description Controller PU type 2.0 address D2
no ip address
encapsulation sdhc
no keepalive
nrzi-encoding
clockrate 9600
sdhc role primary
sdhc vmac 4000.0368.0200
sdhc address D2
sdhc xid D2 01700001
sdhc partner 4000.5555.00d2 D2
sdhc dlsd D2
!
interface Serial3
description Controller PU type 2.1 address D3
no ip address
encapsulation sdhc
no keepalive
nrzi-encoding
clockrate 9600
```

	<pre> sdlc role prim-xid-poll sdlc vmac 4000.0368.0300 sdlc address D3 sdlc partner 4000.5555.00d3 D3 sdlc dlsw D3 !</pre>
Router E	<pre> ! dlsw local-peer peer-id 10.150.1.83 dlsw remote-peer 0 frame-relay interface serial0 83 ! interface Serial0 description Frame-Relay interface dlci 83 no ip address encapsulation frame-relay IETF no ip route-cache no ip mroute-cache frame-relay map dlsw 83 frame-relay lmi-type ansi ! interface Serial1 description Controller PU type 2.0 address E1 no ip address encapsulation sdlc no ip route-cache no keepalive nrzi-encoding clockrate 9600 sdlc role primary sdlc vmac 4000.0083.0100 sdlc address E1 sdlc xid E1 01700001 sdlc partner 4000.5555.00e1 E1 sdlc dlsw E1 ! interface Serial2 description Controller PU type 2.0 address E2 no ip address encapsulation sdlc no keepalive nrzi-encoding clockrate 9600 sdlc role primary sdlc vmac 4000.0083.0200 sdlc address E2 sdlc xid E2 01700001 sdlc partner 4000.5555.00e2 E2 sdlc dlsw E2 ! interface Serial3 description Controller PU type 2.1 address E3 no ip address encapsulation sdlc no keepalive nrzi-encoding clockrate 9600 sdlc role prim-xid-poll sdlc vmac 4000.0083.0300 sdlc address E3 sdlc partner 4000.5555.00e3 E3 sdlc dlsw E3 !</pre>

Notes

- In order to configure an unlimited number of SDLC addresses to the DLSw+, issue the **sdlc dlsw default** command instead of the **sdlc dlsw C1 C2 C3 D1 D2 D3 E1 E2 E3** command.
- No session activities require use of the Exchange Identification (XID). However, the XID is necessary for PU 2.0 connectivity if the host has specified `xid=yes`.
- You can legally use the same XID for all PU 2.0 connections, if you use it for the purpose of connectivity.
- Use the **xid-pass** command for the PU 2.1 configuration on the host router. Use the **sdlc role prim-xid-poll** command on the remote routers.
- Use the **sdlc xid sdlc_address idnum/idblk** command for PU 2.0 configurations. If you have not defined the SDLC role, the SDLC role defaults to none. In the example in this document, C1 and C2 are PU 2.0, and C3 is a PU 2.1.

Verify

There is currently no verification procedure available for this configuration.

Troubleshoot

There is currently no specific troubleshooting information available for this configuration.

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