Downstream Physical Unit Frequently Asked Questions

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Questions

Introduction

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

Q. How do you configure multiple physical unit (PU) support (towards the mainframe)?

A. Use this configuration:

```
dspu host host1 xid 05dffff1 rmac 4000.3745.0001
dspu host host2 xid 05dffff2 rmac 4000.3745.0002

dspu pool hostpool host host1 lu 2 254
dspu pool hostpool host host2 lu 2 254
```

You have now defined 2 distinct upstream PUs and a pool of 506 logical units (LUs): 253 LUs from `host1` and 253 LUs from `host2`.

Q. How do you associate a physical unit (PU) with a particular host?

A. Use this configuration:

```
dspu host HOST1 xid-snd 05fffff1 rmac 4000.3745.0001 rsap 4 lsap 12
dspu pool POOL1 host HOST1 lu 32 36

dspu host HOST2 xid-snd 05fffff2 rmac 4000.3745.0002 rsap 4 lsap 12
dspu pool POOL2 host HOST2 lu 42 46

dspu pu PU1 xid-rcv 05d00001
dspu lu 2 6 host HOST1 12

dspu pu PU2 xid-rcv 05d00002
dspu lu 2 6 host HOST2 22

dspu pu PU3 xid-rcv 05d00003
dspu lu 2 6 pool POOL1

dspu pu PU4 xid-rcv 05d00004
dspu lu 2 6 pool POOL2
```

You have now defined two distinct upstream PUs (HOST1 and HOST2) and four distinct downstream PUs (PU1, PU2, PU3, and PU4).

- PU1 is associated with HOST1 using dedicated logical units (LUs). Host LUs 12, 13, 14, 15, and 16 will be mapped to downstream LUs 2, 3, 4, 5, and 6 respectively.
- PU2 is associated with HOST2 using dedicated LUs. Host LUs 22, 23, 24, 25, and 26 will be mapped to downstream LUs 2, 3, 4, 5, and 6 respectively.
- PU3 is associated with HOST1 using pooled LUs. Host LUs 32, 33, 34, 35, and 36 are in POOL1. One LU from POOL1 will be mapped to each downstream LU (2, 3, 4, 5, and 6), but exact maps can not be determined.
- PU4 is associated with HOST2 using pooled LUs. Host LUs 42, 43, 44, 45, and 46 are in POOL2. One LU from POOL2 will be mapped to each downstream LU (2, 3, 4, 5, and 6), but exact maps can not be determined.

Note: You are really associating LUs instead of PUs, and you could configure LUs for a downstream PU associated to LUs from different hosts. For example:

```
dspu host host1 xid 05fffff1 rmac 4000.3745.0001
dspu host host2 xid 05fffff2 rmac 4000.3745.0002

dspu pu pu-test xid 05d0000f
dspu lu 2 2 host host1 2

!--- Downstream LU02 is matching (or corresponding)
!--- to the LU02 on the HOST1 (mainframe).

dspu lu 3 3 host host2 2

!--- Downstream LU03 is matching (or corresponding)
!--- to the LU02 on the HOST2.
```

Q. What is the difference between the dspu rsrb enable-host and the dspu enable-host commands?

A. The **dspu enable-host** and **dspu enable-pu** commands enable local SAP addresses for real interfaces. For example:

```
int TokenRing0
 dspu enable-pu lsap 8

int TokenRing1
 dspu enable-host lsap 12
```

Because remote source−route bridging (RSRB) is a virtual interface (that is, there is no **interface rsrb 0**), you can issue the **dspu rsrb enable−host** and **dspu rsrb enable−pu** commands to enable local SAP addresses for the RSRB virtual interface.

Decide which to use based on where your end−stations are located. There are only four choices:

1. If your upstream host is across the RSRB interface:

   You must issue this command:

   dspu rsrb enable−host [lsap *lsap−address*]

2. If your downstream physical unit (DSPU) is across the RSRB interface:

   You must issue this command:

   dspu rsrb enable−pu [lsap *lsap−address*]

3. If your upstream host is directly connected through the Token Ring:

   You must issue these commands:

   interface TokenRing

   dspu enable−host [lsap *lsap−address*]

4. If your downstream PU is across the RSRB interface:

You must issue these commands:

```
interface TokenRing

dspu enable−pu [lsap lsap−address]
```

Q. Does Cisco support local−ack on the remote source−route bridging (RSRB) session to the remote front−end processor (FEP)?

A. Yes, you only need to enable local−ack on the **source−bridge remote−peer** statement. The downstream physical unit (DSPU) determines if local−ack is enabled during exchange identifications (XIDs).

Q. How does Cisco handle the loss of remote connection to the upstream host towards the downstream sessions? Do you use a cold ACTPU or do you use UNBIND, DACTLU, or DACTPU?

A. Cisco uses UNBIND and DACTLU. DACTPU is not sent to downstream physical units (PUs) when the upstream PU goes down. Logical Link Control, type 2 (LLC2) and system services control points (SSCP) to PU sessions between the router and the upstream or downstream PUs are maintained independently.

Q. What is the trigger for us to send the NMVT (activation request)? Is there one NMVT per physical unit (PU) or logical unit (LU)?

A. The host must set a bit in its ACTPU request corresponding to Dynamic Definition of Dependent LUs (DDDLU) support. After ACTPU +RSP is sent, the downstream physical unit (DSPU) router sends an NMVT for each defined host LU. Then, the NMVT specifies the LOCADDR for which DSPU wants to receive an ACTLU.

Q. Is it possible to do downstream physical unit (DSPU) for physical unit 2.1 (PU 2.1) and logical unit 6.2 (LU 6.2)? Does DSPU support connection to PU 2.1 nodes; that is, does DSPU support exchange identification 3 (XID3)?

A. Yes, DSPU supports XID3, but DSPU does not negotiate XID3 parameters.

DSPU sends a static XID3 to an end−station and chooses the proper role: primary for downstream physical units (PUs), secondary for upstream PUs.

If the end−station does not accept the static XID3 parameters, then the end−station rejects the XID, and connection is not established.

Q. Does downstream physical unit (DSPU) support logical unit 6.2 (LU 6.2)?

A. Yes, DSPU supports dependent LU 6.2 sessions; that is, system services control points (SSCP) to PU and SSCP−LU sessions must be established.

DSPU does not support independent LU 6.2 sessions; independent LU 6.2 session routing is an Advanced Peer−to−Peer Networking (APPN) Network Node function.

DSPU can route dependent LU 6.2 BINDs because the BIND is received on an SSCP−LU session.

DSPU maps between downstream SSCP−LU sessions and upstream SSCP−LU sessions; and it routes the BIND accordingly.

DSPU does not really care what LU type the BIND is. The BIND is always routed based on the SSCP−LU session map.

APPN Network Nodes can route independent LU 6.2 BINDs, because it builds maps to other nodes based on LU names.

In conclusion:

- Dependent LU 6.2 can be routed by DSPU.
- Independent LU 6.2 must be routed by an APPN Network Node.

Q. What protocols are supported for downstream physical unit (DSPU)?

A. In versions 12.2 and later, DSPU supports these data−link connections (DLCs):

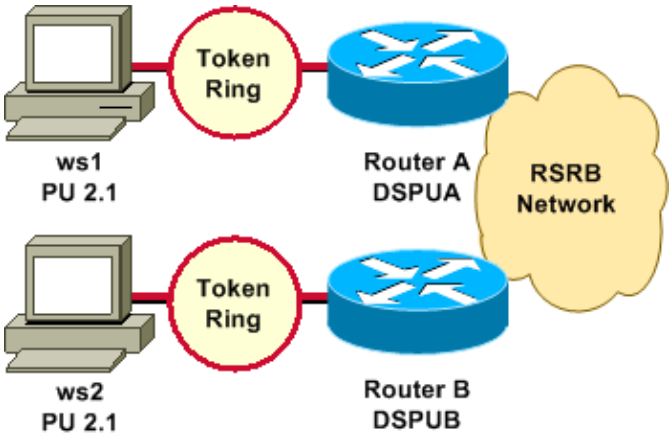
- Token Ring
- Ethernet
- FDDI
- Remote source−route bridging (RSRB)
- Virtual data−link control (VDLC)
- Serial/FrameRelay
- Serial/Synchronous Data Link Control (SDLC)
- X.25/Qualified Logical Link Control (QLLC)
- Native client interface architecture (NCIA)

For more information refer to Configuring DSPU and SNA Service Point Support.

Q. What software is needed on the client to communicate with a Cisco router acting as a physical unit (PU) concentrator?

A. The client software is not really an issue. If it establishes system services control points (SSCP) to PU and SSCP−LU sessions with the host, it should work with downstream physical unit (DSPU). So far, all 3270 emulator software packages have been found to work with DSPU.

Q. Is there independent logical unit 6.2 (LU 6.2) support for downstream physical unit (DSPU)? DSPU is physical unit 2.0 (PU 2.0) upstream; is PU 2.1 supported downstream? If yes, does this mean ws1 can initiate session to ws2 without involvement of VTAM (independent LU 6.2)? Upstream to VTAM dependent logical units (LUs) are supported; for example, only VTAM can initiate a session, right (see next diagram)?



A. DSPU supports only dependent LUs???regardless of type???including dependent LU 6.2. DSPU can not process a BIND without a prior ACTPU and ACTLU sequence.

You must use Advanced Peer−to−Peer Networking (APPN) or Cisco SNAswitch to handle independent LUs.

Related Information

- **Technology Support**
- **Product Support**
- **Technical Support − Cisco Systems**

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