

Configuration DLSw+ sur QLLC

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Introduction

Dans cette configuration, deux ressources X.25 différentes (nous avons utilisé dspu-host pour simuler les périphériques finaux de cette configuration). Pour plus d'informations sur l'unité physique en aval (DSPU), reportez-vous aux documents suivants :

- [Configuration de la prise en charge des points de service DSPU et SNA](#)
- [Équipement de connexion de base \(DSPU\) - Forum aux questions](#)

Ces deux périphériques finaux communiquent avec différentes cartes sur le site du mainframe via X.25. Les ressources X.25 distantes ont été configurées pour différentes adresses de destination (en différentes longueurs et adresses). Tout appel entrant dont l'adresse de destination X.121 correspond à la « sous-adresse dlsw qlc » du routeur est envoyé à Data Link Switching Plus (DLSw+) (avec un ID.STN IND). Lorsque DLSw+ reçoit une requête « Can You Reach » concernant une adresse MAC virtuelle dans le pool, le code QLLC (Qualified Logical Link Control) tente de configurer un circuit virtuel (VC) à l'adresse X.121 qui correspond à l'adresse MAC virtuelle spécifiée. Si un appel entrant est reçu, QLLC envoie un ID.STN.IND avec une adresse MAC virtuelle du pool à DLSw+.

Conditions préalables

Conditions requises

Aucune spécification déterminée n'est requise pour ce document.

Components Used

Les informations de ce document sont basées sur les versions de logiciel et matériel suivantes :

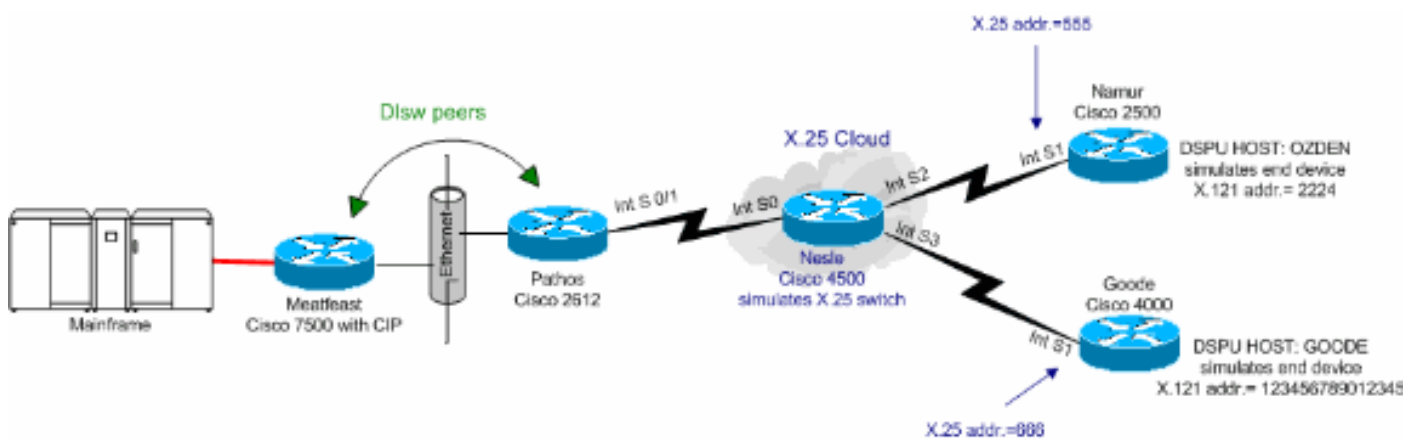
- Le logiciel Cisco IOS® version 12.2(6a) a été utilisé dans Pathos (Cisco 2612)
- Le logiciel Cisco IOS version 12.0(20) a été utilisé dans Namur & Goode (Cisco 2500, Cisco 4000)
- La version 12.1(7) du logiciel Cisco IOS a été utilisée à Nesle (Cisco 4500)

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](#).

Schéma de topologie



Configuration

Cette section vous fournit des informations pour configurer les fonctionnalités décrites dans ce document.

Remarque : Pour en savoir plus sur les commandes utilisées dans le présent document, utilisez [l'outil de recherche de commandes](#) (clients [inscrits](#) seulement).

Configurations

Les adresses MAC du mainframe sont les suivantes :

- 4000.7507.0000
- 4000.7507.ffff

Ce document utilise les configurations indiquées ici:

- [Cisco 7507 \(Fête de viande\)](#)
- [Cisco 2612 \(Pathos\)](#)
- [Cisco 4500 \(Nesle\)](#)
- [Cisco 2500 \(Namur\)](#)
- [Cisco 4000 \(Goode\)](#)

Cisco 7507 (Fête de viande)

```
source-bridge ring-group 100
dlsw local-peer peer-id 10.48.64.75 promiscuous
!
interface Channel4/2
 ip address 10.48.64.225 255.255.255.240
 no keepalive
 lan TokenRing 0
  source-bridge 88 1 100
  adapter 0 4000.7507.0000
  adapter 1 4000.7507.ffff
```

Cisco 2612 (Pathos)

```
!
source-bridge ring-group 200
dlsw local-peer peer-id 10.48.64.40
dlsw remote-peer 0 tcp 10.48.64.75
!
interface Ethernet0/0
 ip address 10.48.64.40 255.255.255.0
 half-duplex
!
interface Serial10/0
 no ip address
!
interface TokenRing0/0
 no ip address
 ring-speed 16
!
interface Serial10/1
 no ip address
 encapsulation x25
 x25 alias .*
!--- It is used against the destination !--- address of
a received call. x25 htc 10 x25 win 7 x25 wout 7 qllc
accept-all-calls qllc dlsw subaddress 123456789012345
vmacaddr 4000.3333.0000 2 partner 4000.7507.0000 qllc
dlsw subaddress 2224 vmacaddr 4000.2222.0000 2 partner
4000.7507.ffff ! ip default-gateway 10.48.64.1 ip
classless no ip http server ip pim bidir-enable ! !
dial-peer cor custom !
```

Cisco 4500 (Nesle)

```
!
x25 routing
!
!
!
!
interface Ethernet0
 ip address 10.48.64.34 255.255.255.0
 media-type 10BaseT
!
interface Ethernet1
 no ip address
 shutdown
 media-type 10BaseT
!
interface Ethernet2
 no ip address
```

```
media-type 10BaseT
!
interface Serial0
  no ip address
  encapsulation x25 dce
  clockrate 250000
!
interface Serial1
  no ip address
!
interface Serial2
  no ip address
  encapsulation x25 dce
  no ip mroute-cache
  clockrate 250000
!
interface Serial3
  no ip address
  encapsulation x25 dce
  clockrate 250000
!
interface TokenRing0
  no ip address
  ring-speed 16
!
ip default-gateway 10.48.64.1
ip classless
no ip http server
x25 route input-interface Serial2 interface Serial0
x25 route input-interface Serial3 interface Serial0
x25 route 555 interface Serial2
x25 route 666 interface Serial3
!
line con 0
  exec-timeout 0 0
line aux 0
  exec-timeout 0 0
line vty 0 4
  exec-timeout 0 0
  password 7 071836
  login
!
ntp clock-period 17179258
ntp server 10.48.64.100
end
```

Cisco 2500 (Namur)

```
hostname namur
!
logging buffered 150000 debugging
enable password 7 120E12
!
dspu host OZDEN xid-snd 00000000 x25 2224 ql1c 12
interface Serial1
!
interface Ethernet0
  no ip address
  no ip directed-broadcast
  shutdown
!
interface Serial0
  no ip address
```

```
no ip directed-broadcast
shutdown
!
interface Serial1
no ip address
no ip directed-broadcast
encapsulation x25
no ip mroute-cache
x25 address 555
x25 htc 10
x25 win 7
x25 wout 7
dspu enable-host ql1c 12
dspu start OZDEN
!
interface TokenRing0
no ip address
no ip directed-broadcast
shutdown
!
```

Cisco 4000 (Google)

```
dspu host GOODE xid-snd 11132323 x25 123456789012345
ql1c 20 interface Serial1
!
interface Ethernet0
ip address 10.48.64.17 255.255.255.0
no ip directed-broadcast
media-type 10BaseT
!
interface Serial0
no ip address
no ip directed-broadcast
shutdown
!
interface Serial1
no ip address
no ip directed-broadcast
encapsulation x25
no ip mroute-cache
x25 address 666
x25 htc 10
x25 win 7
x25 wout 7
dspu enable-host ql1c 20
dspu start GOODE
!
```

Vérification

Cette section fournit des informations que vous pouvez utiliser pour confirmer que votre configuration est active.

Certaines commandes **show** sont prises en charge par l'[Output Interpreter Tool](#) (clients enregistrés uniquement), qui vous permet de voir une analyse de la sortie de la commande show.

- **show llc2** : affiche les connexions LLC2 actives dans le routeur.
- **show version** : affiche les informations de version du logiciel.

- **show dlsw peer** : affiche les informations de connexion des homologues dlsw.
- **show dlsw circuit detail** : affiche les détails du circuit DLSW.
- **show qllc serial 0/1** : affiche des informations sur QLLC serial 0/1.
- **show x25 interface serial 0/1** : affiche l'état de la ligne et du protocole sur l'interface série X.25 0/1.
- **show x25 route** - Affiche la table de routage X.25.
- **show x25 interface serial 0** : affiche l'état de la ligne et du protocole sur l'interface série X.25 0.
- **show dspu** : affiche l'état de la fonction DSPU.
- **show x25 interface serial 1** : affiche l'état de la ligne et du protocole sur l'interface série X.25 1.

Fête de viande

```
#show llc2
....
Channel4/2 DTE: 4000.7507.ffff 4000.2222.0000 04 04
state NORMAL
  V(S)=1, V??)=1, Last N??)=1, Local window=7, Remote
Window=127
  akmax=3, n2=8,
  xid-retry timer      0/0      ack timer      0/1000
  p timer              0/1000   idle timer
5430/10000
  rej timer           0/3200   busy timer     0/9600
  adm timer           0/60000  llc1 timer     0/1000
  akdelay timer       0/100    txQ count      0/200
  RIF: 06B0.0581.0640
Channel4/2 DTE: 4000.7507.0000 4000.3333.0000 04 04
state NORMAL
  V(S)=6, V??)=6, Last N??)=6, Local window=7, Remote
Window=127
  akmax=3, n2=8,
  xid-retry timer      0/0      ack timer      0/1000
  p timer              0/1000   idle timer
5630/10000
  rej timer           0/3200   busy timer     0/9600
  adm timer           0/60000  llc1 timer     0/1000
  akdelay timer       0/100    txQ count      0/200
  RIF: 06B0.0581.0640
```

Pathos

```
pathos#show version
Cisco Internetwork Operating System Software
IOS (tm) C2600 Software (C2600-IS-M), Version 12.2(6a),
RELEASE SOFTWARE (fc1)
Copyright ??) 1986-2001 by cisco Systems, Inc.
Compiled Sat 01-Dec-01 22:30 by pwade
Image text-base: 0x80008088, data-base: 0x810616B4
pathos#show dlsw peer
Peers:                state      pkts_rx  pkts_tx  type
drops ckts TCP    uptime
TCP 10.48.64.75      CONNECT      118      91  conf
0    2    0 00:32:12
Total number of connected peers: 1
Total number of connections:    1
pathos#show dlsw circuit detail
Index          local addr(lsap)  remote addr(dsap)
state          uptime
```

```

234881048      4000.2222.0000(04)  4000.7507.ffff(04)
CONNECTED      00:29:50
                PCEP: 81C25730   UCEP: 81D88528
                Port:Se0/1      peer 10.48.64.75(2065)
                Flow-Control-Tx  CW:20, Permitted:19; Rx CW:20,
Granted:39; Op: Repeat
                Congestion: Low(02), Flow Op: Half: 0/0 Reset
0/0
                RIF = --no rif--
                Bytes:           429/453           Info-frames:
1/1
                XID-frames:      5/4             UInfo-frames:
0/0
                HPR saps: local 0x0, remote 0x4
1426063385    4000.3333.0000(04)  4000.7507.0000(04)
CONNECTED      00:29:49
                PCEP: 81D081B4   UCEP: 81D108B0
                Port:Se0/1      peer 10.48.64.75(2065)
                Flow-Control-Tx  CW:20, Permitted:34; Rx CW:20,
Granted:34; Op: Repeat
                Congestion: Low(02), Flow Op: Half: 0/0 Reset
0/0
                RIF = --no rif--
                Bytes:           554/513           Info-frames:
6/6
                XID-frames:      5/4             UInfo-frames:
0/0
                HPR saps: local 0x0, remote 0x4
Total number of circuits connected: 2
pathos#show qllc serial 0/1
Interface Serial0/1
  vc 2 66620
    Circuit State P4/D1, Logical Link State QLOpened
4000.3333.0000(04)->4000.7507.0000(04)
    0 packets held
  vc 1 55512
    Circuit State P4/D1, Logical Link State QLOpened
4000.2222.0000(04)->4000.7507.ffff(04)
    0 packets held
pathos#
pathos#show x25 interface serial 0/1
SVC 1, State: D1, Interface: Serial0/1
  Started 00:30:51, last input 00:30:50, output 00:30:50
  Connects 55512 <-->
  qllc 4000.2222.0000
  Window size input: 7, output: 7
  Packet size input: 128, output: 128
  PS: 0 PR: 7 ACK: 6 Remote PR: 0 RCNT: 1 RNR: no
  P/D state timeouts: 0 timer (secs): 0
  data bytes 463/441 packets 8/7 Resets 0/0 RNRs 0/0
REJs 0/0 INTs 0/0
SVC 2, State: D1, Interface: Serial0/1
  Started 00:30:51, last input 00:30:50, output 00:30:50
  Connects 66620 <-->
  qllc 4000.3333.0000
  Window size input: 7, output: 7
  Packet size input: 128, output: 128
  PS: 5 PR: 4 ACK: 2 Remote PR: 5 RCNT: 2 RNR: no
  P/D state timeouts: 0 timer (secs): 0
  data bytes 523/566 packets 13/12 Resets 0/0 RNRs 0/0
REJs 0/0 INTs 0/0
pathos#

```

```

nesle#show x25 route
# Match                               Substitute
Route to
 1 input-int Serial2
Serial0
 2 input-int Serial3
Serial0
 3 dest 555
Serial2
 4 dest 666
Serial3

nesle#show x25 interface serial 0
SVC 1, State: D1, Interface: Serial0
  Started 00:32:47, last input 00:32:46, output 00:32:46
  Connects 55512 <--> 2224 from Serial2 SVC 10
  Window size input: 2, output: 2
  Packet size input: 128, output: 128
  PS: 7 PR: 0 ACK: 0 Remote PR: 6 RCNT: 0 RNR: no
  P/D state timeouts: 0 timer (secs): 0
  data bytes 441/463 packets 7/8 Resets 0/0 RNRs 0/0
REJs 0/0 INTs 0/0
SVC 2, State: D1, Interface: Serial0
  Started 00:32:47, last input 00:32:46, output 00:32:46
  Connects 66620 <--> 123456789012345 from Serial3 SVC
1024
  Window size input: 2, output: 2
  Packet size input: 128, output: 128
  PS: 4 PR: 5 ACK: 5 Remote PR: 2 RCNT: 0 RNR: no
  Window is closed
  P/D state timeouts: 0 timer (secs): 0
  data bytes 566/523 packets 12/13 Resets 0/0 RNRs 0/0
REJs 0/0 INTs 0/0
nesle#show x25 interface serial 2
SVC 10, State: D1, Interface: Serial2
  Started 00:32:51, last input 00:32:50, output 00:32:50
  Connects 55512 <--> 2224 to Serial0 SVC 1
  Window size input: 2, output: 2
  Packet size input: 128, output: 128
  PS: 0 PR: 7 ACK: 6 Remote PR: 0 RCNT: 1 RNR: no
  P/D state timeouts: 0 timer (secs): 0
  data bytes 463/441 packets 8/7 Resets 0/0 RNRs 0/0
REJs 0/0 INTs 0/0
nesle#show x25 interface serial 3
SVC 1024, State: D1, Interface: Serial3
  Started 00:32:53, last input 00:32:52, output 00:32:52
  Connects 66620 <--> 123456789012345 to Serial0 SVC 2
  Window size input: 2, output: 2
  Packet size input: 128, output: 128
  PS: 5 PR: 4 ACK: 2 Remote PR: 5 RCNT: 2 RNR: no
  P/D state timeouts: 0 timer (secs): 0
  data bytes 523/566 packets 13/12 Resets 0/0 RNRs 0/0
REJs 0/0 INTs 0/0

```

Namur

```

namur#show dspu
dspu host OZDEN Serial1 (QLLC) PU STATUS Active
  FRAMES RECEIVED 8 FRAMES SENT 8
  LUs USED BY DSPU 0 LUs ACTIVE 0
  LUs USED BY API 0 LUs ACTIVE 0
  LUs ACTIVATED BY HOST BUT NOT USED 0

```



```
namur#show x25 interface serial 1
SVC 10, State: D1, Interface: Serial1
  Started 00:34:55, last input 00:34:54, output 00:34:54
  Connects 2224 <-->
  qllc
  Window size input: 7, output: 7
  Packet size input: 128, output: 128
  PS: 7 PR: 0 ACK: 0 Remote PR: 6 RCNT: 0 RNR: no
  P/D state timeouts: 0 timer (secs): 0
  data bytes 441/463 packets 7/8 Resets 0/0 RNRs 0/0
REJs 0/0 INTs 0/0
namur#
```

Goode

```
goode#show dspu
dspu host GOODE Serial1 (QLLC) PU STATUS Active
  FRAMES RECEIVED 18 FRAMES SENT 18
  LUs USED BY DSPU 0 LUs ACTIVE 0
  LUs USED BY API 0 LUs ACTIVE 0
  LUs ACTIVATED BY HOST BUT NOT USED 5

goode#show x25 interface serial 1
SVC 1024, State: D1, Interface: Serial1
  Started 00:41:25, last input 00:41:25, output 00:41:25
  Connects 123456789012345 <-->
  qllc
  Window size input: 2, output: 2
  Packet size input: 128, output: 128
  PS: 4 PR: 5 ACK: 5 Remote PR: 2 RCNT: 0 RNR: no
  Window is closed
  P/D state timeouts: 0 timer (secs): 0
  data bytes 566/523 packets 12/13 Resets 0/0 RNRs 0/0
REJs 0/0 INTs 0/0
goode#
```

Dépannage

Il n'existe actuellement aucune information de dépannage spécifique pour cette configuration.

Informations connexes

- [Page d'assistance technologique Data-Link Switching Plus \(DLSw+\)](#)
- [Assistance technologique IBM](#)
- [Support et documentation techniques - Cisco Systems](#)