



# *Rapport TP3-4-5*

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# Chapter 1

## OpenSM

Lors du premier lancement d'opensm, on nous indique que le module `ib_umad` n'est pas chargé.

Nous avons donc édité le fichier `/etc/modules` en y ajoutant la ligne `"ib_umad"` puis redémarrer.

Le **LID** correspond à Local Identifier et permet d'identifier chaque périphérique du réseau et de l'utiliser comme adresse.

Lors du lancement d'OpenSM, on remarque que les LIDs sont attribués.

## Chapter 2

# Tables de routage

Un fichier route se décompose en les différentes tables de routages pour chaque commutateur.

Chaque table contient des lignes similaires qui indiquent une route. Voici un exemple:

0x0001 004 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')

Les champs sont les suivants:

1. Le LID de la destination
2. Le port de sortie sur le switch
3. Des informations sur la destination, notamment son nom

# Chapter 3

## Etudes de routages

### 3.1 Etudes de topologies avancés

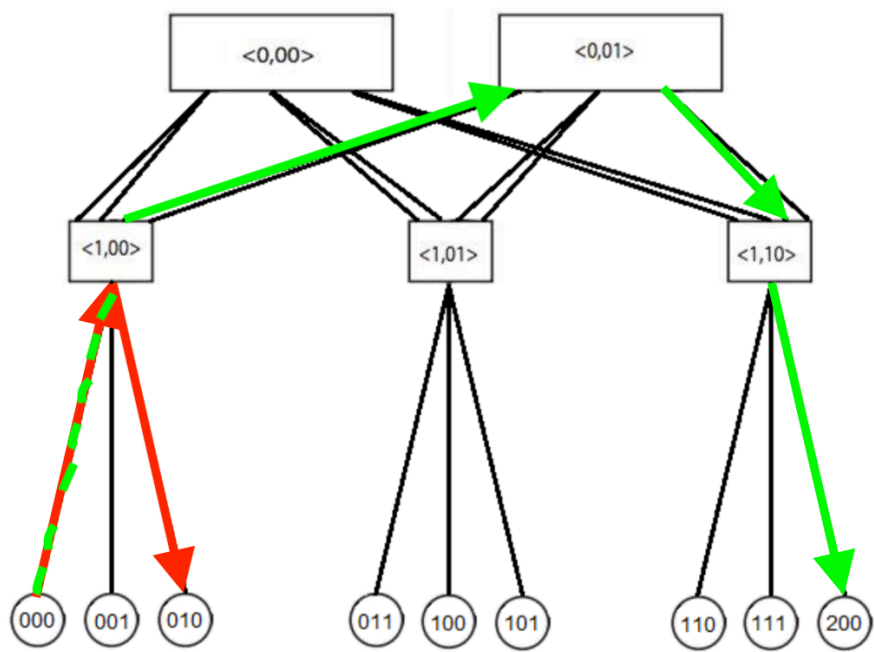
Le fichier `Topo1.topo` contient une topologie *PGFT* (2, [3, 3], [1, 2], [1, 2]).

Le fichier `Topo2.topo` contient une topologie *XGFT* (3, [1, 2, 2], [4, 2, 2]).

	XGFT	PGFT
Avantages	On peut multiplier les liens entre des nœux du niveau $L$ et $L - 1$ . Non bloquant. Premier "petaflopique".	Permet d'éviter les phénomènes de congestion. Permet de réduire le coût par élagage des liens. Permet d'assurer une bonne bande passante.
Inconvénients	On ne peut pas doubler les liens entre deux nœux	—

Table 3.2 – Avantages et inconvénients des topologies précédentes

Les tables de routage générées sont disponibles dans [Appendix B](#).



- 1. Route 1 (rouge): La route prise démarre de 000 pour aller vers le seul switch auquel il est connecté. Puis ce switch étant connecté à la destination 010, le paquet prend la route  $\langle 100 \rangle \rightarrow 010$ .
- 2. Route 2 (vert): La route prise démarre de 000 pour aller vers le seul switch auquel il est connecté. Puis ce switch regarde sa table de routage et détermine qu'il faut l'envoyer à  $\langle 001 \rangle$  par le port 5. Ce nouveau switch regarde sa table de routage et détermine qu'il faut l'envoyer à  $\langle 110 \rangle$  par le port 5. Puis ce switch étant connecté à la destination 200, le paquet prend la route  $\langle 110 \rangle \rightarrow 200$ .

Figure 3.1 – Route topologie 1

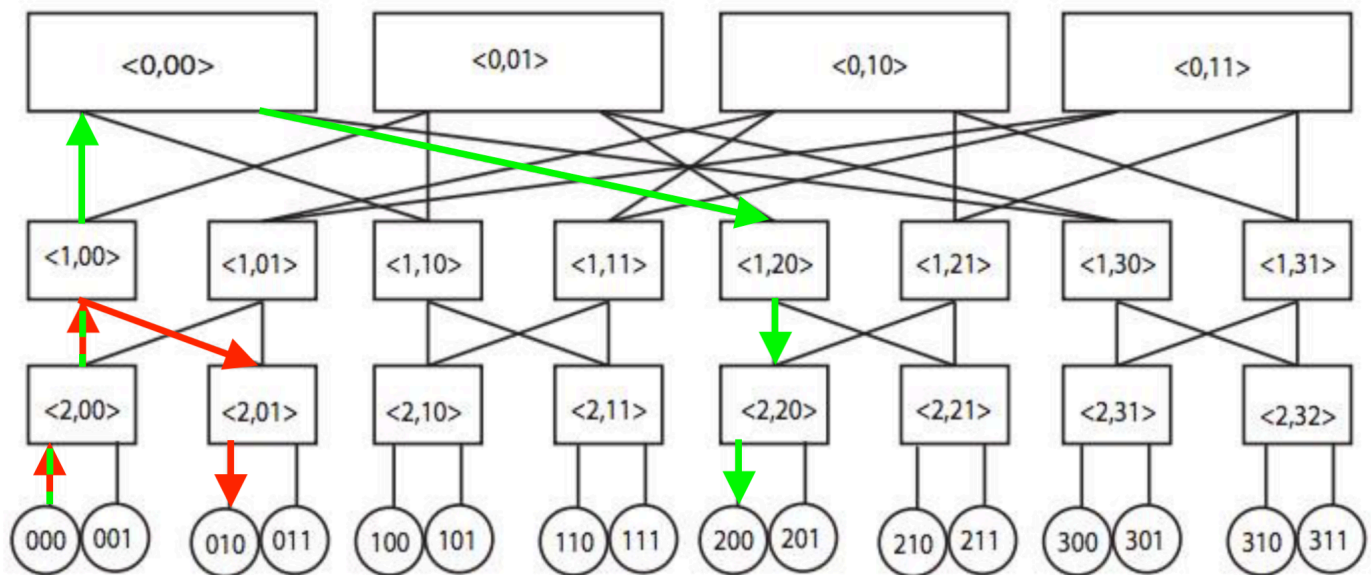


Figure 3.2 – Route topologie 2

1. Route 1 (rouge): La route prise démarre de 000 pour aller vers le seul switch auquel il est connecté. Puis ce switch regarde sa table de routage et détermine qu'il faut l'envoyer à <100> par le port 3. Ce nouveau switch regarde sa table de routage et détermine qu'il faut l'envoyer à <201> par le port 2. Puis ce switch étant connecté à la destination 010, le paquet prend la route <201> → 010.

2. Route 2 (vert): La route prise démarre de 000 pour aller vers le seul switch auquel il est connecté. Puis ce switch regarde sa table de routage et détermine qu'il faut l'envoyer à <100> par le port 3. Puis ce switch regarde sa table de routage et détermine qu'il faut l'envoyer à <000> par le port 3. Puis ce switch regarde sa table de routage et détermine qu'il faut l'envoyer à <120> par le port 3. Puis ce switch regarde sa table de routage et détermine qu'il faut l'envoyer à <220> par le port 1. Puis ce switch étant connecté à la destination 200, le paquet prend la route <220> → 200.

## 3.2 Quelques algorithmes de routage

### 3.2.1 MinHop

Cet algorithme a pour but d'emprunter le plus court chemin en termes de sauts. Il cherche donc à optimiser le nombre de sauts.

### 3.2.2 UPDN

UPDN signifie "Up/Down" et fonctionne sur le même principe que minhop: emprunter la plus courte distance. Cependant une règle supplémentaire permet d'éviter notamment les bouclages: l'algorithme passe d'abord par une phase montante, puis une descendante. De cette manière il est interdit de redescendre dans l'arbre puis de remonter.

### 3.2.3 FTree

FTree reprend les principes d'UPDN tout en évitant les phénomènes de congestion.

### 3.2.4 DOR

Reprend la technique vue en cours avec le XOR dans un hypercube et permet ainsi de diriger le trafic dimension par dimension.

### 3.2.5 LASH

Mix entre UPDN et DOR. Permet de prendre le plus court chemin tout en répartissant le trafic entre les couches afin d'éviter le phénomène de congestion.

### 3.3 Quelques metriques pour letude des performances des algorithmes de routage

### 3.4 MinHop

Le code du calculateur est disponible dans [Appendix A](#)

### 3.5 Route balancing

Le code du calculateur est disponible dans [Appendix A](#)

### 3.6 Résultats

Topologie 1: MinHop = 4, Balancing 4.

Topologie 2: MinHop = 6, Balancing = 20.

Après analyse de ces résultats, nous déduisons que sur la topologie nř2 il faudrait utiliser un algorithme de routage évitant les phénomènes de congestion. Nous préconisons l'utilisation de FTree ou LASH.

En revanche, pour la topologie nř1, UPDN ou DOR semblent suffisants.

# Appendix A

## Calculeur

Listing A.1 – "Calculation.cpp"

```
1  #include <iostream>
2  #include <vector>
3
4  #include "calculation.h"
5
6  using namespace std;
7
8  Calculation::Calculation()
9  {
10 }
11
12 Calculation::~Calculation()
13 {
14 }
15
16 /**
17  * Constructeur qui charge les informations
18  * de la topologie et table de routage en mémoire.
19  */
20 Calculation::Calculation(char * topoFile, char * routeFile)
21 {
22     topologyTable.loadData(topoFile);
23     routingTable.loadData(routeFile);
24 }
25
26 /**
27  * Méthode qui calcule le nombre de sauts
28  * d'un noeud source jusqu'au noeud destination.
29  */
30 int Calculation::getHopCount(int fromId, int toId)
31 {
32     if(fromId == toId)
33         return 0;
34     int count = 1;
35     struct hostNode * fromHost = topologyTable.getHostById(fromId);
36     string fromNode = fromHost->name;
37     string toNode = topologyTable.getHostById(toId)->name;
38     string switchName = fromHost->dstName; //Get the first switch that the node is connected to.
39     bool shouldSearch = true;
40
41     while(shouldSearch)
42     {
43         bool changed = false;
44         routeItem * route = routingTable.getTableByName(switchName);
45
46         for(int i = 0; i < route->subitems; i++) //For each item in the routing table
47         {
48             if(route->dstInfo.at(static_cast<unsigned long>(i)) == topologyTable.getHostById(toId)->name)
49                 //If it's our destination
50             {
```



```

50     string name = topologyTable.getSwitchByName(switchName)->dstName.at(static_cast<unsigned
51         long>(route->outport.at(i)) - 1); //Get the next node
52     if(name == topologyTable.getHostById(toId)->name) //If we arrived to our destination, stop
53     {
54         shouldSearch = false;
55         break;
56     }
57     else //Set new switch
58     {
59         changed = true;
60         switchName = name;
61     }
62 }
63
64 if(shouldSearch && !changed)
65 {
66     std::cout << "ERROR MAMAMIA" << std::endl;
67     break;
68 }
69 count++;
70 }
71
72 cout << "From " << fromNode << " to " << toNode << ": Hop Count = " << count << endl;
73 return count;
74 }
75
76 /**
77  * Méthode qui implémente la métrique Minhop.
78  */
79 int Calculation::calculate()
80 {
81     int minHop = 0xffff; //Max value
82     for(int i = 0; i < topologyTable.getHostCount(); i++)
83     {
84         int cpt = 0;
85         for(int j = 0; j < topologyTable.getHostCount(); j++)
86         {
87             if(i == j)
88                 continue;
89             cpt = max(cpt, getHopCount(i, j));
90         }
91         minHop = min(minHop, cpt);
92     }
93     return minHop;
94 }
95
96 /**
97  * Méthode qui calcule la charge d'un noeud
98  * source jusqu'au noeud destination.
99  */
100 int Calculation::getRoute(int fromId, int toId)
101 {
102     struct hostNode * fromHost = topologyTable.getHostById(fromId);
103     string fromNode = fromHost->name;
104     string toNode = topologyTable.getSwitchById(toId)->name;
105     cout << "From " << fromNode << " to " << toNode;
106     string switchName = fromHost->dstName;
107     struct routeItem * route = routingTable.getTableByName(switchName);
108
109     for(int i = 0; i < route->dstInfo.size(); i++){
110         if(route->dstInfo[i] == toNode)
111             return 1;
112     }
113     return 0;
114 }
115
116 /**
117  * Méthode qui implémente la métrique nombre de chemins disjoints.

```

```
118 */
119 int Calculation::balance()
120 {
121     int balance = 0x0000;; //Max value
122
123     for(int i = 0; i < topologyTable.getSwitchCount(); i++){ //For each switch
124         switchNode * s = topologyTable.getSwitchById(i);
125         struct routeItem * route = routingTable.getTableByName(s->name);
126         int t[s->portCount] = {0};
127         for(int j = 0; j < route->subitems; j++){ //Count each route on each port (link)
128             t[route->outport[j] -1]++;
129         }
130         for(int j = 0; j < s->portCount; j++)
131             balance = max (balance, t[j]); //Get the max
132     }
133     return balance;
134 }
```

## Appendix B

# Tables de routage

### B.1 Topologie 1

Listing B.1 – "Route 1"

```

1  Unicast lids [0x0-0xe] of switch Lid 4 guid 0x000000000200002 (Switch(1 1 0)):
2      Lid Out  Destination
3          Port      Info
4  0x0001 004 : (Channel Adapter portguid 0x000000000100001: 'HCA(000)')
5  0x0002 006 : (Switch portguid 0x000000000200000: 'Switch(1 0 0)')
6  0x0003 006 : (Switch portguid 0x000000000200001: 'Switch(1 0 1)')
7  0x0004 000 : (Switch portguid 0x000000000200002: 'Switch(1 1 0)')
8  0x0005 005 : (Channel Adapter portguid 0x000000000100003: 'HCA(001)')
9  0x0006 004 : (Switch portguid 0x000000000200003: 'Switch(0 0 0)')
10 0x0007 006 : (Switch portguid 0x000000000200004: 'Switch(0 0 1)')
11 0x0008 006 : (Channel Adapter portguid 0x000000000100005: 'HCA(010)')
12 0x0009 007 : (Channel Adapter portguid 0x000000000100007: 'HCA(011)')
13 0x000a 004 : (Channel Adapter portguid 0x000000000100009: 'HCA(100)')
14 0x000b 005 : (Channel Adapter portguid 0x00000000010000b: 'HCA(101)')
15 0x000c 001 : (Channel Adapter portguid 0x00000000010000d: 'HCA(110)')
16 0x000d 002 : (Channel Adapter portguid 0x00000000010000f: 'HCA(111)')
17 0x000e 003 : (Channel Adapter portguid 0x000000000100011: 'HCA(200)')
18 14 valid lids dumped
19 Unicast lids [0x0-0xe] of switch Lid 3 guid 0x000000000200001 (Switch(1 0 1)):
20      Lid Out  Destination
21          Port      Info
22 0x0001 004 : (Channel Adapter portguid 0x000000000100001: 'HCA(000)')
23 0x0002 006 : (Switch portguid 0x000000000200000: 'Switch(1 0 0)')
24 0x0003 000 : (Switch portguid 0x000000000200001: 'Switch(1 0 1)')
25 0x0004 006 : (Switch portguid 0x000000000200002: 'Switch(1 1 0)')
26 0x0005 005 : (Channel Adapter portguid 0x000000000100003: 'HCA(001)')
27 0x0006 004 : (Switch portguid 0x000000000200003: 'Switch(0 0 0)')
28 0x0007 006 : (Switch portguid 0x000000000200004: 'Switch(0 0 1)')
29 0x0008 006 : (Channel Adapter portguid 0x000000000100005: 'HCA(010)')
30 0x0009 001 : (Channel Adapter portguid 0x000000000100007: 'HCA(011)')
31 0x000a 002 : (Channel Adapter portguid 0x000000000100009: 'HCA(100)')
32 0x000b 003 : (Channel Adapter portguid 0x00000000010000b: 'HCA(101)')
33 0x000c 007 : (Channel Adapter portguid 0x00000000010000d: 'HCA(110)')
34 0x000d 004 : (Channel Adapter portguid 0x00000000010000f: 'HCA(111)')
35 0x000e 005 : (Channel Adapter portguid 0x000000000100011: 'HCA(200)')
36 14 valid lids dumped
37 Unicast lids [0x0-0xe] of switch Lid 7 guid 0x000000000200004 (Switch(0 0 1)):
38      Lid Out  Destination
39          Port      Info
40 0x0001 001 : (Channel Adapter portguid 0x000000000100001: 'HCA(000)')
41 0x0002 002 : (Switch portguid 0x000000000200000: 'Switch(1 0 0)')
42 0x0003 004 : (Switch portguid 0x000000000200001: 'Switch(1 0 1)')
43 0x0004 006 : (Switch portguid 0x000000000200002: 'Switch(1 1 0)')
44 0x0005 002 : (Channel Adapter portguid 0x000000000100003: 'HCA(001)')
45 0x0006 002 : (Switch portguid 0x000000000200003: 'Switch(0 0 0)')
46 0x0007 000 : (Switch portguid 0x000000000200004: 'Switch(0 0 1)')
47 0x0008 001 : (Channel Adapter portguid 0x000000000100005: 'HCA(010)')

```

```

48 0x0009 003 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
49 0x000a 004 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
50 0x000b 003 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
51 0x000c 005 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
52 0x000d 006 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
53 0x000e 005 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
54 14 valid lids dumped
55 Unicast lids [0x0-0xe] of switch Lid 6 guid 0x0000000000200003 (Switch(0 0 0)):
56   Lid Out Destination
57   Port      Info
58 0x0001 001 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
59 0x0002 002 : (Switch portguid 0x0000000000200000: 'Switch(1 0 0)')
60 0x0003 004 : (Switch portguid 0x0000000000200001: 'Switch(1 0 1)')
61 0x0004 006 : (Switch portguid 0x0000000000200002: 'Switch(1 1 0)')
62 0x0005 002 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
63 0x0006 000 : (Switch portguid 0x0000000000200003: 'Switch(0 0 0)')
64 0x0007 002 : (Switch portguid 0x0000000000200004: 'Switch(0 0 1)')
65 0x0008 001 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
66 0x0009 003 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
67 0x000a 004 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
68 0x000b 003 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
69 0x000c 005 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
70 0x000d 006 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
71 0x000e 005 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
72 14 valid lids dumped
73 Unicast lids [0x0-0xe] of switch Lid 2 guid 0x0000000000200000 (Switch(1 0 0)):
74   Lid Out Destination
75   Port      Info
76 0x0001 001 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
77 0x0002 000 : (Switch portguid 0x0000000000200000: 'Switch(1 0 0)')
78 0x0003 006 : (Switch portguid 0x0000000000200001: 'Switch(1 0 1)')
79 0x0004 006 : (Switch portguid 0x0000000000200002: 'Switch(1 1 0)')
80 0x0005 002 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
81 0x0006 006 : (Switch portguid 0x0000000000200003: 'Switch(0 0 0)')
82 0x0007 007 : (Switch portguid 0x0000000000200004: 'Switch(0 0 1)')
83 0x0008 003 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
84 0x0009 004 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
85 0x000a 005 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
86 0x000b 006 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
87 0x000c 007 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
88 0x000d 004 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
89 0x000e 005 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
90 14 valid lids dumped

```

## B.2 Topologie 2

Listing B.2 – "Route 2"

```

1 Unicast lids [0x0-0x24] of switch DR path slid 0; dclid 0; 0,1,3,3,4,2 guid 0x0000000000200007 (Switch(2 3
2 2)):
3   Lid Out Destination
4   Port      Info
5 0x0001 003 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
6 0x0002 003 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
7 0x0003 003 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
8 0x0004 003 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
9 0x0005 004 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
10 0x0006 003 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
11 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
12 0x0008 003 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
13 0x0009 004 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
14 0x000a 003 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
15 0x000b 004 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
16 0x000c 003 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
17 0x000d 004 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
18 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')

```

```

18 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
19 0x0010 003 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
20 0x0011 000 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
21 0x0012 003 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
22 0x0013 004 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
23 0x0014 003 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
24 0x0015 004 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
25 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
26 0x0017 004 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
27 0x0018 003 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
28 0x0019 004 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
29 0x001a 004 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
30 0x001b 003 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
31 0x001c 004 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
32 0x001d 004 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
33 0x001e 004 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
34 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
35 0x0020 004 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
36 0x0021 003 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
37 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
38 0x0023 001 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
39 0x0024 002 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
40 36 valid lids dumped
41 Unicast lids [0x0-0x24] of switch DR path slid 0; dclid 0; 0,1,3,3,4,1 guid 0x0000000000200006 (Switch(2 3
    1)):
42   Lid Out  Destination
43   Port    Info
44 0x0001 003 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
45 0x0002 003 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
46 0x0003 003 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
47 0x0004 003 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
48 0x0005 004 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
49 0x0006 003 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
50 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
51 0x0008 003 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
52 0x0009 004 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
53 0x000a 003 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
54 0x000b 004 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
55 0x000c 003 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
56 0x000d 004 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
57 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
58 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
59 0x0010 000 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
60 0x0011 003 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
61 0x0012 003 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
62 0x0013 004 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
63 0x0014 003 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
64 0x0015 004 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
65 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
66 0x0017 004 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
67 0x0018 003 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
68 0x0019 004 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
69 0x001a 003 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
70 0x001b 003 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
71 0x001c 004 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
72 0x001d 004 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
73 0x001e 004 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
74 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
75 0x0020 004 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
76 0x0021 001 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
77 0x0022 002 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
78 0x0023 003 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
79 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
80 36 valid lids dumped
81 Unicast lids [0x0-0x24] of switch DR path slid 0; dclid 0; 0,1,3,3,3,2 guid 0x0000000000200005 (Switch(2 2
    1)):
82   Lid Out  Destination
83   Port    Info
84 0x0001 003 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')

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85 0x0002 003 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
86 0x0003 003 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
87 0x0004 003 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
88 0x0005 004 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
89 0x0006 003 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
90 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
91 0x0008 003 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
92 0x0009 004 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
93 0x000a 003 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
94 0x000b 004 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
95 0x000c 003 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
96 0x000d 004 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
97 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
98 0x000f 000 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
99 0x0010 003 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
100 0x0011 003 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
101 0x0012 003 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
102 0x0013 004 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
103 0x0014 003 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
104 0x0015 004 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
105 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
106 0x0017 004 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
107 0x0018 003 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
108 0x0019 004 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
109 0x001a 003 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
110 0x001b 003 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
111 0x001c 004 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
112 0x001d 004 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
113 0x001e 004 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
114 0x001f 001 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
115 0x0020 002 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
116 0x0021 003 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
117 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
118 0x0023 003 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
119 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
120 36 valid lids dumped
121 Unicast lids [0x0-0x24] of switch DR path slid 0; dlid 0; 0,1,3,3,3,1 guid 0x0000000000200004 (Switch(2 2
    0)):
122   Lid Out  Destination
123     Port    Info
124 0x0001 003 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
125 0x0002 003 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
126 0x0003 003 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
127 0x0004 003 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
128 0x0005 004 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
129 0x0006 003 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
130 0x0007 000 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
131 0x0008 003 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
132 0x0009 004 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
133 0x000a 003 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
134 0x000b 004 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
135 0x000c 003 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
136 0x000d 004 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
137 0x000e 001 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
138 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
139 0x0010 003 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
140 0x0011 003 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
141 0x0012 003 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
142 0x0013 004 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
143 0x0014 003 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
144 0x0015 004 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
145 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
146 0x0017 004 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
147 0x0018 003 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
148 0x0019 004 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
149 0x001a 003 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
150 0x001b 003 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
151 0x001c 004 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
152 0x001d 002 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')

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153 0x001e 004 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
154 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
155 0x0020 004 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
156 0x0021 003 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
157 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
158 0x0023 003 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
159 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
160 36 valid lids dumped
161 Unicast lids [0x0-0x24] of switch DR path slid 0; dlid 0; 0,1,3,3,2,2 guid 0x0000000000200003 (Switch(2 1
1)):
162   Lid Out Destination
163   Port      Info
164 0x0001 003 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
165 0x0002 003 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
166 0x0003 003 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
167 0x0004 003 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
168 0x0005 004 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
169 0x0006 000 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
170 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
171 0x0008 003 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
172 0x0009 004 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
173 0x000a 003 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
174 0x000b 004 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
175 0x000c 001 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
176 0x000d 002 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
177 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
178 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
179 0x0010 003 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
180 0x0011 003 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
181 0x0012 003 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
182 0x0013 004 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
183 0x0014 003 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
184 0x0015 004 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
185 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
186 0x0017 004 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
187 0x0018 003 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
188 0x0019 004 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
189 0x001a 003 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
190 0x001b 003 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
191 0x001c 004 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
192 0x001d 004 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
193 0x001e 004 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
194 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
195 0x0020 004 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
196 0x0021 003 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
197 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
198 0x0023 003 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
199 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
200 36 valid lids dumped
201 Unicast lids [0x0-0x24] of switch DR path slid 0; dlid 0; 0,1,3,3,2,1 guid 0x0000000000200002 (Switch(2 1
0)):
202   Lid Out Destination
203   Port      Info
204 0x0001 003 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
205 0x0002 003 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
206 0x0003 003 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
207 0x0004 000 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
208 0x0005 004 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
209 0x0006 003 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
210 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
211 0x0008 003 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
212 0x0009 004 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
213 0x000a 001 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
214 0x000b 002 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
215 0x000c 003 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
216 0x000d 004 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
217 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
218 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
219 0x0010 003 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')

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220 0x0011 003 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
221 0x0012 003 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
222 0x0013 004 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
223 0x0014 003 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
224 0x0015 004 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
225 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
226 0x0017 004 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
227 0x0018 003 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
228 0x0019 004 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
229 0x001a 003 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
230 0x001b 003 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
231 0x001c 004 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
232 0x001d 004 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
233 0x001e 004 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
234 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
235 0x0020 004 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
236 0x0021 003 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
237 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
238 0x0023 003 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
239 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
240 36 valid lids dumped
241 Unicast lids [0x0-0x24] of switch DR path slid 0; dclid 0; 0,1,4,3,4 guid 0x000000000020000f (Switch(1 3
    1))):
242   Lid Out Destination
243     Port      Info
244 0x0001 003 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
245 0x0002 003 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
246 0x0003 003 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
247 0x0004 003 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
248 0x0005 004 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
249 0x0006 003 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
250 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
251 0x0008 003 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
252 0x0009 004 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
253 0x000a 003 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
254 0x000b 004 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
255 0x000c 003 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
256 0x000d 004 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
257 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
258 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
259 0x0010 001 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
260 0x0011 002 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
261 0x0012 001 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
262 0x0013 003 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
263 0x0014 001 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
264 0x0015 003 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
265 0x0016 001 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
266 0x0017 003 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
267 0x0018 001 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
268 0x0019 000 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
269 0x001a 001 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
270 0x001b 001 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
271 0x001c 003 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
272 0x001d 004 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
273 0x001e 004 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
274 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
275 0x0020 004 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
276 0x0021 001 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
277 0x0022 001 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
278 0x0023 002 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
279 0x0024 002 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
280 36 valid lids dumped
281 Unicast lids [0x0-0x24] of switch DR path slid 0; dclid 0; 0,1,4,3,3 guid 0x000000000020000d (Switch(1 2
    1))):
282   Lid Out Destination
283     Port      Info
284 0x0001 003 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
285 0x0002 003 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
286 0x0003 003 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')

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287 0x0004 003 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
288 0x0005 004 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
289 0x0006 003 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
290 0x0007 001 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
291 0x0008 003 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
292 0x0009 004 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
293 0x000a 003 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
294 0x000b 004 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
295 0x000c 003 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
296 0x000d 004 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
297 0x000e 001 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
298 0x000f 002 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
299 0x0010 003 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
300 0x0011 003 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
301 0x0012 001 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
302 0x0013 003 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
303 0x0014 001 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
304 0x0015 003 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
305 0x0016 001 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
306 0x0017 000 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
307 0x0018 001 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
308 0x0019 003 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
309 0x001a 001 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
310 0x001b 001 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
311 0x001c 003 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
312 0x001d 001 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
313 0x001e 004 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
314 0x001f 002 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
315 0x0020 002 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
316 0x0021 003 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
317 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
318 0x0023 003 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
319 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
320 36 valid lids dumped
321 Unicast lids [0x0-0x24] of switch DR path slid 0; dlid 0; 0,1,4,3,2 guid 0x000000000020000b (Switch(1 1
    1)):
322   Lid Out  Destination
323       Port      Info
324 0x0001 003 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
325 0x0002 003 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
326 0x0003 003 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
327 0x0004 001 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
328 0x0005 004 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
329 0x0006 002 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
330 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
331 0x0008 003 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
332 0x0009 004 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
333 0x000a 001 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
334 0x000b 001 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
335 0x000c 002 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
336 0x000d 002 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
337 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
338 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
339 0x0010 003 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
340 0x0011 003 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
341 0x0012 001 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
342 0x0013 003 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
343 0x0014 001 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
344 0x0015 000 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
345 0x0016 001 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
346 0x0017 003 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
347 0x0018 001 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
348 0x0019 003 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
349 0x001a 001 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
350 0x001b 001 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
351 0x001c 003 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
352 0x001d 004 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
353 0x001e 004 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
354 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')

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355 0x0020 004 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
356 0x0021 003 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
357 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
358 0x0023 003 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
359 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
360 36 valid lids dumped
361 Unicast lids [0x0-0x24] of switch DR path slid 0; dclid 0; 0,1,3,3,4 guid 0x000000000020000e (Switch(1 3
    0)):
362   Lid Out Destination
363   Port      Info
364 0x0001 003 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
365 0x0002 003 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
366 0x0003 003 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
367 0x0004 003 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
368 0x0005 004 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
369 0x0006 003 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
370 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
371 0x0008 003 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
372 0x0009 004 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
373 0x000a 003 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
374 0x000b 004 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
375 0x000c 003 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
376 0x000d 004 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
377 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
378 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
379 0x0010 001 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
380 0x0011 002 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
381 0x0012 003 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
382 0x0013 001 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
383 0x0014 003 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
384 0x0015 001 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
385 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
386 0x0017 001 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
387 0x0018 000 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
388 0x0019 001 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
389 0x001a 003 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
390 0x001b 004 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
391 0x001c 001 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
392 0x001d 004 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
393 0x001e 001 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
394 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
395 0x0020 004 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
396 0x0021 001 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
397 0x0022 001 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
398 0x0023 002 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
399 0x0024 002 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
400 36 valid lids dumped
401 Unicast lids [0x0-0x24] of switch DR path slid 0; dclid 0; 0,1,3,3,3 guid 0x000000000020000c (Switch(1 2
    0)):
402   Lid Out Destination
403   Port      Info
404 0x0001 003 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
405 0x0002 003 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
406 0x0003 003 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
407 0x0004 003 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
408 0x0005 004 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
409 0x0006 003 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
410 0x0007 001 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
411 0x0008 003 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
412 0x0009 004 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
413 0x000a 003 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
414 0x000b 004 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
415 0x000c 003 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
416 0x000d 004 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
417 0x000e 001 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
418 0x000f 002 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
419 0x0010 003 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
420 0x0011 003 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
421 0x0012 003 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')

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422 0x0013 001 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
423 0x0014 003 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
424 0x0015 001 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
425 0x0016 000 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
426 0x0017 001 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
427 0x0018 003 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
428 0x0019 001 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
429 0x001a 003 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
430 0x001b 004 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
431 0x001c 001 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
432 0x001d 001 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
433 0x001e 001 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
434 0x001f 002 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
435 0x0020 002 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
436 0x0021 003 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
437 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
438 0x0023 003 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
439 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
440 36 valid lids dumped
441 Unicast lids [0x0-0x24] of switch DR path slid 0; dclid 0; 0,1,3,3,2 guid 0x000000000020000a (Switch(1 1
    0))):
442   Lid Out Destination
443   Port      Info
444 0x0001 003 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
445 0x0002 003 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
446 0x0003 003 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
447 0x0004 001 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
448 0x0005 004 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
449 0x0006 002 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
450 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
451 0x0008 003 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
452 0x0009 004 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
453 0x000a 001 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
454 0x000b 001 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
455 0x000c 002 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
456 0x000d 002 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
457 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
458 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
459 0x0010 003 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
460 0x0011 003 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
461 0x0012 003 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
462 0x0013 001 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
463 0x0014 000 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
464 0x0015 001 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
465 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
466 0x0017 001 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
467 0x0018 003 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
468 0x0019 001 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
469 0x001a 003 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
470 0x001b 004 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
471 0x001c 001 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
472 0x001d 004 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
473 0x001e 001 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
474 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
475 0x0020 004 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
476 0x0021 003 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
477 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
478 0x0023 003 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
479 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
480 36 valid lids dumped
481 Unicast lids [0x0-0x24] of switch DR path slid 0; dclid 0; 0,1,4,4 guid 0x0000000000200013 (Switch(0 1 1))):
482   Lid Out Destination
483   Port      Info
484 0x0001 001 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
485 0x0002 001 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
486 0x0003 001 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
487 0x0004 002 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
488 0x0005 001 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
489 0x0006 002 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')

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490 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
491 0x0008 001 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
492 0x0009 001 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
493 0x000a 002 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
494 0x000b 002 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
495 0x000c 002 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
496 0x000d 002 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
497 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
498 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
499 0x0010 004 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
500 0x0011 004 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
501 0x0012 001 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
502 0x0013 001 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
503 0x0014 002 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
504 0x0015 002 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
505 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
506 0x0017 003 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
507 0x0018 004 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
508 0x0019 004 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
509 0x001a 001 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
510 0x001b 001 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
511 0x001c 001 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
512 0x001d 003 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
513 0x001e 000 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
514 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
515 0x0020 003 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
516 0x0021 004 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
517 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
518 0x0023 004 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
519 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
520 36 valid lids dumped
521 Unicast lids [0x0-0x24] of switch DR path slid 0; dlid 0; 0,1,4,3 guid 0x0000000000200012 (Switch(0 1 0)):
522   Lid Out Destination
523     Port      Info
524 0x0001 001 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
525 0x0002 001 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
526 0x0003 001 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
527 0x0004 002 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
528 0x0005 001 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
529 0x0006 002 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
530 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
531 0x0008 001 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
532 0x0009 001 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
533 0x000a 002 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
534 0x000b 002 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
535 0x000c 002 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
536 0x000d 002 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
537 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
538 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
539 0x0010 004 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
540 0x0011 004 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
541 0x0012 001 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
542 0x0013 001 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
543 0x0014 002 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
544 0x0015 002 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
545 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
546 0x0017 003 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
547 0x0018 004 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
548 0x0019 004 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
549 0x001a 001 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
550 0x001b 001 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
551 0x001c 000 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
552 0x001d 003 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
553 0x001e 001 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
554 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
555 0x0020 003 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
556 0x0021 004 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
557 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
558 0x0023 004 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')

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559 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
560 36 valid lids dumped
561 Unicast lids [0x0-0x24] of switch DR path slid 0; dclid 0; 0,1,3,4 guid 0x0000000000200011 (Switch(0 0 1)):
562   Lid Out Destination
563   Port   Info
564 0x0001 001 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
565 0x0002 001 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
566 0x0003 001 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
567 0x0004 002 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
568 0x0005 001 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
569 0x0006 002 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
570 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
571 0x0008 001 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
572 0x0009 001 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
573 0x000a 002 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
574 0x000b 002 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
575 0x000c 002 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
576 0x000d 002 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
577 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
578 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
579 0x0010 004 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
580 0x0011 004 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
581 0x0012 001 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
582 0x0013 001 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
583 0x0014 002 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
584 0x0015 002 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
585 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
586 0x0017 003 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
587 0x0018 004 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
588 0x0019 004 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
589 0x001a 001 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
590 0x001b 000 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
591 0x001c 001 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
592 0x001d 003 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
593 0x001e 001 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
594 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
595 0x0020 003 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
596 0x0021 004 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
597 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
598 0x0023 004 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
599 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
600 36 valid lids dumped
601 Unicast lids [0x0-0x24] of switch DR path slid 0; dclid 0; 0,1,3,3 guid 0x0000000000200010 (Switch(0 0 0)):
602   Lid Out Destination
603   Port   Info
604 0x0001 001 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
605 0x0002 001 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
606 0x0003 001 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
607 0x0004 002 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
608 0x0005 001 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
609 0x0006 002 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
610 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
611 0x0008 001 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
612 0x0009 001 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
613 0x000a 002 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
614 0x000b 002 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
615 0x000c 002 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
616 0x000d 002 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
617 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
618 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
619 0x0010 004 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
620 0x0011 004 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
621 0x0012 001 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
622 0x0013 001 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
623 0x0014 002 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
624 0x0015 002 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
625 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
626 0x0017 003 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
627 0x0018 004 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')

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628 0x0019 004 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
629 0x001a 000 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
630 0x001b 001 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
631 0x001c 001 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
632 0x001d 003 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
633 0x001e 001 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
634 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
635 0x0020 003 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
636 0x0021 004 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
637 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
638 0x0023 004 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
639 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
640 36 valid lids dumped
641 Unicast lids [0x0-0x24] of switch DR path slid 0; dlid 0; 0,1,3,2 guid 0x0000000000200001 (Switch(2 0 1)):
642   Lid Out Destination
643   Port      Info
644 0x0001 003 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
645 0x0002 003 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
646 0x0003 000 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
647 0x0004 003 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
648 0x0005 004 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
649 0x0006 003 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
650 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
651 0x0008 001 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
652 0x0009 002 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
653 0x000a 003 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
654 0x000b 004 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
655 0x000c 003 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
656 0x000d 004 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
657 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
658 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
659 0x0010 003 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
660 0x0011 003 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
661 0x0012 003 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
662 0x0013 004 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
663 0x0014 003 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
664 0x0015 004 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
665 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
666 0x0017 004 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
667 0x0018 003 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
668 0x0019 004 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
669 0x001a 003 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
670 0x001b 003 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
671 0x001c 004 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
672 0x001d 004 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
673 0x001e 004 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
674 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
675 0x0020 004 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
676 0x0021 003 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
677 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
678 0x0023 003 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
679 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
680 36 valid lids dumped
681 Unicast lids [0x0-0x24] of switch DR path slid 0; dlid 0; 0,1,4 guid 0x0000000000200009 (Switch(1 0 1)):
682   Lid Out Destination
683   Port      Info
684 0x0001 001 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
685 0x0002 001 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
686 0x0003 002 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
687 0x0004 003 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
688 0x0005 001 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
689 0x0006 003 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
690 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
691 0x0008 002 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
692 0x0009 002 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
693 0x000a 003 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
694 0x000b 004 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
695 0x000c 003 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
696 0x000d 004 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')

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697 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
698 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
699 0x0010 003 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
700 0x0011 003 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
701 0x0012 001 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
702 0x0013 000 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
703 0x0014 001 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
704 0x0015 003 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
705 0x0016 001 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
706 0x0017 003 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
707 0x0018 001 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
708 0x0019 003 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
709 0x001a 001 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
710 0x001b 001 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
711 0x001c 003 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
712 0x001d 004 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
713 0x001e 004 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
714 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
715 0x0020 004 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
716 0x0021 003 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
717 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
718 0x0023 003 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
719 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
720 36 valid lids dumped
721 Unicast lids [0x0-0x24] of switch DR path slid 0; dlid 0; 0,1,3 guid 0x0000000000200008 (Switch(1 0 0)):
722   Lid Out Destination
723   Port      Info
724 0x0001 001 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
725 0x0002 001 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')
726 0x0003 002 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
727 0x0004 003 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
728 0x0005 001 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
729 0x0006 003 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
730 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
731 0x0008 002 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
732 0x0009 002 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
733 0x000a 003 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
734 0x000b 004 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
735 0x000c 003 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
736 0x000d 004 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
737 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
738 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
739 0x0010 003 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
740 0x0011 003 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
741 0x0012 000 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
742 0x0013 001 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
743 0x0014 003 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
744 0x0015 001 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
745 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
746 0x0017 001 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
747 0x0018 003 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
748 0x0019 001 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
749 0x001a 003 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
750 0x001b 004 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
751 0x001c 001 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
752 0x001d 004 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
753 0x001e 001 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
754 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
755 0x0020 004 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
756 0x0021 003 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
757 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
758 0x0023 003 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
759 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
760 36 valid lids dumped
761 Unicast lids [0x0-0x24] of switch DR path slid 0; dlid 0; 0,1 guid 0x0000000000200000 (Switch(2 0 0)):
762   Lid Out Destination
763   Port      Info
764 0x0001 001 : (Channel Adapter portguid 0x0000000000100001: 'HCA(000)')
765 0x0002 000 : (Switch portguid 0x0000000000200000: 'Switch(2 0 0)')

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766 0x0003 003 : (Switch portguid 0x0000000000200001: 'Switch(2 0 1)')
767 0x0004 003 : (Switch portguid 0x0000000000200002: 'Switch(2 1 0)')
768 0x0005 002 : (Channel Adapter portguid 0x0000000000100003: 'HCA(001)')
769 0x0006 003 : (Switch portguid 0x0000000000200003: 'Switch(2 1 1)')
770 0x0007 003 : (Switch portguid 0x0000000000200004: 'Switch(2 2 0)')
771 0x0008 003 : (Channel Adapter portguid 0x0000000000100005: 'HCA(010)')
772 0x0009 004 : (Channel Adapter portguid 0x0000000000100007: 'HCA(011)')
773 0x000a 003 : (Channel Adapter portguid 0x0000000000100009: 'HCA(100)')
774 0x000b 004 : (Channel Adapter portguid 0x000000000010000b: 'HCA(101)')
775 0x000c 003 : (Channel Adapter portguid 0x000000000010000d: 'HCA(110)')
776 0x000d 004 : (Channel Adapter portguid 0x000000000010000f: 'HCA(111)')
777 0x000e 003 : (Channel Adapter portguid 0x0000000000100011: 'HCA(200)')
778 0x000f 003 : (Switch portguid 0x0000000000200005: 'Switch(2 2 1)')
779 0x0010 003 : (Switch portguid 0x0000000000200006: 'Switch(2 3 1)')
780 0x0011 003 : (Switch portguid 0x0000000000200007: 'Switch(2 3 2)')
781 0x0012 003 : (Switch portguid 0x0000000000200008: 'Switch(1 0 0)')
782 0x0013 004 : (Switch portguid 0x0000000000200009: 'Switch(1 0 1)')
783 0x0014 003 : (Switch portguid 0x000000000020000a: 'Switch(1 1 0)')
784 0x0015 004 : (Switch portguid 0x000000000020000b: 'Switch(1 1 1)')
785 0x0016 003 : (Switch portguid 0x000000000020000c: 'Switch(1 2 0)')
786 0x0017 004 : (Switch portguid 0x000000000020000d: 'Switch(1 2 1)')
787 0x0018 003 : (Switch portguid 0x000000000020000e: 'Switch(1 3 0)')
788 0x0019 004 : (Switch portguid 0x000000000020000f: 'Switch(1 3 1)')
789 0x001a 003 : (Switch portguid 0x0000000000200010: 'Switch(0 0 0)')
790 0x001b 003 : (Switch portguid 0x0000000000200011: 'Switch(0 0 1)')
791 0x001c 004 : (Switch portguid 0x0000000000200012: 'Switch(0 1 0)')
792 0x001d 004 : (Channel Adapter portguid 0x0000000000100013: 'HCA(201)')
793 0x001e 004 : (Switch portguid 0x0000000000200013: 'Switch(0 1 1)')
794 0x001f 003 : (Channel Adapter portguid 0x0000000000100015: 'HCA(210)')
795 0x0020 004 : (Channel Adapter portguid 0x0000000000100017: 'HCA(211)')
796 0x0021 003 : (Channel Adapter portguid 0x0000000000100019: 'HCA(300)')
797 0x0022 004 : (Channel Adapter portguid 0x000000000010001b: 'HCA(301)')
798 0x0023 003 : (Channel Adapter portguid 0x000000000010001d: 'HCA(310)')
799 0x0024 004 : (Channel Adapter portguid 0x000000000010001f: 'HCA(311)')
800 36 valid lids dumped
801
802 *** WARNING ***: this command has been replaced by dump_fts
```



## Appendix C

### NS3

Par manque de temps (la compilation étant très longue, plus d'une heure avec les tests etc.) nous n'avons pas pu tester NS3.

Figure C.1 – Tests NS3