



# Troubleshooting the Fabric Cable Connections

This chapter has troubleshooting details for incorrect fabric cable connections.

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## Troubleshooting the Fabric Cable Connection

As there are a large number of fabric cable connections that are required for configuring the MC connections, there are possibilities of incorrect connections. Check the following:

- CXP2 connections using the **show controller fabric exp summary rack F0** command.
- ASIC status on the S2 fabric cards using the commands - **show controller fabric sfe s2 F0/FC0/0** and **show controller fabric sfe s2 F0/FC0/1**
- Cables in between ports using the commands - **show controller fabric exp dom location F0/FC0 port 0** and **show controller fabric exp dom location F0/FC0 port 0**

If the above commands display the required outputs, check for bad connection, incorrect topology or cabling error. To check the bundle details, use the **show controller fabric bundle detail all** command. To detect incorrect topology, use the **show controller sfe link-info** command.

To check if the 12 lanes in a link are down, use the **show controller fabric link port s2 x all** command. If all the 12 lanes are down, it indicates that the CXP/ link is connected incorrectly. If less than 12 lanes are down, there could be other reasons for the link failure.

Sample outputs for the commands discussed in this section:

```
sysadmin-vm:0_RP0# show controller fabric plane all detail

Plane Admin Plane  Plane  up->dn  up->mcast  Total   Down   PPU
Id      State State  Mode    counter  counter  Bundles Bundles State
-----
0       UP    UP     MC      0        0        1      24    2   NA
1       UP    UP     MC      0        0        1      24    1   NA
2       UP    UP     MC      0        0        1      24    0   NA
3       UP    UP     MC      0        0        1      24    1   NA
sysadmin-vm:0_RP0#
sysadmin-vm:0_RP0#
sysadmin-vm:0_RP0# show controller fabric bundle all detail
Wed May  2 23:37:48.248 UTC
Bundle      Oper  Plane  Total  Down  Bundle      Bundle
R/S/P      State State  Id     Links Links Port1      Port2
```

F0/FC0/0	DN	0	12	12	F0/FC0/0	0/FC0/0
F0/FC0/1	DN	0	12	12	F0/FC0/1	0/FC0/1
F0/FC0/2	UP	0	12	0	F0/FC0/2	0/FC0/2
F0/FC0/3	UP	0	12	0	F0/FC0/3	0/FC0/3
F0/FC0/4	UP	0	12	0	F0/FC0/4	0/FC0/4
F0/FC0/5	UP	0	12	0	F0/FC0/5	0/FC0/5
F0/FC0/6	UP	0	12	0	F0/FC0/6	1/FC0/0
F0/FC0/7	UP	0	12	0	F0/FC0/7	1/FC0/1
F0/FC0/8	UP	0	12	0	F0/FC0/8	1/FC0/2
F0/FC0/9	UP	0	12	0	F0/FC0/9	1/FC0/3
F0/FC0/10	UP	0	12	0	F0/FC0/10	1/FC0/4
F0/FC0/11	UP	0	12	0	F0/FC0/11	1/FC0/5
F0/FC1/0	UP	1	12	0	F0/FC1/0	0/FC1/0
F0/FC1/1	UP	1	12	0	F0/FC1/1	0/FC1/1
F0/FC1/2	UP	1	12	0	F0/FC1/2	0/FC1/2
F0/FC1/3	UP	1	12	0	F0/FC1/3	0/FC1/3
F0/FC1/4	UP	1	12	0	F0/FC1/4	0/FC1/4
F0/FC1/5	UP	1	12	0	F0/FC1/5	0/FC1/5
F0/FC1/6	UP	1	12	0	F0/FC1/6	1/FC1/0
F0/FC1/7	UP	1	12	0	F0/FC1/7	1/FC1/1
F0/FC1/8	UP	1	12	0	F0/FC1/8	1/FC1/2
F0/FC1/9	UP	1	12	0	F0/FC1/9	1/FC1/3
F0/FC1/10	UP	1	12	0	F0/FC1/10	1/FC1/4
F0/FC1/11	UP	1	12	0	F0/FC1/11	1/FC1/5
F0/FC2/0	UP	2	12	0	F0/FC2/0	0/FC2/0
F0/FC2/1	UP	2	12	0	F0/FC2/1	0/FC2/1
F0/FC2/2	UP	2	12	0	F0/FC2/2	0/FC2/2
F0/FC2/3	UP	2	12	0	F0/FC2/3	0/FC2/3
F0/FC2/4	UP	2	12	0	F0/FC2/4	0/FC2/4
F0/FC2/5	UP	2	12	0	F0/FC2/5	0/FC2/5
F0/FC2/6	UP	2	12	0	F0/FC2/6	1/FC2/0
F0/FC2/7	UP	2	12	0	F0/FC2/7	1/FC2/1
F0/FC2/8	UP	2	12	0	F0/FC2/8	1/FC2/2
F0/FC2/9	UP	2	12	0	F0/FC2/9	1/FC2/3
F0/FC2/10	UP	2	12	0	F0/FC2/10	1/FC2/4
F0/FC2/11	UP	2	12	0	F0/FC2/11	1/FC2/5
F0/FC3/0	UP	3	12	0	F0/FC3/0	0/FC3/0
F0/FC3/1	UP	3	12	0	F0/FC3/1	0/FC3/1
F0/FC3/2	UP	3	12	0	F0/FC3/2	0/FC3/2
F0/FC3/3	UP	3	12	0	F0/FC3/3	0/FC3/3
F0/FC3/4	UP	3	12	0	F0/FC3/4	0/FC3/4
F0/FC3/5	UP	3	12	0	F0/FC3/5	0/FC3/5
F0/FC3/6	UP	3	12	0	F0/FC3/6	1/FC3/0
F0/FC3/7	UP	3	12	0	F0/FC3/7	1/FC3/1
F0/FC3/8	UP	3	12	0	F0/FC3/8	1/FC3/2
F0/FC3/9	UP	3	12	0	F0/FC3/9	1/FC3/3
F0/FC3/10	UP	3	12	0	F0/FC3/10	1/FC3/4
F0/FC3/11	UP	3	12	10	F0/FC3/11	1/FC3/5
F0/FC4/0	UP	0	12	0	F0/FC4/0	0/FC0/6
F0/FC4/1	UP	0	12	0	F0/FC4/1	0/FC0/7
F0/FC4/2	UP	0	12	0	F0/FC4/2	0/FC0/8
F0/FC4/3	UP	0	12	0	F0/FC4/3	0/FC0/9
F0/FC4/4	UP	0	12	0	F0/FC4/4	0/FC0/10
F0/FC4/5	UP	0	12	0	F0/FC4/5	0/FC0/11
F0/FC4/6	UP	0	12	0	F0/FC4/6	1/FC0/6
F0/FC4/7	UP	0	12	0	F0/FC4/7	1/FC0/7
F0/FC4/8	UP	0	12	0	F0/FC4/8	1/FC0/8
F0/FC4/9	UP	0	12	0	F0/FC4/9	1/FC0/9
F0/FC4/10	UP	0	12	0	F0/FC4/10	1/FC0/10
F0/FC4/11	UP	0	12	0	F0/FC4/11	1/FC0/11
F0/FC5/0	UP	1	12	0	F0/FC5/0	0/FC1/6
F0/FC5/1	UP	1	12	0	F0/FC5/1	0/FC1/7
F0/FC5/2	UP	1	12	0	F0/FC5/2	0/FC1/8

F0/FC5/3	UP	1	12	0	F0/FC5/3	0/FC1/9
F0/FC5/4	UP	1	12	0	F0/FC5/4	0/FC1/10
F0/FC5/5	UP	1	12	0	F0/FC5/5	0/FC1/11
F0/FC5/6	UP	1	12	0	F0/FC5/6	1/FC1/6
F0/FC5/7	UP	1	12	0	F0/FC5/7	1/FC1/7
F0/FC5/8	UP	1	12	0	F0/FC5/8	1/FC1/8
F0/FC5/9	UP	1	12	0	F0/FC5/9	1/FC1/9
F0/FC5/10	DN	1	12	12	F0/FC5/10	1/FC1/10
F0/FC5/11	UP	1	12	0	F0/FC5/11	1/FC1/11
F0/FC6/0	UP	2	12	0	F0/FC6/0	0/FC2/6
F0/FC6/1	UP	2	12	0	F0/FC6/1	0/FC2/7
F0/FC6/2	UP	2	12	0	F0/FC6/2	0/FC2/8
F0/FC6/3	UP	2	12	0	F0/FC6/3	0/FC2/9
F0/FC6/4	UP	2	12	0	F0/FC6/4	0/FC2/10
F0/FC6/5	UP	2	12	0	F0/FC6/5	0/FC2/11
F0/FC6/6	UP	2	12	0	F0/FC6/6	1/FC2/6
F0/FC6/7	UP	2	12	0	F0/FC6/7	1/FC2/7
F0/FC6/8	UP	2	12	0	F0/FC6/8	1/FC2/8
F0/FC6/9	UP	2	12	0	F0/FC6/9	1/FC2/9
F0/FC6/10	UP	2	12	0	F0/FC6/10	1/FC2/10
F0/FC6/11	UP	2	12	0	F0/FC6/11	1/FC2/11
F0/FC7/0	UP	3	12	0	F0/FC7/0	0/FC3/6
F0/FC7/1	UP	3	12	0	F0/FC7/1	0/FC3/7
F0/FC7/2	UP	3	12	0	F0/FC7/2	0/FC3/8
F0/FC7/3	UP	3	12	0	F0/FC7/3	0/FC3/9
F0/FC7/4	UP	3	12	0	F0/FC7/4	0/FC3/10
F0/FC7/5	UP	3	12	0	F0/FC7/5	0/FC3/11
F0/FC7/6	UP	3	12	0	F0/FC7/6	1/FC3/6
F0/FC7/7	UP	3	12	0	F0/FC7/7	1/FC3/7
F0/FC7/8	UP	3	12	0	F0/FC7/8	1/FC3/8
F0/FC7/9	UP	3	12	0	F0/FC7/9	1/FC3/9
F0/FC7/10	UP	3	12	0	F0/FC7/10	1/FC3/10
F0/FC7/11	UP	3	12	0	F0/FC7/11	1/FC3/11

sysadmin-vm:0\_RP0# show controller fabric cxp summary rack F0

```

=====
Fabric side CXP Port Initialization Status Summary
=====
Active functional role of the Rack [R/S] : F0/SC1
. - CXP is not present
p - CXP is not powered
I - CXP is not Initialized
U - CXP is not Supported
T - One or more Tx channel is disabled on the CXP
R - One or more Rx channel is disabled on the CXP
G - CXP is Initialized properly
    
```

Maximum CXP port number [0-23] per slot

Slot	0	1	2	3	4	5	6	7	8	9	10	11
F0/FC0	<b>G</b>	<b>G</b>	G	G	G	G	G	G	G	G	G	G
F0/FC1	G	G	G	G	G	G	G	G	G	G	G	G
F0/FC2	G	G	G	G	G	G	G	G	G	G	G	G
F0/FC3	G	G	G	G	G	G	G	G	G	G	G	T
F0/FC4	G	G	G	G	G	G	G	G	G	G	G	G
F0/FC5	G	G	G	G	G	G	G	G	G	G	T	G

<<

```

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| F0/FC6 | G | G | G | G | G | G | G | G | G | G | G | G | G |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| F0/FC7 | G | G | G | G | G | G | G | G | G | G | G | G | G |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| Slot   | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| F0/FC0 | . | . | . | . | . | . | . | . | . | . | . | . |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| F0/FC1 | . | . | . | . | . | . | . | . | . | . | . | . |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| F0/FC2 | . | . | . | . | . | . | . | . | . | . | . | . |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| F0/FC3 | . | . | . | . | . | . | . | . | . | . | . | . |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| F0/FC4 | . | . | . | . | . | . | . | . | . | . | . | . |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| F0/FC5 | . | . | . | . | . | . | . | . | . | . | . | . |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| F0/FC6 | . | . | . | . | . | . | . | . | . | . | . | . |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| F0/FC7 | . | . | . | . | . | . | . | . | . | . | . | . |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+

```

```

sysadmin-vm:0_RP0# show controller fabric cxp dom location F0/FC0 port 0
Wed May 2 23:44:04.384 UTC

```

=====  
CXPDigital Optical Monitor Information  
=====

Location: F0/FC0, CXP port number: 0

```

-----
Connector description      : CXP Optical Transceiver with Optical Connector
Vendor Name                : CISCO-AVAGO
Cisco Part Number         : 10-3250-01
Cisco Serial Number       : AGF2132K00N
Cisco VID                  : V00
Cisco PID                  : ONS-CXP2-SR25
Cisco CLEI Code           : WOTRD92BAA
Vendor Part Number        : SFBR-86PDAZ-CS1
Vendor Serial Number      : AGF2132K00N
Vendor Date Code          : 20170813
Vendor Lot Code           :
Vendor OUI IEEE COMPANY ID : 0x176A
Eeprom Revision           : 0xAC17
Firmware Revision         : 0x7A
Vendor Revision Number    : 2

```

```

-----
Tx Temperature Reading    :45.00 Celsius   Tx Temperature Alarm :Not Set
Tx Voltage Reading        :3230.90mV      Tx Voltage Alarm     :Not Set

```

```

+-----+-----+-----+-----+-----+
| Channel | Channel | FAULT | Signal | Optical Power |
| Number. | Status  | Status| Strength| Alarm          |
+-----+-----+-----+-----+-----+
| Tx Ch 0: | Enabled | no fault | Signal Detected | off |
| Tx Ch 1: | Enabled | no fault | Signal Detected | off |
| Tx Ch 2: | Enabled | no fault | Signal Detected | off |
| Tx Ch 3: | Enabled | no fault | Signal Detected | off |
| Tx Ch 4: | Enabled | no fault | Signal Detected | off |
| Tx Ch 5: | Enabled | no fault | Signal Detected | off |
| Tx Ch 6: | Enabled | no fault | Signal Detected | off |
| Tx Ch 7: | Enabled | no fault | Signal Detected | off |
| Tx Ch 8: | Enabled | no fault | Signal Detected | off |
| Tx Ch 9: | Enabled | no fault | Signal Detected | off |

```

```
| Tx Ch 10:| Enabled | no fault | Signal Detected | off |
| Tx Ch 11:| Enabled | no fault | Signal Detected | off |
+-----+
```

```
+-----+
| Channel |          Optical Light |          Bias |          Optical Bias |
| Number. |          Output        |          Current |          Alarm        |
+-----+
| Tx Ch 0: | 1.11mW 0.4336dBm     | 7.000 mA      | off                  |
| Tx Ch 1: | 1.15mW 0.6070dBm     | 7.000 mA      | off                  |
| Tx Ch 2: | 1.12mW 0.4805dBm     | 7.000 mA      | off                  |
| Tx Ch 3: | 1.29mW 1.0924dBm     | 7.000 mA      | off                  |
| Tx Ch 4: | 1.23mW 0.8849dBm     | 7.000 mA      | off                  |
| Tx Ch 5: | 1.35mW 1.3033dBm     | 7.000 mA      | off                  |
| Tx Ch 6: | 1.34mW 1.2743dBm     | 7.000 mA      | off                  |
| Tx Ch 7: | 1.32mW 1.2090dBm     | 7.000 mA      | off                  |
| Tx Ch 8: | 1.10mW 0.4179dBm     | 7.000 mA      | off                  |
| Tx Ch 9: | 1.21mW 0.8135dBm     | 7.000 mA      | off                  |
| Tx Ch 10:| 1.27mW 1.0483dBm     | 7.000 mA      | off                  |
| Tx Ch 11:| 1.10mW 0.3981dBm     | 7.000 mA      | off                  |
+-----+
```

```
Rx Temperature Reading :45.00 Celsius Rx Temperature Alarm :Not Set
Rx Voltage Reading      :3246.90 mV      Rx Voltage Alarm :Not Set
```

```
+-----+
| Channel | Channel |          Signal | Optical Power |          Optical Light |
| Number. | Status  |          Strength |          Alarm |          Input          |
+-----+
| Rx Ch 0: | Enabled | Signal Detected | off           | 1.03mW 0.1494dBm     |
| Rx Ch 1: | Enabled | Signal Detected | off           | 1.15mW 0.6145dBm     |
| Rx Ch 2: | Enabled | Signal Detected | off           | 1.20mW 0.7882dBm     |
| Rx Ch 3: | Enabled | Signal Detected | off           | 1.09mW 0.3743dBm     |
| Rx Ch 4: | Enabled | Signal Detected | off           | 1.37mW 1.3799dBm     |
| Rx Ch 5: | Enabled | Signal Detected | off           | 1.25mW 0.9795dBm     |
| Rx Ch 6: | Enabled | Signal Detected | off           | 1.31mW 1.1826dBm     |
| Rx Ch 7: | Enabled | Signal Detected | off           | 1.33mW 1.2320dBm     |
| Rx Ch 8: | Enabled | Signal Detected | off           | 1.23mW 0.8955dBm     |
| Rx Ch 9: | Enabled | Signal Detected | off           | 1.47mW 1.6702dBm     |
| Rx Ch 10:| Enabled | Signal Detected | off           | 1.11mW 0.4454dBm     |
| Rx Ch 11:| Enabled | Signal Detected | off           | 1.34mW 1.2743dBm     |
+-----+
```

```
sysadmin-vm:0_RP0# show controller fabric sfe s2 F0/FC0/0
```

```
      Sfe      Admin  Oper
      R/S/A      State  State
-----
F0/FC0/0      UP      UP
```

```
sysadmin-vm:0_RP0# Show controller fabric bundle all detail | i DN
```

```
F0/FC0/0      DN      0      12 12      F0/FC0/0      0/FC0/0
F0/FC0/1      DN      0      12 12      F0/FC0/1      0/FC0/1
```

```
sysadmin-vm:0_RP0# show controller fabric link port s2 rx all | i "DN|SFE|R/S/A/P|state" |
i "F0/FC0|SFE|R/S/A/P|state"
```

```
SFE port      Admin  Near-end      Near      Far      Far-end      Other End
R/S/A/P      /Oper  CDR           -end     -end     CDR          R/S/A/P
              state  LO-Sx-Px-LI  CXP/Ch  CXP/Ch  LO-Sx-Px-LI
F0/FC0/0/13  UP/DN          01/03      01/03          0/FC0/0/81
```

```

F0/FC0/0/15      UP/DN          01/01  01/01          0/FC0/0/83
F0/FC0/0/16      UP/DN          01/00  01/00          0/FC0/0/72
F0/FC0/0/18      UP/DN          01/02  01/02          0/FC0/0/82
F0/FC0/0/20      UP/DN          01/04  01/04          0/FC0/0/80
F0/FC0/0/22      UP/DN          01/05  01/05          0/FC0/0/79
F0/FC0/0/24      UP/DN          00/04  00/04          0/FC0/0/128
F0/FC0/0/26      UP/DN          00/05  00/05          0/FC0/0/127
F0/FC0/0/29      UP/DN          00/02  00/02          0/FC0/0/131
F0/FC0/0/31      UP/DN          00/00  00/00          0/FC0/0/120
F0/FC0/0/32      UP/DN          00/01  00/01          0/FC0/0/130
F0/FC0/0/34      UP/DN          00/03  00/03          0/FC0/0/129
F0/FC0/1/126     UP/DN  05-S0-P5-05  01/06  01/06          0/FC0/0/78
F0/FC0/1/127     UP/DN  03-S0-P5-03  01/09  01/09          0/FC0/0/75
F0/FC0/1/128     UP/DN  06-S0-P5-06  01/08  01/08          0/FC0/0/76
F0/FC0/1/129     UP/DN  04-S0-P5-04  01/07  01/07          0/FC0/0/77
F0/FC0/1/130     UP/DN  12-S0-P5-12  01/10  01/10          0/FC0/0/74
F0/FC0/1/131     UP/DN  11-S0-P5-11  01/11  01/11          0/FC0/0/73
F0/FC0/1/138     UP/DN  06-S0-P4-06  00/08  00/08          0/FC0/0/124
F0/FC0/1/139     UP/DN  12-S0-P4-12  00/10  00/10          0/FC0/0/122
F0/FC0/1/140     UP/DN  04-S0-P4-04  00/07  00/07          0/FC0/0/125
F0/FC0/1/141     UP/DN  03-S0-P4-03  00/09  00/09          0/FC0/0/123
F0/FC0/1/142     UP/DN  11-S0-P4-11  00/11  00/11          0/FC0/0/121
F0/FC0/1/143     UP/DN  05-S0-P4-05  00/06  00/06          0/FC0/0/126
    
```

```

sysadmin-vm:0_RP0# show controller sfe link-info rx 0 143 topo instance 1 location F0/FC0
| i T
    
```

```

      R - No Reach Cells   S - Size error   T - Invalid Topo   U - Perm Shut
F0/FC0/1/126 23.00 S2 0/0 UP/DN .....T..... 0/FC0/0/78 0/FC0/0/126
F0/FC0/1/127 23.00 S2 0/0 UP/DN .....T..... 0/FC0/0/75 0/FC0/0/123
F0/FC0/1/128 23.00 S2 0/0 UP/DN .....T..... 0/FC0/0/76 0/FC0/0/124
F0/FC0/1/129 23.00 S2 0/0 UP/DN .....T..... 0/FC0/0/77 0/FC0/0/125
F0/FC0/1/130 23.00 S2 0/0 UP/DN .....T..... 0/FC0/0/74 0/FC0/0/122
F0/FC0/1/131 23.00 S2 0/0 UP/DN .....T..... 0/FC0/0/73 0/FC0/0/121
F0/FC0/1/138 23.00 S2 0/0 UP/DN .....T..... 0/FC0/0/124 0/FC0/0/76
F0/FC0/1/139 23.00 S2 0/0 UP/DN .....T..... 0/FC0/0/122 0/FC0/0/74
F0/FC0/1/140 23.00 S2 0/0 UP/DN .....T..... 0/FC0/0/125 0/FC0/0/77
F0/FC0/1/141 23.00 S2 0/0 UP/DN .....T..... 0/FC0/0/123 0/FC0/0/75
F0/FC0/1/142 23.00 S2 0/0 UP/DN .....T..... 0/FC0/0/121 0/FC0/0/73
F0/FC0/1/143 23.00 S2 0/0 UP/DN .....T..... 0/FC0/0/126 0/FC0/0/78
    
```