

## Cable the MetroCluster IP switches

**ONTAP MetroCluster** 

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## Cable the MetroCluster IP switches

# Using the port tables with the RcfFileGenerator tool or multiple MetroCluster configurations

You must understand how to use the information in the port tables to correctly generate your RCF files.

### Before you begin

Review these considerations before using the tables:

- The following tables show the port usage for site A. The same cabling is used for site B.
- The switches cannot be configured with ports of different speeds (for example, a mix of 100 Gbps ports and 40 Gbps ports).
- Keep track of the MetroCluster port group (MetroCluster 1, MetroCluster 2, etc.). You will need this information when using the RcfFileGenerator tool as described later in this configuration procedure.
- The RcfFileGenerator for MetroCluster IP also provides a per-port cabling overview for each switch. Use this cabling overview to verify your cabling.

### Cabling eight-node MetroCluster configurations

For MetroCluster configuration running ONTAP 9.8 and earlier, some procedures that are performed to transition an upgrade require the addition of a second four-node DR group to the configuration to create a temporary eight-node configuration. Beginning with ONTAP 9.9.1, permanent 8-node MetroCluster configurations are supported.

#### About this task

For such configurations, you use the same method as described above. Instead of a second MetroCluster, you are cabling an additional four-node DR group.

For example, your configuration includes the following:

- · Cisco 3132Q-V switches
- MetroCluster 1: FAS2750 platforms
- MetroCluster 2: AFF A700 platforms (these platforms are being added as a second four-node DR group)

#### **Steps**

- 1. For MetroCluster 1, cable the Cisco 3132Q-V switches using the table for the FAS2750 platform and the rows for MetroCluster 1 interfaces.
- 2. For MetroCluster 2 (the second DR group), cable the Cisco 3132Q-V switches using the table for the AFF A700 platform and the rows for MetroCluster 2 interfaces.

## Platform port assignments for Cisco 3132Q-V switches

The port usage in a MetroCluster IP configuration depends on the switch model and platform type.

## Port usage for FAS2750 or AFF A220 systems and a Cisco 3132Q-V switch

Cabling an AFF A220 or FAS2750 to a Cisco 3132Q-V switch				
Part III	FAS2750.	Switch		
Port use	IP_switch_x_1	IP_switch_x_2	Port	
			1	
			2	
Hausad	IP_switch_x_1 IP_switch_x  ISL, Local Cluster  e0a e0b disabled ISL, MetroCluster		3	
onuseu		-	4	
			5	
			6	
ISL, Local Cluster	121 120	l Clustor	7	
native speed / 40G / 100G	ISL, LOCA	li Ciuster	8	
	e0a	e0b	9/1	
MetroCluster 1, Shared Cluster and	disabled		9/2-4	
MetroCluster interface	Port use    FAS2750. AFF A22   IP_switch_x_1   IP_switch_x_1	e0b	10/1	
	disabled		10/2-4	
	e0a	e0b	11/1	
MetroCluster 2, Shared Cluster and	disabled e0a e0b	11/2-4		
MetroCluster interface	e0a	e0b	12/1	
	disa	bled	12/2-4	
	e0a	e0b	13/1	
MetroCluster 3, Shared Cluster and	disa	bled	13/2-4	
MetroCluster interface	e0a	e0b	14/1	
	disa	bled	14/2-4	
•	ISL, Metr	roCluster	15 - 20	
ISL, MetroCluster			21/1-4	
	ist, weti	ociustei	22/1-4	
100			23/1-4	
			24/1-4	
Unused		-	25 - 32	

Port usage for FAS9000, AFF A700 and a Cisco 3132Q-V switch

Dt	FAS9000,	AFF A700	Switch port
Port use	IP_switch_x_1	IP_switch_x_2	Port
MetroCluster 1			1
Local Cluster interface			2
MetroCluster 2	See Hardwa	re Universe	3
Local Cluster interface	for availa	ble ports	4
MetroCluster 3			5
Local Cluster interface			6
ISL, Local Cluster	ISI Loca	re Universe ple ports  Cluster  e5b  e5b  e5b  e5b  e5b  c5b  c5b  c5b	7
native speed / 40G / 100G	ist, tota	l Cluster	8
MetroCluster 1	e5a	e5b	9
MetroCluster interface	e5a	e5b	10
MetroCluster 2	e5a	e5b	11
MetroCluster interface	e5a	e5b	12
MetroCluster 3	e5a	e5b	13
MetroCluster interface	e5a	e5b	14
			15
ISL, MetroCluster			16
native speed	ISI Metr	oCluster	17
40G	ISE, WIEL	AFF A700 IP_switch_x_2 re Universe ble ports  I Cluster  e5b e5b e5b e5b e5b oCluster	18
400			19
			20
ISL, MetroCluster			21/1-4
breakout mode 10G	ISL, Metr	oCluster	22/1-4
			23/1-4
			24/1-4
Unused		-	25 - 32

Port usage for AFF A800 and a Cisco 3132Q-V switch

Cabling an AFF A800 to a Cisco 3132Q-V switch			
Dd	AFF A800		South the Book
Port use	IP_switch_x_1	IP_switch_x_2	Switch Port
MetroCluster 1			1
Local Cluster interface			2
MetroCluster 2	See Hardwa	See Hardware Universe	
Local Cluster interface	for availa	ble ports	4
MetroCluster 3	1		5
Local Cluster interface			6
ISL, Local Cluster	121 1 000	LCluster	7
native speed / 40G / 100G	ISL, Local Cluster		8
MetroCluster 1	e0b	e1b	9
MetroCluster interface	e0b	e1b	10
MetroCluster 2	e0b	e1b	11
MetroCluster interface	e0b	e1b	12
MetroCluster 3	e0b	e1b	13
MetroCluster interface	e0b	e1b	14
			15
ISL, MetroCluster			16
native speed	ISI Mot	roCluster	17
40G	ist, weti	ociustei	18
400			19
			20
ISL, MetroCluster	ISL, MetroCluster		21/1-4
breakout mode 10G			22/1-4
			23/1-4
			24/1-4
Unused		-	25 - 32

# Platform port assignments for Cisco 3232C or Cisco 9336C switches

The port usage in a MetroCluster IP configuration depends on the switch model and platform type.

Review these considerations before using the tables:

- The following tables show the port usage for site A. The same cabling is used for site B.
- The switches cannot be configured with ports of different speeds (for example, a mix of 100 Gbps ports and 40 Gbps ports).
- If you are configuring a single MetroCluster with the switches, use the MetroCluster 1 port group.

Keep track of the MetroCluster port group (MetroCluster 1, MetroCluster 2, or MetroCluster 3). You will need it when using the RcfFileGenerator tool as described later in this configuration procedure.

• The RcfFileGenerator for MetroCluster IP also provides a per-port cabling overview for each switch.

Use this cabling overview to verify your cabling.

### Cabling two MetroCluster configurations to the switches

When cabling more than one MetroCluster configuration to a Cisco 3132Q-V switch, then cable each MetroCluster according to the appropriate table. For example, if cabling a FAS2750 and an A700 to the same Cisco 3132Q-V switch. Then you cable the FAS2750 as per 'MetroCluster 1' in Table 1, and the A700 as per 'MetroCluster 2' or 'MetroCluster 3' in Table 2. You cannot physically cable both the FAS2750 and A700 as 'MetroCluster 1'.

### Cabling a FAS2750 or AFF A220 system to a Cisco 3232C or Cisco 9336C switch

Cabling an AFF A220 or FAS2750 to a Cisco 3232C or Cisco 9336C switch				
	FAS2750,	FAS2750, AFF A220		
Port use	IP_switch_x_1	IP_switch_x_2	Switch port	
Unused		-	1-6	
ISL, Local Cluster	121 1.000	l Cluster	7	
native speed / 100G	ISE, LUCA	Cluster	8	
	e0a	e0b	9/1	
MetroCluster 1, Shared Cluster	disa	bled	9/2-4	
and MetroCluster interface	e0a	e0b	10/1	
	disa	bled	10/2-4	
	e0a	e0b	11/1	
MetroCluster 2, Shared Cluster	disa	bled	11/2-4	
and MetroCluster interface	e0a	e0b	12/1	
	disa	bled	12/2-4	
	e0a	e0b	13/1	
MetroCluster 3, Shared Cluster	disa	bled	13/2-4	
and MetroCluster interface	e0a	e0b	14/1	
	disa	bled	14/2-4	
			15	
ISL, MetroCluster			16	
native speed	ISI Motr	oCluster	17	
40G / 100G	ISL, MELI	ociustei	18	
400 / 1000			19	
			20	
ISL, MetroCluster			21/1-4	
breakout mode	ISI Matr	oCluster	22/1-4	
10G	ist, weti	Colubici	23/1-4	
100			24/1-4	
Unused		-	25 - 32	

Cabling a AFF A300 or FAS8200 to a Cisco 3232C or Cisco 9336C switch

Cabling a AFF A300 or FAS8200 to a Cisco 3232C or Cisco 9336C switch			
	FAS8200,	AFF A300	
Port use	IP_switch_x_1	IP_switch_x_2	Switch port
			1/1
MetroCluster 1			1/2 - 4
Local Cluster interface			2/1
			2/2 - 4
	7		3/1
MetroCluster 2	See Hardwa	re Universe	3/2 - 4
Local Cluster interface	for availa	ble ports	4/1
			4/2 - 4
	7		5/1
MetroCluster 3			5/2 - 4
Local Cluster interface			6/1
ISL, Local Cluster			6/2 - 4 7
native speed / 100G	ISL, Loca	l Cluster	8
	e1a	e1b	9/1
MetroCluster 1		bled	9/2-4
MetroCluster interface	e1a	e1b	10/1
		bled	10/2-4
	e1a	e1b	11/1
MetroCluster 2		bled	11/2-4
MetroCluster interface	e1a	e1b	12/1
menodiaster menade		bled	12/2-4
	e1a	e1b	13/1
MetroCluster 3		bled	13/2-4
MetroCluster interface	e1a	e1b	14/1
Wetrociaster interrace		bled	14/2-4
ISL, MetroCluster		oCluster	15 - 20
ISL, MELIOCIUSIEI	ISE, WIEL	ociustei	21/1-4
ISL, MetroCluster			22/1-4
breakout mode	ISL, Met	roCluster	23/1-4
10G			
	-1-	-16	24/1-4
MetroCluster 4	e1a	e1b bled	25/1
MetroCluster 4 MetroCluster interface			25/2-4
Metrocluster Interrace	e1a	e1b	26/1
Harrier I	disa	bled	26/2-4
Unused			27 - 28
		re Universe	29/1
MetroCluster 4	disabled		29/2-4
Local Cluster interface		re Universe	30/1
	disa	bled	30/2-4
Unused		-	31 - 32

## Cabling a AFF A250 or FAS500f to a Cisco 3232C or Cisco 9336C switch

Cabling an AFF A250 or FAS500f to a Cisco 3232C or Cisco 9336C switch				
	FAS500f,	FAS500f, AFF A250		
Port use			Switch port	
Unused		-	1-6	
ISL, Local Cluster	ISL, Local Cluster		7	
native speed / 100G	ISL, LOCA	Cluster	8	
MetroCluster 1, Shared	e0c	e0d	9/1	
Cluster and MetroCluster	disa	bled	9/2-4	
interface	e0c	e0d	10/1	
interrace	disa	bled	10/2-4	
MetroCluster 2, Shared	e0c	e0d	11/1	
Cluster and MetroCluster	disa	bled	11/2-4	
interface	euc eud disabled euc eud disabled euc eud disabled	e0d	12/1	
interrace	disabled		12/2-4	
MetroCluster 3, Shared	e0c	e0d	13/1	
Cluster and MetroCluster	disa	bled	13/2-4	
interface	e0c	e0d	14/1	
interrace	disa	bled	14/2-4	
			15	
ISL, MetroCluster			16	
native speed	ISI Mot	oCluster	17	
40G / 100G	ist, wet	ociustei	18	
400 / 1000			19	
			20	
ISL, MetroCluster			21/1-4	
breakout mode	ISI Mot	roCluster	22/1-4	
10G	ist, weti	ociustei	23/1-4	
100	2		24/1-4	
Unused		-	25 - 32	

Cabling a AFF A320 to a Cisco 3232C or Cisco 9336C switch

Cabling a AFF A320 to a Cisco 3232C or Cisco 9336C switch			
	AFF A320		
Port use	IP_switch_x_1	IP_switch_x_2	Switch port
MetroCluster 1,			1
Local Cluster interface			2
MetroCluster 2,	See Hardwa	re Universe	3
Local Cluster interface	for availa	ble ports	4
MetroCluster 3,			5
Local Cluster interface			6
ISL, Local Cluster	ISI Loca	l Clustor	7
native speed / 100G	ISL, Local Cluster		8
MetroCluster 1,	e0g	e0h	9
MetroCluster interface	e0g	e0h	10
MetroCluster 2,	e0g	e0h	11
MetroCluster interface	e0g	e0h	12
MetroCluster 3,	e0g	e0h	13
MetroCluster interface	e0g	e0h	14
ISL, MetroCluster			
native speed	ISI Metr	oCluster	17
40G / 100G	iot, with	ociustei	18
4007 1000			19
			20
ISL, MetroCluster			21/1-4
breakout mode	ISI. Metr	oCluster	22/1-4
10G	iot, meti	oordster	23/1-4
			24/1-4
			25
			26
			27
Unused			28
Shasea			29
			30
			31
			32

Cabling an AFF A400, FAS8300 or FAS8700 to a Cisco 3232C or Cisco 9336C switch

Cabling a AFF A400, FAS8300 or FAS8700 to a Cisco 3232C or Cisco 9336C switch				
Port use	IP_switch_x_1	IP_switch_x_2	Switch port	
MetroCluster 1,			1	
Local Cluster interface			2	
MetroCluster 2,	See Hardwa	re Universe	3	
Local Cluster interface	for availa	ble ports	4	
MetroCluster 3,			5	
Local Cluster interface			6	
ISL, Local Cluster	ISI Loca	l Cluster	7	
native speed / 100G	131, 100	Cluster	8	
MetroCluster 1,	e1a	e1b	9	
MetroCluster interface	e1a	e1b	10	
MetroCluster 2,	e1a	e1b	11	
MetroCluster interface	e1a	e1b	12	
MetroCluster 3,	e1a	e1b	13	
MetroCluster interface	e1a	e1b	14	
			15	
ISL, MetroCluster			16	
native speed	ISI Motr	oCluster	17	
40G / 100G	ISL, MELI	ociustei	18	
400 / 1000			19	
			20	
ISL, MetroCluster			21/1-4	
breakout mode	ISI Motr	oCluster	22/1-4	
10G	ISE, IVIEU	ociustei	23/1-4	
100			24/1-4	
			25	
			26	
			27	
Unused		_	28	
onuseu		•	29	
			30	
			31	
			32	

Cabling a AFF A700 or FAS9000 to a Cisco 3232C or Cisco 9336C switch

Cabling a AFF A700 or FAS9000 to a Cisco 3232C or Cisco 9336C switch				
	FAS9000,	FAS9000, AFF A700		
Port use	IP_switch_x_1	IP_switch_x_2	Switch port	
MetroCluster 1,			1	
Local Cluster interface			2	
MetroCluster 2,	See Hardwa	re Universe	3	
Local Cluster interface	for availa	ble ports	4	
MetroCluster 3,			5	
Local Cluster interface			6	
ISL, Local Cluster	121 1000	LCluster	7	
native speed / 100G	ISL, LOCA	l Cluster	8	
MetroCluster 1,	e5a	e5b	9	
MetroCluster interface	e5a	e5b	10	
MetroCluster 2,	e5a	e5b	11	
MetroCluster interface	e5a	e5b	12	
MetroCluster 3,	e5a	e5b	13	
MetroCluster interface	e5a	e5b	14	
			15	
ICL Material Charter			16	
ISL, MetroCluster	ICI Mante	Cluster	17	
native speed	ISL, Meti	roCluster	18	
40G / 100G			19	
			20	
101 - 14-1 011			21/1-4	
ISL, MetroCluster	101 84-4	Cluster	22/1-4	
breakout mode	ISL, Meti	roCluster	23/1-4	
10G			24/1-4	
			25	
			26	
			27	
Hauss d			28	
Unused		-	29	
			30	
			31	
			32	

Cabling a AFF A800 to a Cisco 3232C or Cisco 9336C switch

Cabling an AFF A800 to a Cisco 3232C or Cisco 9336C switch			
	AFF A800  IP_switch_x_1		
Port use			Switch port
MetroCluster 1,			1
Local Cluster interface			2
MetroCluster 2,	See Hardwa	re Universe	3
Local Cluster interface	for availa	ble ports	4
MetroCluster 3,			5
Local Cluster interface			6
ISL, Local Cluster	121 1000	l Cluster	7
native speed / 100G	ist, tota	Cluster	8
MetroCluster 1,	e0b	e1b	9
MetroCluster interface	e0b	e1b	10
MetroCluster 2,	e0b	e1b	11
MetroCluster interface	e0b	e1b	12
MetroCluster 3,	e0b	e1b	13
MetroCluster interface	e0b	e1b	14
			15
ISL, MetroCluster			16
native speed	ISI Mot	roCluster	17
40G / 100G	ist, weti	ociustei	18
400 / 1000			19
			20
ISL, MetroCluster			21/1-4
breakout mode	ISI Mot	roCluster	22/1-4
10G	ist, weti	ociustei	23/1-4
100			24/1-4
			25
			26
			27
Unused			28
onuseu		-	29
			30
			31
			32

## Cabling an AFF A900 or FAS9500 to a Cisco 3232C or Cisco 9336C switch



You have the option to use ports e5a and e7a as intercluster LIFs in a MetroCluster IP configuration.

223	FAS9500 / A900		Switch
Port use	IP_switch_x_1	IP_switch_x_2	Port
Material Lacel Charter interface		·	1
MetroCluster 1, Local Cluster interface			2
Asses Charter 2   Local Charter insertion	See Hardware	Universe for	3
MetroCluster 2, Local Cluster interface	availabl	le ports	4
MetroCluster 3, Local Cluster interface			5
Ports for Transition (10/40/100Gbps)			6
ISL, Local Cluster	101 1 000	I Charter	7
native speed / 100G	ISL, LOCA	I Cluster	8
Antro Cluster 1 Mater Custor into 5	e5b	e7b	9
MetroCluster 1, MetroCluster interface	e5b	e7b	10
	e5b	e7b	11
VetroCluster 2, MetroCluster interface	e5b	e7b	12
	e5b	e7b	13
MetroCluster 3, MetroCluster interface	e5b e7b		14
			15
			16
ISL, MetroCluster			17
native speed	ISL, Metr	roCluster	18
40G / 100G			19
			20
			21/1-4
ISL, MetroCluster	325322		22/1-4
breakout mode	ISL, Metr	roCluster	23/1-4
10G			24/1-4
			25
			26
			27
			28
Unused	Unu	ised	29
			30
			31
			32
			33
(1) A 12 Line   American   1 mm   1 A 14 May   10 A 14 May			34
9336C-FX2 only: Ports disabled	9336C-FX2 only: Ports disabled		35
			36

# Cabling an AFF A320, AFF A400, AFF A700 or AFF A800 to a Cisco 9336C-FX2 shared switch

MetroCluster 1,			1
Local Cluster Interface	See Hardwa	2	
MetroCluster 2,	for available ports		3
Local Cluster Interface			4
Storago shelf 1 (0)	NSM-A, e0a	NSM-A, e0b	5
Storage shelf 1 (9)	NSM-B, e0a	NSM-B, e0b	6
ISL, Local Cluster	121 121	l Cluster	7
native speed / 100G	ISL, LUCA	ii Clustei	8
MetroCluster 1,	Port 'A'	Port 'B'	9
MetroCluster interface	Port 'A'	Port 'B'	10
MetroCluster 2,	Port 'A'	Port 'B'	11
MetroCluster interface	Port 'A'	Port 'B'	12
ISL, MetroCluster,			13
native speed 40G / 100G	ISL, MetroCluster	ISL, MetroCluster	14
breakout mode 10G	ist, wetrocluster	ist, wetrocluster	15
breakout mode 100			16
MetroCluster 1,		17	
Storage Interface	See Hardwa	re Universe	18
MetroCluster 2,	for availa	ible ports	19
Storage Interface			20
Storage shelf 2 (8)	NSM-A, e0a	NSM-A, e0b	21
Storage shell 2 (o)	NSM-B, e0a	NSM-B, e0b	22
Storago sholf 2 /7\	NSM-A, e0a	NSM-A, e0b	23
Storage shelf 3 (7)	NSM-B, e0a	NSM-B, e0b	24
Storago shelf 4 (5)	NSM-A, e0a	NSM-A, e0b	25
Storage shelf 4 (6)	NSM-B, e0a	NSM-B, e0b	26
Storage shelf 5 /5\	NSM-A, e0a	NSM-A, e0b	27
Storage shelf 5 (5)	NSM-B, e0a	NSM-B, e0b	28
Storage shelf 6 (4)	NSM-A, e0a	NSM-A, e0b	29
Storage shelf 6 (4)	NSM-B, e0a	NSM-B, e0b	30
Storage shelf 7/2)	NSM-A, e0a	NSM-A, e0b	31
Storage shelf 7 (3)	NSM-B, e0a	NSM-B, e0b	32
Storage shelf 9 (2)	NSM-A, e0a	NSM-A, e0b	33
Storage shelf 8 (2)	NSM-B, e0a	NSM-B, e0b	34
Storage shelf 0 /1\	NSM-A, e0a	NSM-A, e0b	35
Storage shelf 9 (1)	NSM-B, e0a NSM-B, e0b		36

MetroCluster interfaces per platform			
Platform	Port 'A'	Port 'B'	
AFF A320	e0g	e0h	
AFF A400	e1a	e1b	
AFF A700	e5a	e5b	
AFF A800	e0b	e1b	

# Platform port assignments for Broadcom supported BES-53248 IP switches

The port usage in a MetroCluster IP configuration depends on the switch model and platform type.

The switches cannot be used with remote ISL ports of different speeds (for example, a 25 Gbps port connected to a 10 Gbps ISL port).

#### Notes for the tables below:

- For some platforms, you can use ports 49 54 for MetroCluster ISLs or MetroCluster interface connections.
   These ports require an additional license.
- 2. Only a single four-node MetroCluster using A320 systems can be connected to the switch.

Features that require a switched cluster are not supported in this configuration, including MetroCluster FC to IP transition and tech refresh procedures.

3. AFF A320 systems configured with Broadcom BES-53248 switches might not support all features.

Any configuration or feature that requires that the local cluster connections are connected to a switch is not supported. For example, the following configurations and procedures are not supported:

- Eight-node MetroCluster configurations
- Transitioning from MetroCluster FC to MetroCluster IP configurations
- Refreshing a four-node MetroCluster IP configuration (ONTAP 9.8 and later)
- 4. If you connect two MetroCluster configurations and both use the same controller type, then you must use MetroCluster port groups 3 and 4. If the controllers are different, then you must use either MetroCluster port groups 3 and 4 for one type and MetroCluster port groups 1 and 2 for the other.
  - For example, if you connect:
    - Two MetroCluster configurations consisting of FAS2750/AFF A220 only, or FAS500f/AFF A250 only, you must select MetroCluster port groups 3 and 4.
    - Two MetroCluster configurations where one MetroCluster is type FAS2750/AFF A220 and the other is FAS500f/AFF A250, you must select port groups 3 and 4 for one, and port groups 1 and 2 for the other. In the RcfFileGenerator for MetroCluster IP, drop-down fields 1 and 2 only populate with the supported platform after you select platforms in drop-down fields 3 and 4. Refer to Using the port tables with the RcfFileGenerator tool or multiple MetroCluster configurations for more information on how to use the port tables.

## Switch port usage for AFF A220 or FAS2750 systems

Cabling a AFF A220 or FAS2750 to a Broadcom BES-53248 switch				
Port use	FAS275	FAS2750, A220		
Port use	IP_switch_x_1	IP_switch_x_2	Switch port	
Unused		-	1-6	
MetroCluster 3, Shared Cluster and	e0a	e0b	9	
MetroCluster interface	e0a	e0b	10	
MetroCluster 4, Shared Cluster and	e0a	e0b	11	
MetroCluster interface	e0a	e0b	12	
ISL, MetroCLuster			13	
native speed	ISI Mot	roCluster	14	
10G / 25G	ISE, WIEL	lociustei	15	
100 / 230			16	
Unused		-	17 - 52	
ISL, MetroCluster, native speed	to Mot	roClustor	53	
40G / 100G (see note 1)	ISL, MetroCluster		54	
ISL, Local Cluster	121 100	l Cluster	55	
native speed / 100G	ISL, Local Cluster		56	

## Switch port usage for AFF A250 or FAS500f systems

Cabling a AFF A250 or FAS500f to a Broadcom BES-53248 switch					
Port use	FAS500	of, A250	Switch nort		
Port use	IP_switch_x_1	IP_switch_x_2	Switch port		
Unused		-	1-6		
MetroCluster 3, Shared Cluster	e0c	e0d	9		
and MetroCluster interface	e0c	e0d	10		
MetroCluster 4, Shared Cluster	e0c	e0d	11		
and MetroCluster interface	e0c	e0d	12		
ISI MatroClustor			13		
ISL, MetroCLuster	ICI Mat	-aCluster	14		
native speed	ist, weti	roCluster	15		
10G / 25G			16		
Unused		-	17 - 52		
ISL, MetroCluster, native speed	ISL, MetroCluster		53		
40G / 100G (see note 1)			54		
ISL, Local Cluster	ISL, Local Cluster		55		
native speed / 100G			56		

Switch port usage for combined use of AFF A250 or FAS500f and AFF A220 or FAS2750 systems

Cabling a AFF A220 or FAS2750 and a AFF A250 or FAS500f to a Broadcom BES-53248 switch					
Port use	FAS2750, AFF A220		FAS2750, AFF A220 FAS500f, AFF A250		Curitada mant
Port use	IP_switch_x_1	IP_switch_x_2	IP_switch_x_1 IP_switch_x_2		Switch port
Unused	-		-		1-4
MetroCluster 1, Shared Cluster and	e0a	e0b	e0c	e0d	5
MetroCluster interface (see note 4)	e0a	e0b	e0c	e0d	6
MetroCluster 2, Shared Cluster and	e0a	e0b	e0c	e0d	7
MetroCluster interface (see note 4)	e0a	e0b	e0c	e0d	8
MetroCluster 3, Shared Cluster and	e0a	e0b	e0c	e0d	9
MetroCluster interface (see note 4)	e0a	e0b	e0c	e0d	10
MetroCluster 4, Shared Cluster and	e0a	e0b	e0c	e0d	11
MetroCluster interface (see note 4)	e0a	e0b	e0c	e0d	12
ISI MatraCluster					13
ISL, MetroCLuster native speed	ISI Moto	ro Clustor	ISI Mot	roClustor	14
10G / 25G	ISL, Metr	ociuster	ist, wet	roCluster	15
100 / 230					16
Unused		-		-	17 - 52
ISL, MetroCluster, native speed	ISL Moto	ISL, MetroCluster ISL, MetroCluster		53	
40G / 100G (see note 1)	ist, weti			54	
ISL, Local Cluster	101 1 2 2 2	d Chustor	101 1 2 2 2	d Chustor	55
native speed / 100G	ISL, LOCa	al Cluster	ISL, Local Cluster		56

Switch port usage for AFF A300 or FAS8200 systems

Cabling a AFF A300 or FAS8200 to a Broadcom BES-53248 switch				
	Port use    FAS8200, AFF A300			
Port use			Switch port	
MetroCluster 1, Local Cluster interface			1	
Wetrocluster 1, Local cluster interrace	See Hardwa	re Universe	2	
MetroCluster 2, Local Cluster interface	for availa	ble ports	3	
Metrociuster 2, Local ciuster interrace			4	
MetroCluster 1, MetroCluster interface	e1a	e1b	5	
Wetrocluster 1, Wetrocluster Interface	e1a	e1b	6	
MetroCluster 2, MetroCluster interface e1a e1a	e1a	e1b	7	
	e1a	e1b	8	
			9	
Unused	-		10	
onuseu			11	
			12	
ISL, MetroCLuster			13	
native speed	ISI Mot	oCluster	14	
10G / 25G	ist, Weti	ociustei	15	
100 / 250			16	
Unused	-		17 - 52	
ISL, MetroCluster, native speed	ISL, MetroCluster		53	
40G / 100G (see note 1)			54	
ISL, Local Cluster	ISL, Local Cluster		55	
native speed / 100G	131, 100	ii Ciustei	56	

Cabling a AFF A320 to a Broadcom BES-53248 switch				
Port use	AFF A320		Switch port	
Portuse	IP_switch_x_1	IP_switch_x_2	Switch port	
Ports not used	Ports n	ot used	1 - 12	
ISL, MetroCLuster		13		
	ICI Mote	14		
native speed	ISL, Metr	15		
10G / 25G			16	
Ports not licensed (17 - 52)				
ISL, MetroCluster, native speed	ISL, MetroCluster		53	
40G / 100G (see note 1)			54	
MetroCluster 1, MetroCluster interface	e0g	e0h	55	
(see note 2)	e0g	e0h	56	

Switch port usage for AFF A400, FAS8300 or FAS8700 systems

Cabling a FAS8300, A400 or FAS8700 to a Broadcom BES-53248 switch					
Port use	FAS8300,FA	FAS8300,FAS8700, A400			
Port use	IP_switch_x_1	IP_switch_x_1			
Unused		-	1 - 12		
ISI MatraClustor					
ISL, MetroCluster	ISL, MetroCluster		14		
native speed			15		
10G / 25G			16		
Unused	-		17 - 48		
MetroCluster 5, Local Cluster interface	See Hardware Universe		49		
(see note 1)	for availa	ble ports	50		
MetroCluster 5, MetroCluster interface	e1a	e1b	51		
(see note 1)	e1a	e1b	52		
ISL, MetroCluster, native speed	ISL, MetroCluster		53		
40G / 100G (see note 1)			54		
ISL, Local Cluster	ISL, Local Cluster		55		
native speed / 100G			56		

# Platform port assignments for NVIDIA supported SN2100 IP switches

The port usage in a MetroCluster IP configuration depends on the switch model and platform type.

### Supported configurations

The following platforms are currently supported:

- FAS500f / AFF A250
- FAS8300 / AFF A400
- FAS8700
- FAS9000 / AFF A700
- AFF A800

The following platforms and configurations are not currently supported:

- MetroCluster FC-to-IP Transition
- An eight-node MetroCluster configuration

### Review these considerations before using the configuration tables

If you cable multiple MetroCluster configurations then follow the respective table. For example:

• If you cable two four-node MetroCluster configurations of type AFF A700, then connect the first MetroCluster shown as 'MetroCluster 1', and the second MetroCluster shown as 'MetroCluster 2' in the AFF A700 table.



Ports 13 and 14 can be used in native speed mode supporting 40 Gbps and 100 Gbps, or in breakout mode to support  $4 \times 25$  Gbps or  $4 \times 10$  Gbps. If they use native speed mode they are represented as port 13 and 14. If they use breakout mode, either  $4 \times 25$  Gbps or  $4 \times 10$  Gbps, then they are represented as 13s0-3 and 14s0-3.

The following sections describe the physical cabling outline. You can also refer to the RcfFileGenerator for detailed cabling information.

### Switch port usage for AFF A250 or FAS500f systems

Port use	FAS500	f, A250	Switch port
Port use	IP_Switch_x_1	IP_Switch_x_2	Switch port
Ports not used	-		1-6
	e0c	e0d	7s0
MetroCluster 1, Shared Cluster and	disa	bled	7s1-3
MetroCluster interface	e0c	e0d	8s0
	disa	bled	851-3
	e0c	e0d	9s0
MetroCluster 2, Shared Cluster and	disabled		951-3
MetroCluster interface	e0c	e0d	1050
	disa	bled	1051-3
	e0c	e0d	11s0
MetroCluster 3, Shared Cluster and	disa	bled	1151-3
MetroCluster interface	e0c	e0d	12s0
	disabled		1251-3
MetroCluster ISL	ISL, MetroCluster		13/13s0-3
40/100G or 4 × 25G or 4 × 10G			14/14s0-3
ISL, Local Cluster	121 1000	l Cluster	15
100G	ISE, LOCA	ii Ciustei	16

Switch port usage for AFF A400, FAS8300 or FAS8700 systems

Port use	FAS8300, A400, FAS8700		Switch port
Portuse	IP_Switch_x_1	IP_Switch_x_2	Switch port
MetroCluster 1,	Local Clus	ster ports	1
Local Cluster interface	as per	HWU	2
MetroCluster 2,	Local Clus	ster ports	3
Local Cluster interface	as per	HWU	4
MetroCluster 3,	Local Clus	ster ports	5
Local Cluster interface	as per HWU		6
MetroCluster 1,	e1a	e1b	7
MetroCluster interface	e1a	e1b	8
MetroCluster 2,	e1a	e1b	9
MetroCluster interface	e1a	e1b	10
MetroCluster 3,	e1a	e1b	11
MetroCluster interface	e1a	e1b	12
MetroCluster ISL	ISL, MetroCluster		13/13s0-3
40/100G or 4 × 25G or 4 × 10G			14/14s0-3
ISL, Local Cluster	191 1.000	l Cluster	15
100G	ISE, LUCA	Clustel	16

## Switch port usage for AFF A700 or FAS9000

Port use	FAS9000, A700		Switch port
Portuse	IP_Switch_x_1	IP_Switch_x_2	Switch port
MetroCluster 1,	Local Cluster ports		1
Local Cluster interface	as per	HWU	2
MetroCluster 2,	Local Clus	ster ports	3
Local Cluster interface	as per	HWU	4
MetroCluster 3,	Local Clus	ster ports	5
Local Cluster interface	as per HWU		6
MetroCluster 1,	e5a	e5b	7
MetroCluster interface	e5a	e5b	8
MetroCluster 2,	e5a	e5b	9
MetroCluster interface	e5a	e5b	10
MetroCluster 3,	e5a	e5b	11
MetroCluster interface	e5a	e5b	12
MetroCluster ISL	ISL, MetroCluster		13/13s0-3
40/100G or 4 × 25G or 4 × 10G			14/14s0-3
ISL, Local Cluster	191 1000	l Cluster	15
100G	ISE, LUCA	Clustel	16

## Switch port usage for AFF A800

Port use	A800		Curitab part
	IP_Switch_x_1	IP_Switch_x_2	Switch port
MetroCluster 1,	Local Cluster ports		1
Local Cluster interface	as per HWU		2
MetroCluster 2,	Local Cluster ports		3
Local Cluster interface	as per HWU		4
MetroCluster 3,	Local Cluster ports		5
Local Cluster interface	as per HWU		6
MetroCluster 1,	e0b	e1b	7
MetroCluster interface	e0b	e1b	8
MetroCluster 2,	e0b	e1b	9
MetroCluster interface	e0b	e1b	10
MetroCluster 3,	e0b	e1b	11
MetroCluster interface	e0b	e1b	12
MetroCluster ISL	ISL, MetroCluster		13/13s0-3
40/100G or 4 × 25G or 4 × 10G			14/14s0-3
ISL, Local Cluster	ISL, Local Cluster		15
100G			16

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