

# 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	
Unused			3	
onuseu		-	4	
			5	
			6	
ISL, Local Cluster	121 120	l Clustor	7	
native speed / 40G / 100G	ISL, LOCA	l Cluster	8	
	e0a	e0b	9/1	
MetroCluster 1, Shared Cluster and	disa	disabled		
MetroCluster interface	e0a	e0b	10/1	
	disabled		10/2-4	
	e0a	e0b	11/1	
MetroCluster 2, Shared Cluster and	e0a e0b 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, MetroCluster native speed 40G	ISL, Metr	roCluster	15 - 20	
ISL, MetroCluster breakout mode			21/1-4	
10G	ist, weti	roCluster	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

Dorst	FAS9000,	FAS9000, AFF A700	
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	121 120	l Cluster	7
native speed / 40G / 100G	ISL, LOCA	ii Ciustei	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 Mot	roClustor	17
40G	ISL, WIEL	re Universe ble ports  Cluster  e5b  e5b  e5b  e5b  e5b  c5b  c5b  c5b	18
400			19
			20
ISL, MetroCluster			21/1-4
breakout mode 10G	ISL, Meti	roCluster	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				
Bookson	AFF	AFF A800		
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	able ports	4	
MetroCluster 3			5	
Local Cluster interface			6	
ISL, Local Cluster	121 120	I Cluster	7	
native speed / 40G / 100G	ISL, LOCA	ISL, Local Cluster		
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, wet	lociustei	18	
400			19	
			20	
ISL, MetroCluster		ISL, MetroCluster		
breakout mode 10G	ISL, Met			
			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,	Switch	
Port use	IP_switch_x_1	IP_switch_x_2	port
Unused		-	1-6
ISL, Local Cluster	121 1.000	l Clustor	7
native speed / 100G	ISE, LUCA	ISL, Local Cluster	
	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
		·	
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
			6/2 - 4
ISL, Local Cluster			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
ISE, MIELIOCIUSIEI	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 29/2-4
MetroCluster 4		disabled	
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,			
Port use	IP_switch_x_1	IP_switch_x_2	Switch port	
Unused		-	1-6	
ISL, Local Cluster	121 1000	ISL, Local Cluster		
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	disabled		11/2-4	
	and MetroCluster e0c 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	ISL, MetroCluster		
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			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			16	
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		_		
Shasea	onused -		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				
	FAS8300, FAS8700, AFF A400			
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	ISL, Local Cluster e5a e5b		
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 Martin Olivetin			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	ISL, LOCA	rciuster	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	oCluster	17
40G / 100G	ist, Weti	ociustei	18
400 / 1000			19
			20
ISL, MetroCluster			21/1-4
breakout mode	ISI Metr	oCluster	22/1-4
10G	ISE, WIEL	ociustei	23/1-4
100			24/1-4
			25
			26
			27
Unused		_	28
onuseu		_	29
			30
			31
			32

Cabling a AFF A900 to a Cisco 3232C or Cisco 9336C switch

Cabling an AFF A900 to a Cisco 3232C or Cisco 9336C-FX2 switch				
	AFF A900			
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		able ports	4	
MetroCluster 3, Local Cluster interface		,	5	
Ports for Transition (10/40/100Gbps)			6	
ISL, Local Cluster			7	
native speed / 100G	ISL, Loca	al Cluster	8	
MetroCluster 1,	e5a	e7a	9	
MetroCluster interface			10	
MetroCluster 2,	e5a	e7a		
MetroCluster 2,	e5a	e7a	11	
	e5a	e7a	12	
MetroCluster 3, MetroCluster interface	e5a	e7a	13	
MetroCluster Interrace	e5a	e7a	14	
			15	
ISL, MetroCluster			16	
native speed	ISL, Metr	roCluster	17	
40G / 100G			18	
			19	
			20	
ISL, MetroCluster			21/1-4	
breakout mode	ISL, Metr	roCluster	22/1-4	
10G	•		23/1-4	
			24/1-4	
			25	
			26	
			27	
Unused	_		28	
		29		
			30	
			31	
			32	
			33	
9336C-FX2 only: Ports disabled	9336C-FX2 only: Ports disabled		34	
-			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	re Universe	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, Metrocluster	15
breakout mode 100			16
MetroCluster 1,	*		17
Storage Interface	See Hardwa	re Universe	18
MetroCluster 2,	for availa	ible ports	19
Storage Interface		111 25 11	20
Storage shelf 2 (8)	NSM-A, e0a	NSM-A, e0b	21
Storage shell 2 (6)	NSM-B, e0a	NSM-B, e0b	22
Storage shelf 3 (7)	NSM-A, e0a	NSM-A, e0b	23
Storage shell 3 (7)	NSM-B, e0a	NSM-B, e0b	24
Storage shelf 4 (6)	NSM-A, e0a	NSM-A, e0b	25
Storage shell 4 (0)	NSM-B, e0a	NSM-B, e0b	26
Storage shelf 5 (5)	NSM-A, e0a	NSM-A, e0b	27
Storage shell 3 (3)	NSM-B, e0a	NSM-B, e0b	28
Storage shelf 6 (4)	NSM-A, e0a	NSM-A, e0b	29
Storage shell 0 (4)	NSM-B, e0a	NSM-B, e0b	30
Storage shelf 7 (3)	NSM-A, e0a	NSM-A, e0b	31
Storage Silen 7 (3)	NSM-B, e0a	NSM-B, e0b	32
Storage shelf 8 (2)	NSM-A, e0a	NSM-A, e0b	33
Storage stiell o (2)	NSM-B, e0a	NSM-B, e0b	34
Storage shelf 9 (1)	NSM-A, e0a	NSM-A, e0b	35
Storage stien 3 (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)

## Switch port usage for AFF A220 or FAS2750 systems

Cabling a AFF A220 or FAS2750 to a Broadcom BES-53248 switch				
Port use	FAS2750, A220		Curital part	
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	
ISI MotroCluster		13		
ISL, MetroCLuster	ISI Mot	ISI Matas Shartas	14	
native speed 10G / 25G	ist, weti	ISL, MetroCluster		
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 AFF A250 or FAS500f systems

Cabling a AFF A250 or FAS500f to a Broadcom BES-53248 switch			
Port use	FAS500f, A250		Switch port
Port use	IP_switch_x_1	IP_switch_x_1   IP_switch_x_2	
Unused		-	
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	ISL, MetroCluster		13
ISL, MetroCLuster			14
native speed 10G / 25G			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 AFF A300 or FAS8200 systems

Cabling a AFF A300 or FAS8200 to a Broadcom BES-53248 switch			
	FAS8200, AFF A300		
Port use	Port use IP_switch_x_1 IP_swi	IP_switch_x_2	Switch port
MetroCluster 1, Local Cluster interface			1
Wetroclaster 1, Local claster interface	See Hardwa	re Universe	2
MetroCluster 2, Local Cluster interface	for availa	ble ports	3
Metrociaster 2, Local Claster Interface			4
MetroCluster 1, MetroCluster interface	e1a	e1b	5
Metrocluster 1, Metrocluster Interrace	e1a	e1b	6
MetroCluster 2, MetroCluster interface	e1a	e1b	7
Metrocluster 2, Metrocluster Interface	e1a	e1b	8
	·		9
Unused		_	
onuseu	-		11
			12
ISL, MetroCLuster	ISL, MetroCluster		13
native speed			14
10G / 25G			15
100 / 230			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

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 not used		1 - 12
ISL, MetroCLuster	ISL, MetroCluster		13
			14
native speed			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,FAS8700, A400		Considerate manufa	
	IP_switch_x_1	IP_switch_x_2	Switch port	
Unused	-		1 - 12	
ISL, MetroCluster	ISL, MetroCluster		13	
•			14	
native speed 10G / 25G			15	
10G / 25G			16	
Unused	-		17 - 48	
MetroCluster 5, Local Cluster interface	See Hardware Universe		49	
(see note 1)	for available 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	

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