

# Cable the MetroCluster IP switches

**ONTAP MetroCluster** 

NetApp August 12, 2022

This PDF was generated from https://docs.netapp.com/us-en/ontap-metrocluster/install-ip/using\_rcf\_generator.html on August 12, 2022. Always check docs.netapp.com for the latest.

# **Table of Contents**

C	able the MetroCluster IP switches	. 1
	Using the port tables with the RcfFileGenerator tool or multiple MetroCluster configurations	. 1
	Platform port assignments for Cisco 3132Q-V switches	. 1
	Platform port assignments for Cisco 3232C or Cisco 9336C switches	. 4
	Platform port assignments for Broadcom supported BES-53248 IP switches	15

## 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	disabled	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

Doub.us -	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	ISI Loca	LClustor	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	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 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
			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
			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
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 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,	FAS500f, AFF A250		
Port use	IP_switch_x_1	IP_switch_x_2	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	disabled		11/2-4	
interface	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	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			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			28	
Shasea	onusea -		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	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	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 an AFF A900 or FAS9500 to a Cisco 3232C or Cisco 9336C switch

Cabling a FAS9500 or AFF A9	00 to a Cisco 3232C or Ci	sco 9336C-FX2 switch	
Port use	FAS9500 / A900		Switch
	IP_switch_x_1	P_switch_x_1	
MetroCluster 1, Local Cluster interface			1
Wetroclaster 1, Local Claster Interface			2
MetroCluster 2, Local Cluster interface	See Hardware Unive	rse for available ports	3
Wetrociaster 2, Local craster interrace		rse for available ports	4
MetroCluster 3, Local Cluster interface			5
Ports for Transition (10/40/100Gbps)			6
ISL, Local Cluster	ISL, Loc	al Cluster	7
native speed / 100G	,		8
MetroCluster 1, MetroCluster interface	e5a	e7a	9
	e5a	e7a	10
MetroCluster 2, MetroCluster interface	e5a	e7a	11
	e5a	e7a	12
MetroCluster 3, MetroCluster interface	e5a	e7a	13
	e5a	e7a	14
			15
ISL, MetroCluster			16
native speed	ISI. Met	troCluster	17
40G / 100G	102,1112	il o o lastel	18
400/1000			19
			20
ISL, MetroCluster			21/1-4
breakout mode	ISI. Met	troCluster	22/1-4
10G	102, 1112		23/1-4
			24/1-4
		[	25
		[	26
			27
Unused			28
			29
			30
			31
			32
	C-FX2 only: Ports disabled 9336C-FX2 only: Ports disabled		33
9336C-FX2 only: Ports disabled			34
2222 omji i ona diadored			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 availa	ble ports	3
Local Cluster Interface			4
Storage shelf 1 (9)	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	Cluster	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
ICI MetroCluster			13
ISL, MetroCluster, native speed 40G / 100G	ICI MotroCluster	ISL, MetroCluster	14
breakout mode 10G	ISL, MetroCluster	ist, Metrocluster	15
breakout mode 100			16
MetroCluster 1,			17
Storage Interface	See Hardwa	re Universe	18
MetroCluster 2,	for availa	ble ports	19
Storage Interface			20
Ctorogo chalf 2 (0)	NSM-A, e0a	NSM-A, e0b	21
Storage shelf 2 (8)	NSM-B, e0a	NSM-B, e0b	22
Storago shalf 2 /7\	NSM-A, e0a	NSM-A, e0b	23
Storage shelf 3 (7)	NSM-B, e0a	NSM-B, e0b	24
Starage shalf 4 (5)	NSM-A, e0a	NSM-A, e0b	25
Storage shelf 4 (6)	NSM-B, e0a	NSM-B, e0b	26
Storago shalf 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 chalf 7 (2)	NSM-A, e0a	NSM-A, e0b	31
Storage shelf 7 (3)	NSM-B, e0a	NSM-B, e0b	32
Storago shelf 9 (2)	NSM-A, e0a	NSM-A, e0b	33
Storage shelf 8 (2)	NSM-B, e0a	NSM-B, e0b	34
Storage chalf 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				
Dort	FAS275	FAS2750, A220		
Port use	IP_switch_x_1	IP_switch_x_2	Switch port	
Unused		-		
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				
native speed	ISL, MetroCluster		14	
10G / 25G	ISE, WIEL	ociustei	15	
100 / 230			16	
Unused		-		
ISL, MetroCluster, native speed	121 Mot	ISI Martin Churton		
40G / 100G (see note 1)	ISL, MetroCluster		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		Curital 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	ISL, MetroCluster		13	
ISL, MetroCLuster			14	
native speed			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		50, AFF A220 FAS500f, AFF A250		Switch port	
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	ISL, MetroCluster		ISI Matas Chartas		14	
10G / 25G	ist, weti	ociuster	ISL, MetroCluster		15	
100 / 230					16	
Unused		-	-		17 - 52	
ISL, MetroCluster, native speed	ISL Moto	ro Clustor	ISL, MetroCluster		53	
40G / 100G (see note 1)	ist, weti	roCluster			54	
ISL, Local Cluster	101 1 2 2 2	d Chustor	ISL, Local Cluster		55	
native speed / 100G	ISL, LOCa	al Cluster			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	IP_switch_x_1	IP_switch_x_1		
MetroCluster 1, Local Cluster interface			1	
Wetrocluster 1, Local cluster interrace	See Hardwa	re Universe	2	
MetroCluster 2, Local Cluster interface	for available ports		3	
Wetrocluster 2, Local cluster interrace			4	
MetroCluster 1, MetroCluster interface	e1a	e1b	5	
Wetrocluster 1, Wetrocluster Interface	e1a	e1b	6	
MetroCluster 2, MetroCluster interface	e1a	e1b	7	
Metrocluster 2, Metrocluster Interface	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	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	

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		13		
	ICI Mote	14		
native speed	ISL, MetroCluster		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		Switch port	
Port use	IP_switch_x_1	IP_switch_x_1		
Unused	-		1 - 12	
ISL, MetroCluster		13		
	ISI Moto	14		
native speed	ISL, MetroCluster		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	

### **Copyright Information**

Copyright © 2022 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system- without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

### **Trademark Information**

NETAPP, the NETAPP logo, and the marks listed at <a href="http://www.netapp.com/TM">http://www.netapp.com/TM</a> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.