

Switch Stacking – ArubaOS Switch

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Why stacking?

To reduce the number of uplinks and optimize their usage

To reduce the number of IP interfaces and addresses

To simplify operations by unifying management and control planes
Installation, configuration, software upgrades

In stacking we have two types

Backplane stacking (BPS)

Front plane stacking (FPS)-VSF

Currently we would be covering Backplane stacking and its topology, use case, functionality as well stacking troubleshooting

Some of the major functionalities provided by the stacking infrastructure are,

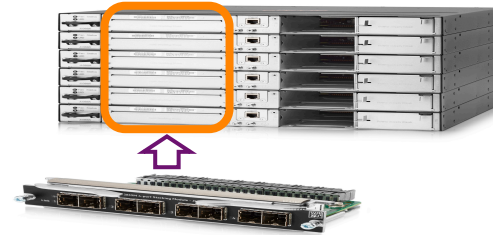
- Stack topology discovery
- Stack commander and standby election
- Stack member management – addition, removal and provisioning
- Stack topology management
- Stack spilt

Backplane stacking (BPS)

Current switches models that supports Backplane stacking

3800 switch series (3810)

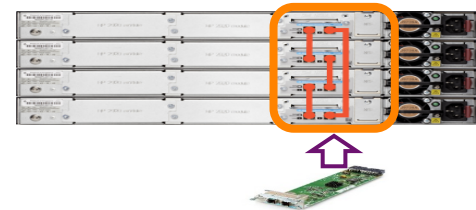
Mesh topology: up to 5 units
Ring topology: up to 10 units
Stack port throughput*: up to 40Gbps
Stack module throughput*: up to 160Gbps



2900 switch series (2920/2930M)

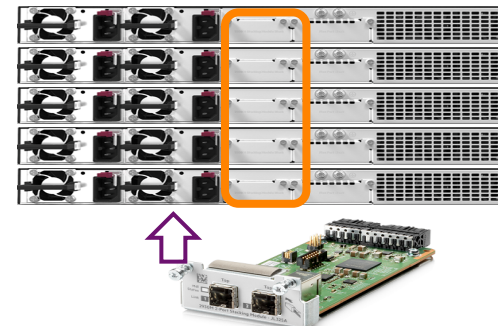
2920

Ring topology: up to 4 units
Stack port throughput*: up to 20Gbps
Stack module throughput*: up to 40Gbps



2930M

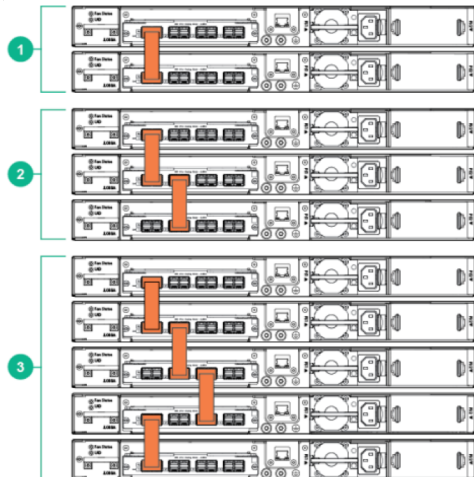
Ring topology: up to 10 units
Stack port throughput*: up to 25Gbps
Stack module throughput*: up to 50Gbps



Topology supported

- Chain
- Ring (recommended)
- Mesh (recommended)

Chain:



Typical chain topology



Chain

The switches on the ends of the chain only have a single link back to the adjacent switch.

For the inactive fragment, the switches remain powered on and create a separate stack, but all of network ports on the switches in the inactive fragment become disabled and do not pass network traffic.

Chain topologies are not recommended because a single failure

When stacking failure at the switch, stacking module, or cable level, will cause switch-to-switch communication failures between switches that are located on opposite sides of the failure.

Up to 10 switches may be stacked in an open-ended chain with single cables between each pair.

Two-member chain topology (One 0.5 meter stacking cables)

Three member chain topology (two 0.5 meter stacking cables)

Four-member chain topology (three 0.5 meter stacking cables)

Topology

RING:

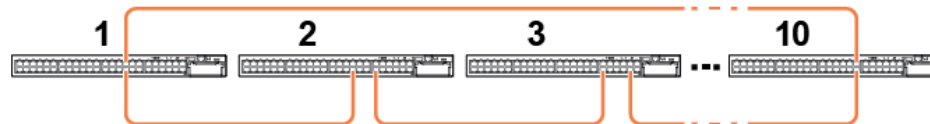
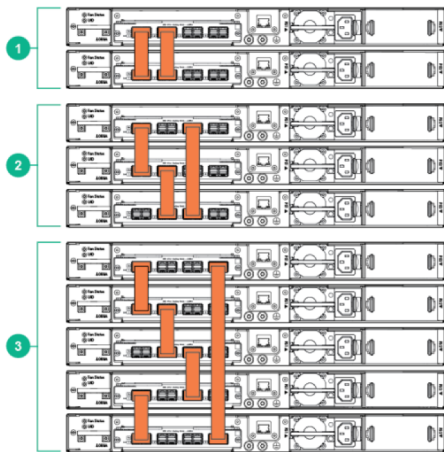
Ring topologies afford some protection from a single failure because communications between the switches continues, in a direction away from the failure

Up to 10 switches may be connected in a closed ring topology.

In a ring topology, two stacking ports are used on each switch..

Note that any one of the 4 stacking ports on the stacking module can be used to connect to any stacking port on the stacking module of the neighboring switch.

Typical Ring topology

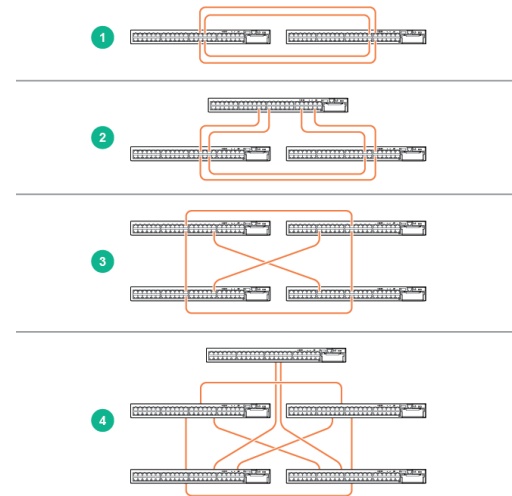
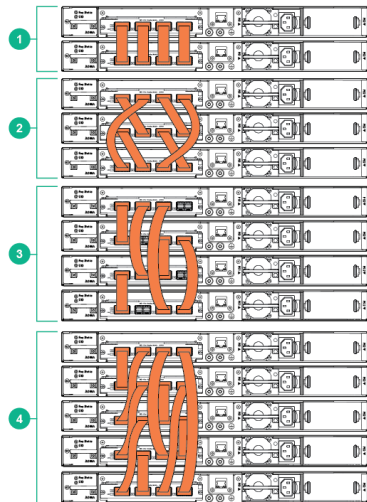


Topology types

MESH:

The mesh topology supports two to five stacked switches. Here we see examples of each supported configuration, with 2, 3, 4 and 5 switches. In mesh topologies, every switch in the stack is connected to every other switch in the stack. So for example, with four stacking ports on the Stacking Module, the maximum number of switches that can be meshed together is limited to five, as shown. Mesh topologies provide the most protection from stacking failures because communications can be rerouted through multiple paths. Note that in all but the 4-switch configuration, all four stacking ports are connected.

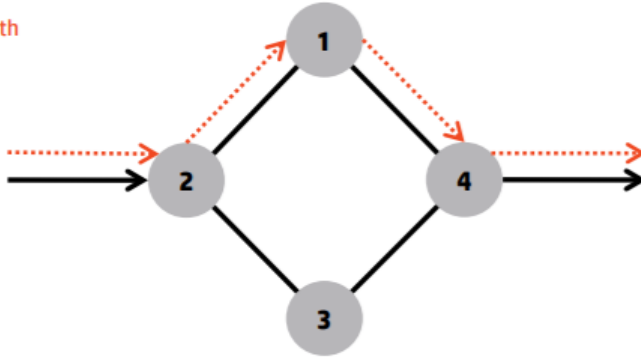
Meshing is the recommended topology, whenever possible.



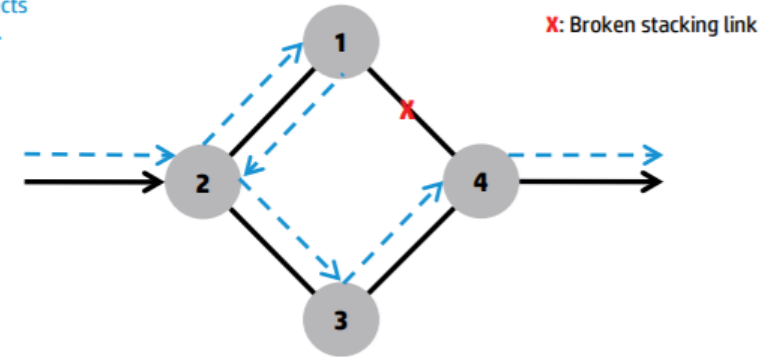
Traffic flow

RING

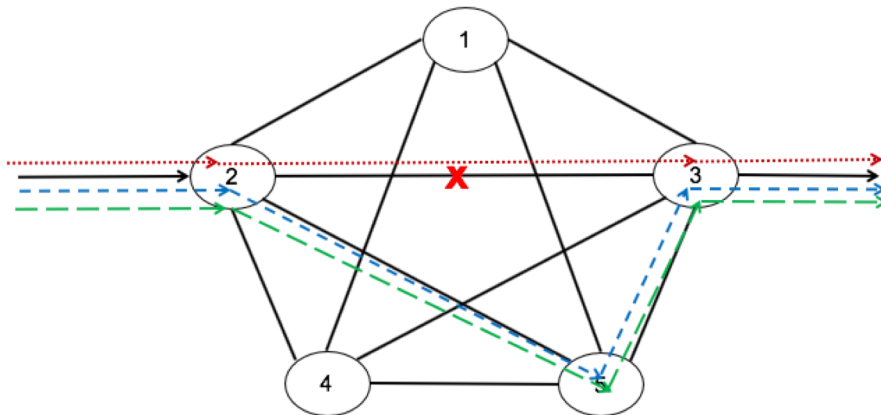
The packets use the shortest path through the stack.



The hardware detects the stacking failure and notifies the Software. The hardware automatically redirects the packets through the stack. Hardware detect time < 1 μ s



MESH



The packets use the shortest path through the Stack
The Hardware detects the Stacking failure and notifies the Software. The Hardware automatically redirects the packets through the Stack.
Hardware detect time < 1 μ sec
The switch updates the path that the packets will use through the Stack
Initial failure detected quickly and redirected in hardware Gives time for software to update mesh forwarding tables

Topology supported

Topology	No of members	Stacking cables
Chain	10	9
Ring	10	10
Mesh	5	10

Stacking Roles

Commander

Commander – This type indicates that this is the current commander of the stack. Note: In some stack merge cases two switches can momentarily assume that they are commanders until the stack is merged.

- Runs network control and management protocols (STP, LACP, RIP, OSPF, Telnet, SNMP...)
- Syncs protocol states to the “Standby” for hitless failover.
- Manages the ASIC (forwarding) tables of *all* switches in the stack

Standby – This type indicates that this is the current standby switch.

- Provides commander-level HA
- Receives configuration and protocol state information from Commander.
- Runs protocols in passive mode where their runtime states are updated based on sync from Commander.
- Is ready to take over as Commander of the Stack should the Commander fail

Member – This is a switch that is active in the stack but is not the commander or standby switch.

- Remaining switches (if any) are “Member” switches
- Only have a copy of the configuration but no knowledge of protocol state
- Will be upgraded to Standby if commander/standby fails

Stacking configuration Methods

- Plug-and-go method
- Deterministic method

plug-and-go method

Factory-reset switches

Power-off switches

Reboot

If you don't care which switch functions as the Commander and Standby member, you can use the plug-and-go method. The plug-and-go method only requires a few steps.

1. Power off all switches that will be part of the stack.
2. Install the stacking modules in the switches.
3. Power on the first switch and enable stacking if necessary. The switch will automatically reboot.
4. Power off the switch.

Repeat the process for each switch.

Next, connect the stacking cables to create your stacking topology. Always connect the stacking cables with the power off. Connecting the cables during or after a switch reboot can result in multiple stacks being formed.

Then, power on the switches. If they're all powered on at approximately the same time, the election process will begin after about 60 seconds after the switches fully reboot. The Commander and Standby will be elected and the remaining switches will be assigned a Member ID.

Continued...

Deterministic method

- Configure Commander priority
- Configure the Standby
- Configure members priority
- Configure OOBM port Member IP addresses

- 1.The Deterministic method, which results in specific switches being the stack commander and Standby and all remaining switches being stack members.
- 2.The Deterministic method will allow the administrator to specify which model of the switch that will be the commander and which model of the switch would be Standby.

CLI configurations

Plug-and-go method

- Insert the stacking module
- Factory reset the switch
- Enable stacking on the switch

```
(config)# stacking enable
```

This will save the current configuration and reboot the switch.

Continue [y/n]

```
show stacking
```

Stack ID : NO ID - will merge upon connectivity

MAC Address : f40343-3505c5

Stack Topology : No Stack Formed

Stack Status : No Stack Formed

Split Policy : One-Fragment-Up

Uptime : 0d 0h 2m

Software Version : KB.16.02.0025

Mbr

ID	Mac Address	Model	Pri	Status
----	-------------	-------	-----	--------

*1 f40343-350580 Aruba JL074A 3810M-48G-PoE+-1-slot ... 128 Commander

Continued...

- Similarly perform the step on the secondary switch in order to join the stack
- After the switch comes up then connect the stacking cable to the secondary
- The switch will experience a reboot post the stacking cable connection

Post the connection

```
stack1# stack1# stack1# show stacking
```

```
Stack ID      : 000200fd-4575a280
MAC Address   : 00fd45-75a2c4
Stack Topology : Chain
Stack Status  : Fragment Active
Split Policy  : One-Fragment-Up
Uptime       : 0d 0h 13m
Software Version : KB.16.02.0025
```

Mbr

ID	Mac Address	Model	Pri	Status
----	-------------	-------	-----	--------

*1	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot ...	128	Commander
2	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot ...	128	Missing

Plug-and-go method

After secondary switch comes up it established the connection to the commander

Stack ID : 000200fd-4575a280
MAC Address : 00fd45-75a2c4
Stack Topology : Chain
Stack Status : Active
Split Policy : One-Fragment-Up
Uptime : 0d 0h 17m
Software Version : KB.16.02.0025

Mbr

ID	Mac Address	Model	Pri	Status
----	-------------	-------	-----	--------

*1	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot ...	128	Commander
2	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot ...	128	Standby

show stacking stack-ports

1	1	Up	2	1
1	2	Down	0	0
1	3	Down	0	0
1	4	Down	0	0
2	1	Up	1	1
2	2	Down	0	0
2	3	Down	0	0
2	4	Down	0	0

--- Reverse event Log listing: Events Since Boot ---

I 09/21/18 20:19:39 00179 mgr: ST1-CMDR: SME Console redirection from member 2 - MANAGER Mode
I 09/21/18 20:17:35 00540 stacking: ST1-CMDR: Redundant Standby Management
Module syncing is complete. Configuration changes are allowed
I 09/21/18 20:17:35 03272 stacking: ST1-CMDR: Stack active
I 09/21/18 20:17:35 03260 stacking: ST2-STBY: Member booted
M 09/21/18 20:16:39 02797 chassis: ST2-STBY: Internal power supply 1 is OK.
Total fault count: 0.
M 09/21/18 20:16:39 02796 chassis: ST2-STBY: Internal power supply 1 inserted.
Total fault count: 0.
I 09/21/18 20:16:37 00540 stacking: ST1-CMDR: Redundant Standby Management

Module syncing is in progress. Configuration changes are temporarily blocked

I 09/21/18 20:16:28 00539 stacking: ST1-CMDR: Initial sync to standby starting
W 09/21/18 20:16:28 03270 stacking: ST1-CMDR: Topology is a Chain
I 09/21/18 20:16:28 00422 chassis: ST1-CMDR: Slot 2/1-24,A Ready
I 09/21/18 20:16:20 00376 chassis: ST1-CMDR: Slot 2/1-24,A Download Complete
I 09/21/18 20:16:19 00375 chassis: ST1-CMDR: Slot 2/1-24,A Downloading
I 09/21/18 20:16:19 03846 InSysProg: ST1-CMDR: Slot 2/1-24,A: Checking for firmware updates.

-- MORE --, next page: Space, next line: Enter, quit: Control-CI 09/21/18 20:16:07 03279 stacking: ST1-CMDR: Member 2 (f40343-34f900) chosen as

-- MORE --, next page: Space, next line: Enter, quit: Control-C standby. Reason: Only available standby

-- MORE --, next page: Space, next line: Enter, quit: Control-CI 09/21/18 20:16:07 02558 chassis: ST1-CMDR: Stack port 1 is now on-line.

-- MORE --, next page: Space, next line: Enter, quit: Control-CI 09/21/18 20:15:19 02559 chassis: ST1-CMDR: Stack port 1 is now off-line.

-- MORE --, next page: Space, next line: Enter, quit: Control-CI 09/21/18 20:15:14 03272 stacking: ST1-CMDR: Stack fragment active

Continued

show stacking

Stack ID : 000200fd-4575a280
MAC Address : 00fd45-75a2c4
Stack Topology : Chain
Stack Status : Active
Split Policy : One-Fragment-Up
Uptime : 0d 0h 40m
Software Version : KB.16.02.0025

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ID	Mac Address	Model	Pri	Status

1	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot ...	128	Commander
*2	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot ...	128	Standby
3	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot ...	128	Member
4	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot ...	128	Member

---- Reverse event Log listing: Events Since Boot ----

I 09/21/18 20:39:29 03125 mgr: ST1-CMDR: Startup configuration changed by SNMP.
New seq. number 17

I 09/21/18 20:39:29 02682 OOBM: ST4-MMBR: OOBM - Enabled globally.
I 09/21/18 20:39:29 02612 mgr: ST1-CMDR: chassis subsystem saved the whole running config to startup config.
I 09/21/18 20:39:29 03260 stacking: ST4-MMBR: Member booted
M 09/21/18 20:39:29 02797 chassis: ST4-MMBR: Internal power supply 1 is OK. Total fault count: 0.
M 09/21/18 20:39:29 02796 chassis: ST4-MMBR: Internal power supply 1 inserted. Total fault count: 0.
I 09/21/18 20:38:53 00068 chassis: ST4-UKWN: Slot 4/25-48,A Inserted
I 09/21/18 20:38:53 00068 chassis: ST4-UKWN: Slot 4/1-24,A Inserted
I 09/21/18 20:38:49 02558 chassis: ST4-UKWN: Stack port 2 is now on-line.
I 09/21/18 20:38:45 05047 chassis: ST4-UKWN: Member 1: flexible module JL079A in slot Expansion Module A is active.
I 09/21/18 20:38:45 02556 chassis: ST4-UKWN: Stack port 2 cable inserted.
I 09/21/18 20:38:45 05047 chassis: ST4-UKWN: Member 1: flexible module JL084A in slot Stacking Module is active.
I 09/21/18 20:38:32 05045 chassis: ST4-UKWN: Member 1: Flexible Module JL079A inserted in slot Expansion Module A

-- MORE --, next page: Space, next line: Enter, quit: Control-CI 09/21/18 20:38:26 03803 chassis: ST4-UKWN: System Self test completed on Master

I 09/21/18 20:38:26 05046 chassis: ST4-UKWN: Flexible Module JL084A inserted in slot Stacking Module
I 09/21/18 20:38:25 03802 chassis: ST4-UKWN: System Self test started on Master
I 09/21/18 20:38:24 03803 chassis: ST4-UKWN: System Self test completed on Master
I 09/21/18 20:38:24 03802 chassis: ST4-UKWN: System Self test started on Master
I 09/21/18 20:39:28 00539 stacking: ST1-CMDR: Initial sync to member 4 complete
I 09/21/18 20:39:20 00539 stacking: ST1-CMDR: Initial sync to member 4 starting
I 09/21/18 20:39:20 00422 chassis: ST1-CMDR: Slot 4/1-24,A Ready
I 09/21/18 20:39:20 00422 chassis: ST1-CMDR: Slot 4/25-48,A Ready
I 09/21/18 20:39:12 00376 chassis: ST1-CMDR: Slot 4/1-24,A Download Complete
I 09/21/18 20:39:12 00376 chassis: ST1-CMDR: Slot 4/25-48,A Download Complete
I 09/21/18 20:39:11 00375 chassis: ST1-CMDR: Slot 4/1-24,A Downloading
I 09/21/18 20:39:11 00375 chassis: ST1-CMDR: Slot 4/25-48,A Downloading
I 09/21/18 20:39:11 03846 InSysProg: ST1-CMDR: Slot 4/1-24,A: Checking for firmware updates.
I 09/21/18 20:39:11 03846 InSysProg: ST1-CMDR: Slot 4/25-48,A: Checking for firmware updates.
I 09/21/18 20:38:59 03125 mgr: ST1-CMDR: Startup configuration changed by SNMP.

CLI Configurations

- **Deterministic method**

```
switch2(config)# stacking member 1 type JL073A mac-address f40343-350480
switch2(config)# stacking member 2 priority 200
```

```
switch2(config)# show stacking
```

```
Stack ID      : 000af403-43350480
MAC Address   : f40343-3504d9
Stack Topology : Unknown
Stack Status  : Active
Split Policy   : One-Fragment-Up
Uptime        : 0d 0h 8m
Software Version : KB.16.05.0009
```

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ID	Mac Address	Model	Pri	Status
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*1	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	200	Commander
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Deterministic method

Aruba-Stack-3810M(config)# stacking member 4 type JL073A mac-address f40343-34f900

This will save the current configuration. Continue [y/n]? y

Aruba-Stack-3810M(config)# stacking member 4 priority 255

Aruba-Stack-3810M(config)# stacking member 1 type JL074A mac-address 00fd45-75a280

This will save the current configuration. Continue [y/n]? y

Aruba-Stack-3810M(config)# stacking member 1 priority 200

Aruba-Stack-3810M(config)# stacking member 2 type JL073A mac-address f40343-350480

This will save the current configuration. Continue [y/n]? y

Aruba-Stack-3810M(config)# stacking member 3 type JL074A mac-address f40343-350580

This will save the current configuration. Continue [y/n]? y

Aruba-Stack-3810M(config)# show stacking

Stack ID : 0001f403-43350580

MAC Address : f40343-3505c5

Stack Topology : Ring

Stack Status : Active

Split Policy : One-Fragment-Up

Uptime : 0d 18h 4m

Software Version : KB.16.06.0006

Member

ID	Mac Address	Model	Pri	Status
----	-------------	-------	-----	--------

1	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot...	200	Standby
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Member
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Member
*4	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	255	Commander

CLI configurations

Aruba-Stack-3810M(config)# show stacking detail

Stack ID : 0001f403-43350580

MAC Address : f40343-3505c5

Stack Topology : Ring

Stack Status : Active

Split Policy : One-Fragment-Up

Uptime : 0d 18h 7m

Software Version : KB.16.06.0006

Name : Aruba-Stack-3810M

Contact :

Location :

Member ID : 1

Mac Address : 00fd45-75a280

Type : JL074A

Model : Aruba JL074A 3810M-48G-PoE+-1-slot Switch

Priority : 200

Status : Standby

ROM Version : KB.16.01.0008

Serial Number : SG74GYX11D

Uptime : 0d 18h 7m

CPU Utilization : 0%

Memory - Total : 692,510,720 bytes

Free : 520,358,672 bytes

Stack Ports -

#1 : Inactive

#2 : Active, Peer member 4

#3 : Inactive

#4 : Active, Peer member 3

Member ID : 2

Mac Address : f40343-350480

Type : JL073A

Model : Aruba JL073A 3810M-24G-PoE+-1-slot Switch

Priority : 150

Status : Member

ROM Version : KB.16.01.0008

Serial Number : SG76GYW02X

Uptime : 0d 18h 7m

CPU Utilization : 0%

Memory - Total : 692,510,720 bytes

Free : 535,566,768 bytes

Stack Ports -

#1 : Inactive

#2 : Active, Peer member 4

#3 : Inactive

#4 : Active, Peer member 3

Member ID : 3

Mac Address : f40343-350580

Type : JL074A

Model : Aruba JL074A 3810M-48G-PoE+-1-slot Switch

Priority : 100

Status : Member

ROM Version : KB.16.01.0008

Serial Number : SG76GYX1WR

Uptime : 0d 18h 7m

CPU Utilization : 0%

Memory - Total : 692,510,720 bytes

Free : 535,566,216 bytes

Stack Ports -

#1 : Active, Peer member 1

#2 : Inactive

#3 : Active, Peer member 2

#4 : Inactive

Member ID : 4

Mac Address : f40343-34f900

Type : JL073A

Model : Aruba JL073A 3810M-24G-PoE+-1-slot Switch

Priority : 255

Status : Commander

ROM Version : KB.16.01.0008

Serial Number : SG76GYW041

Uptime : 0d 18h 7m

CPU Utilization : 0%

Memory - Total : 692,510,720 bytes

Free : 503,303,368 bytes

Stack Ports -

#1 : Inactive

#2 : Inactive

#3 : Active, Peer member 2

#4 : Active, Peer member 1

Stacking Election:

Commander elected as follows:

Choose the switch with the highest configured priority as the commander.

Out of the switches with the same “highest” priority, pick the one that was the previous active commander.

If none were the previous active commander, then pick the one that was previous Standby .

If none were the previous Standby, then pick the one that has the highest software version .

Else pick the switch with the lowest MAC address.

Standby elected as follows

Choose the switch which has the same software version as the commander.

If none have the same software version, then choose the switch with the highest configured priority as the Standby

Out of the switches with the same “highest” priority, pick the one that is at furthest distance from the commander.

Else pick the switch with the lowest MAC address

Stack ID

Stack ID:

This is the identification number of the stack (all switches in the same stack share the same stack ID).

This value set by the commander and stays with the stack. When the stack ID is initially generated, it is created using the current commander MAC address

Adding a switch to stack

Provision¹ the stack for the new switch with the following command on the stack

```
(config)#: stacking member <n> type <JxxxxA> [mac <MAC-address>]
```

I,e (config)# stacking member 3 type JL074A mac-address f40343-350580

where:

n is the stacking member number for the switch

JxxxxA is the product number of the switch (required).

Any supported model can be installed and assume this provisioned configuration. If you specify a value for this parameter, then only a switch of this specific model type can assume this provisioned configuration

(Optional) MAC-address can be specified if you want a specific switch to assume this provisioned configuration. If this value is entered, then the type value for the switch that has this MAC address must be correct, or a configuration error is logged and the switch is not allowed to join the stack.

(Optional) You can pre-configure a priority for the member switch by entering this command:

```
HP Switch(config)#: stacking member N priority X
```

I,e (config)# stacking member 3 priority 100

Where:

n is the stacking member number for the switch.

x is the priority (1 - 255, but should be less than the priority assigned to the Commander — the priority for the Standby should be the second highest in the stack; member switches can be left at the default priority value of 128).

Ensure the new member switch is factory defaulted before connecting it to stack

Redundancy switchover

```
(config)# stacking member 4 remove
The commander cannot be removed. Please failover to standby before trying
to remove it.
```

Commander cannot be removed from the stack, in order to remove it we need to move to to Standby/member using “redundancy switchover”

Mbr

ID	Mac Address	Model	Pri	Status
1	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot...	200	Standby
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Member
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Member
*4	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	255	Commander

```
(config)# stacking member 4 remove
The commander cannot be removed. Please failover to standby before trying
to remove it.
```

Console to standby and execute

```
Aruba-Stack-3810M(config)# redundancy switchover
Aruba-Stack-3810M(config)# redundancy switchover
The commander will now reboot from the secondary image. The standby
will become the commander. Do you want to continue [y/n]? y
```

Now stack member 1 has become the commander and priority switch has become the standby

Mbr

ID	Mac Address	Model	Pri	Status
*1	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot...	200	Commander
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Standby
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Member
4	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	255	Member

Remove and renumber the member

```
Aruba-Stack-3810M(config)# stacking member 4 remove
```

The specified stack member will be removed from the stack and its configuration will be erased. The resulting configuration will be saved. The stack member will be shutdown. Continue [y/n]? y

Mbr					
ID	Mac Address	Model	Pri Status		

*1	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot...	200	Commander	
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Standby	
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Member	
4	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	255	Member	

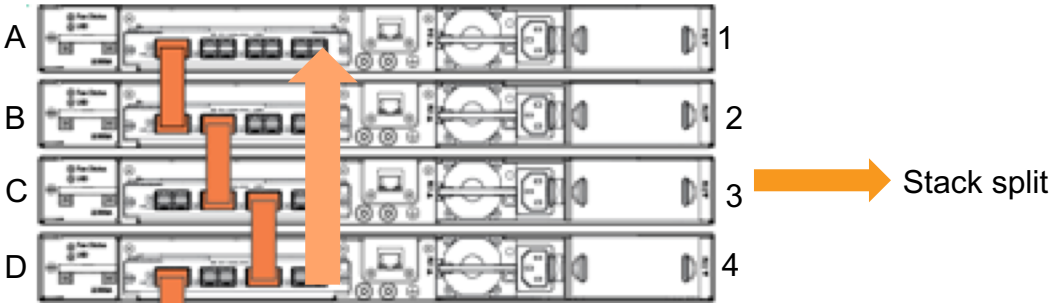
Mbr						
ID	Mac Address	Model	Pri Status			

*1	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot...	200	Commander		
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Standby		
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Member		

We cannot remove a stack member if that would result in the split stack

```
Aruba-Stack-3810M(config)# stacking member 3 remove
```

Reloading this member is not allowed since it would result in a stack split.



Applying redundancy switchover

Will perform a switch over now so we can remove the member

```
Aruba-Stack-3810M(config)# redundancy switchover
```

The commander will now reboot from the secondary image. The standby will become the commander. Do you want to continue [y/n]?

Mbr

ID	Mac Address	Model	Pri	Status
1	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot...	200	Commander
*2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Standby
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Member



Mbr

ID	Mac Address	Model	Pri	Status
1	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot...	200	Member
*2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Commander
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Standby

Mbr

ID	Mac Address	Model	Pri	Status
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Commander
*3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Standby

```
Aruba-Stack-3810M(config)# stacking member 1 remove
```

The specified stack member will be removed from the stack and its configuration will be erased. The resulting configuration will be saved. The stack member will be shutdown. Continue [y/n]? y



Renumbering the members to join the stack

The removed members will be unresponsive from stack on console

Renumber the stack 4 to 1 and 1 to 4

Aruba-Stack-3810M(config)# stacking member 1 type

JL071A
JL072A
JL073A
JL074A
JL075A
JL076A

Aruba-Stack-3810M(config)# stacking member 1 type JL073A mac-address f40343-34f900
This will save the current configuration. Continue [y/n]? y

Aruba-Stack-3810M(config)# stacking member 4 type JL074A mac-address 00fd45-75a280
This will save the current configuration. Continue [y/n]?

Mbr

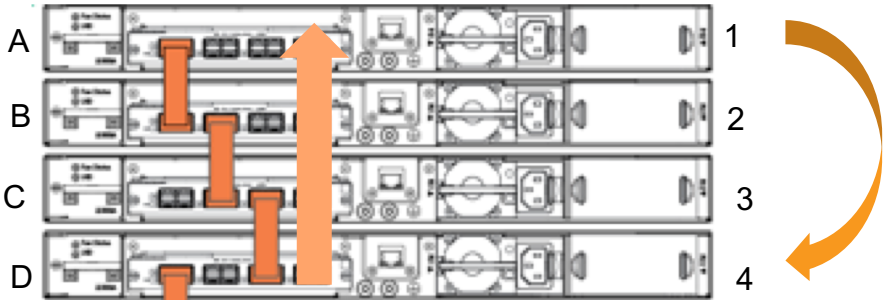
ID	Mac Address	Model	Pri	Status
1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Not Joined
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Commander
*3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Standby
4	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Not Joined

After connecting the members to the stack

Aruba-Stack-3810M(config)#

Mbr

ID	Mac Address	Model	Pri	Status
1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Member
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Commander
*3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Standby
4	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Member



Mbr

ID	Mac Address	Model	Pri	Status
1	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot...	200	Standby
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Member
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Member
*4	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	255	Commander

Replacing a faulty member

(config)# stacking member 4 remove

Aruba-Stack-3810M# show stacking

Stack ID : 0001f403-43350580

MAC Address : f40343-3505c5

Stack Topology : Chain

Stack Status : Fragment Active

Split Policy : One-Fragment-Up

Uptime : 1d 0h 37m

Software Version : KB.16.06.0006

Mbr

ID	Mac Address	Model	Pri	Status
*1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Member
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Commander
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Standby
4	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Missing

Aruba-Stack-3810M(config)# stacking member 4 type **JL074A** mac-address 00fd45-78f480

This will save the current configuration. Continue [y/n]? y

Status not joined

Aruba-Stack-3810M(config)# show stacking

Stack ID : 0001f403-43350580

MAC Address : f40343-3505c5

Stack Topology : Chain

Stack Status : Fragment Active

Split Policy : One-Fragment-Up

Uptime : 1d 1h 10m

Software Version : KB.16.06.0006

Mbr

ID	Mac Address	Model	Pri	Status
*1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Member
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Commander
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Standby
4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Not Joined

- Verify the the switch is factory defaulted before connecting
- Check the connecting switch is in the same supported J series using below command

Aruba-Stack-3810M(config)# stacking member 1 type

JL071A

JL072A

JL073A

JL074A

JL075A

JL076A

- Add the new member to the existing stack which would result in reboot before joining the stack

Member joining the stack

New member trying to join the stack
The software version of this switch doesn't match the stack commander,
waiting for reboot...

Mbr

ID	Mac Address	Model	Pri	Status

*1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Member
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Commander
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Standby
4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Member

- We can add the new member just by adding the type

Aruba-Stack-3810M(config)# stacking member 5 type JL074A

This will save the current configuration. Continue [y/n]? y

Aruba-Stack-3810M(config)# show stacking

Stack ID : 0001f403-43350580

MAC Address : f40343-3505c5

Stack Topology : Chain

Stack Status : Active

Split Policy : One-Fragment-Up

Uptime : 1d 1h 27m

Software Version : KB.16.06.0006

Mbr

ID	Mac Address	Model	Pri	Status

*1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Member
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Commander
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Standby
4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Member
5		Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Not Joined

MAC address will be learnt once the new member is installed in stack

Stack fragment

This detection logic, when it sees that one or more switches of the stack are missing and unreachable, it takes a decision whether the remaining switches (called a stack fragment) constitute a greater stack than the switches that are missing.

When the lesser fragment is re-connected to the greater stack fragment, the switches will reboot and join the stack with the configuration available on the greater fragment

All-Fragments-Up. With this setting, all fragments of a split-stack would continue forwarding traffic. Configuration changes would also be allowed on all fragments

If the user performs any configuration changes on more than one fragment, the merge of these fragments WILL NOT be automatic when reconnected. The two fragments will continue switching traffic independently. The user would be required to explicitly execute manager-mode command “stacking factory-reset”

If the user has not made any configuration changes on any fragment, the fragments will merge automatically when reconnected.

The stack will never become an “inactive fragment” if the “all-fragments-up”

If user issued a “stacking set-stack” command on the split condition the Inactive fragment can become active

```
Aruba-Stack-3810M# show stacking
Stack ID      : 0001f403-43350580
MAC Address   : f40343-3505c5
Stack Topology : Chain
Stack Status  : Fragment Inactive
Split Policy  : One-Fragment-Up
Uptime       : 0d 0h 9m
Software Version : KB.16.06.0006
Mbr
ID Mac Address Model Pri Status
-----
1 f40343-34f900 Aruba JL073A 3810M-24G-PoE+-1-slot... 200 Missing
3 f40343-350580 Aruba JL074A 3810M-48G-PoE+-1-slot... 100 Standby
4 00fd45-78f480 Aruba JL074A 3810M-48G-PoE+-1-slot... 250 Missing
*5 f40343-350480 Aruba JL073A 3810M-24G-PoE+-1-slot... 128 Commander
```

```
Aruba-Stack-3810M# stacking set-stack
This stack will be rebooted and will become a new Active Stack
with a new stack ID. Continue [y/n]? y
```



```
Aruba-Stack-3810M# show stacking
Stack ID      : 0011f403-43350480
MAC Address   : f40343-3505c4
Stack Topology : Chain
Stack Status  : Active
Split Policy  : One-Fragment-Up
Uptime       : 0d 0h 4m
Software Version : KB.16.06.0006
Mbr
ID Mac Address Model Pri Status
-----
1 f40343-34f900 Aruba JL073A 3810M-24G-PoE+-1-slot... 200 Not Joined
3 f40343-350580 Aruba JL074A 3810M-48G-PoE+-1-slot... 100 Commander
4 00fd45-78f480 Aruba JL074A 3810M-48G-PoE+-1-slot... 250 Not Joined
*5 f40343-350480 Aruba JL073A 3810M-24G-PoE+-1-slot... 128 Standby
```

Stack-fragment

Aruba-Stack-3810M(config)# show stacking

Stack ID : 0001f403-43350580

MAC Address : f40343-3505c5

Stack Topology : Chain

Stack Status : Active

Split Policy : One-Fragment-Up

Uptime : 1d 2h 19m

Software Version : KB.16.06.0006

Mbr

ID	Mac Address	Model	Pri	Status
----	-------------	-------	-----	--------

*1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Member
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Commander
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Standby
4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Member

Aruba-Stack-3810M(config)# stacking split-policy all-fragments-up

Aruba-Stack-3810M(config)# show stacking

Stack ID : 0001f403-43350580

MAC Address : f40343-3505c5

Stack Topology : Chain

Stack Status : Fragment Active

Split Policy : All-Fragments-Up

Uptime : 1d 2h 24m

Software Version : KB.16.06.0006

Mbr

ID	Mac Address	Model	Pri	Status
----	-------------	-------	-----	--------

1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Missing
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Commander
*3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Standby
4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Member

Aruba-Stack-3810M(config)# stacking split-policy one-fragment-up

Aruba-Stack-3810M(config)# show stacking

Stack ID : 0001f403-43350580

MAC Address : f40343-3505c5

Stack Topology : Chain

Stack Status : Fragment Active

Split Policy : One-Fragment-Up

Uptime : 1d 2h 26m

Software Version : KB.16.06.0006

Mbr

ID	Mac Address	Model	Pri	Status
----	-------------	-------	-----	--------

1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Missing
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Commander
*3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Standby
4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Member

Aruba-Stack-3810M# show stacking

Stack ID : 0001f403-43350580

MAC Address : f40343-3505c5

Stack Topology : Chain

Stack Status : Fragment Inactive

Split Policy : One-Fragment-Up

Uptime : 0d 4h 5m

Software Version : KB.16.06.0006

Mbr

ID	Mac Address	Model	Pri	Status
----	-------------	-------	-----	--------

1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Missing
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Commander
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Missing
4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Missing

OOBM (Out-Of-Band-Management)

When using stacking, the user often does not know which switch is the “commander switch” at any given point of time; therefore, any OOBM port may be used to manage the whole stack

The Stacking OOBM Discovery Protocol is designed for;

- Discovering OOBM ports on the same network
- Discovering other members of a split stack
- Helping to make decision on Active Lesser Stack

Thus the overall design of the protocol is Broadcast (at appropriate time) packets from an OOBM port. No acknowledgement of packets.
The discovery packets will be Layer 2 packets. They will be broadcasted with commander’s OOBM port MAC as source MAC address.

- Packets will be sent out with a 30 second interval. Send a packet out of the commander’s OOBM port;
- Mark down all OOBM ports it arrives on as duplicative ports (and don’t send out packets from them);
- Send the next packet out of the next OOBM port that is not marked as duplicative port yet;
- Repeat (up to 10 times maximum) until all OOBM ports have had a packet sent out, or have been marked as duplicative;

Packets will be resent on:

- Any topology change (member joins or leaves stack, commander changes);
- Any topology change has been received from another switch, that indicates that the switch is using the commander’s OOBM MAC address or commander’s OOBM IP address;
- If switch decides to become an active “lesser” stack.

The commander will have full control of the Stacking OOBM discovery protocol.

The commander will forward the results of the Stacking OOBM Discovery Protocol to all the members if there is a change. As a result, each member will have last information from Stacking OOBM Discovery protocol.
The protocol doesn’t become active until a commander is elected

OOBM during split situation

Aruba-Stack-3810M# show stacking

Stack ID : 0001f403-43350580

MAC Address : f40343-3505c5

Stack Topology : Chain

Stack Status : Fragment Active

Split Policy : One-Fragment-Up

Uptime : 0d 1h 41m

Software Version : KB.16.06.0006

Mbr

ID	Mac Address	Model	Pri	Status
1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Standby
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Missing
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Member
4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Commander

Aruba-Stack-3810M# **show oobm discovery**

Active Stack Fragment(local)

IP Address : 10.10.10.1

Mbr Mac Address Status

ID

4 00fd45-78f480 Commander
1 f40343-34f900 Member
3 f40343-350580 Member

Inactive Stack Fragment(discovered)

IP Address : 10.10.10.4

Mbr Mac Address Status

ID

2 f40343-350480 Commander

Member console

Aruba-Stack-3810M# show stacking

Stack ID : 0001f403-43350580

MAC Address : f40343-3505c5

Stack Topology : Chain

Stack Status : Fragment Active

Split Policy : One-Fragment-Up

Uptime : 0d 1h 44m

Software Version : KB.16.06.0006

Mbr

ID	Mac Address	Model	Pri	Status
1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Standby
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Missing
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Member
*4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Commander

OOBM discovery

From commander:

Aruba-Stack-3810M# show stacking
Stack ID : 0001f403-43350580
MAC Address : f40343-3505c5
Stack Topology : Chain
Stack Status : Fragment Active
Split Policy : One-Fragment-Up
Uptime : 0d 5h 34m
Software Version : KB.16.06.0006

Mbr

ID	Mac Address	Model	Pri	Status
1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Standby
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Missing
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Member
*4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Commander

From the lost member:

Aruba-Stack-3810M# show stacking
Stack ID : 0001f403-43350580
MAC Address : f40343-3505c5
Stack Topology : Chain
Stack Status : Fragment Inactive
Split Policy : One-Fragment-Up
Uptime : 0d 4h 1m
Software Version : KB.16.06.0006

Mbr

ID	Mac Address	Model	Pri	Status
1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Missing
*2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Commander
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Missing
4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Missing

Accessed via OOBM ip interface of member

Aruba-Stack-3810M# show stacking
Stack ID : 0001f403-43350580
MAC Address : f40343-3505c5
Stack Topology : Chain
Stack Status : Fragment Inactive
Split Policy : One-Fragment-Up
Uptime : 0d 4h 5m
Software Version : KB.16.06.0006

Mbr

ID	Mac Address	Model	Pri	Status
1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Missing
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Commander
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Missing
4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Missing

Aruba-Stack-3810M# show oobm discovery
Inactive Stack Fragment(local)
IP Address : 10.10.10.4
Mbr Mac Address Status
ID

2 f40343-350480 Commander

Active Stack Fragment(discovered)
IP Address : 10.10.10.1
Mbr Mac Address Status
ID

4 00fd45-78f480 Commander
1 f40343-34f900 Member
3 f40343-350580 Member

OOBM Global access

Aruba-Stack-3810M# show oobm discovery
Active Stack Fragment(local)
IP Address : 10.10.10.1
Mbr Mac Address Status
ID

4 00fd45-78f480 Commander
1 f40343-34f900 Member
3 f40343-350580 Member

Inactive Stack Fragment(discovered)
IP Address : 10.10.10.4
Mbr Mac Address Status
ID

2 f40343-350480 Commander

Troubleshooting stacking

Here member 2 stack connection was pulled down manually

Mbr				
ID	Mac Address	Model	Pri	Status

1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Standby Booting
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Missing
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Member
*4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Commander

Run the RMON logs to instantly check the events

Show logging -r -s

```
I 09/24/18 15:44:27 03260 stacking: ST4-CMDR: Member booted
I 09/24/18 15:44:27 03261 stacking: ST4-CMDR: Member active
I 09/24/18 15:44:27 03401 crypto: ST4-CMDR: Function POWER UP passed selftest.
I 09/24/18 15:44:26 02682 OOBM: ST3-MMBR: OOBM - Enabled globally.
I 09/24/18 15:44:27 00539 stacking: ST4-CMDR: Initial sync to member 3 complete
I 09/24/18 15:44:26 00539 stacking: ST4-CMDR: Initial sync to member 3 starting
I 09/24/18 15:44:26 00539 stacking: ST4-CMDR: Initial sync to standby starting
I 09/24/18 15:44:25 00539 stacking: ST1-MMBR: Initial sync to member 3 starting
I 09/24/18 15:44:25 03260 stacking: ST3-MMBR: Member booted
W 09/24/18 15:44:25 03270 stacking: ST4-CMDR: Topology is a Chain
I 09/24/18 15:44:25 03279 stacking: ST4-CMDR: Member 1 (f40343-34f900) chosen as standby. Reason: Highest switch priority
I 09/24/18 15:44:25 00803 usb: ST4-CMDR: port enabled.
I 09/24/18 15:44:25 00110 telnet: ST4-CMDR: telnetd service enabled
I 09/24/18 15:44:25 00116 telnet: ST4-CMDR: telnetd service enabled on OOBM
I 09/24/18 15:44:24 02712 console: ST4-CMDR: USB console cable disconnected
I 09/24/18 15:44:24 02712 console: ST4-CMDR: USB console cable disconnected
I 09/24/18 15:44:24 00061 system: ST4-CMDR:
I 09/24/18 15:44:24 03267 stacking: ST4-CMDR: Failover occurred
I 09/24/18 15:44:24 03272 stacking: ST4-STBY: Stack fragment active
```

```
W 09/24/18 15:44:24 03270 stacking: ST4-STBY: Topology is a Chain
09/24/18 15:44:24 03278 stacking: ST4-STBY: Member 4 (00fd45-78f480) elected as commander. Reason: Standby takeover
W 09/24/18 15:44:24 03258 stacking: ST4-STBY: Commander switch with Member ID 2 removed due to loss of communication
I 09/24/18 15:44:24 02559 chassis: ST1-MMBR: Stack port 4 is now off-line.
I 09/24/18 15:44:19 02557 chassis: ST2-CMDR: Stack port 4 cable removed.
I 09/24/18 15:44:15 02556 chassis: ST2-CMDR: Stack port 4 cable inserted.
W 09/24/18 15:44:10 05227 activate: ST2-CMDR: Time synchronization failed; retry time sync after 60 seconds.
W 09/24/18 15:44:10 05626 activate: ST2-CMDR: Time sync with HTTP server failed.
I 09/24/18 15:44:08 05625 activate: ST2-CMDR: Trying to sync switch time with HTTP server.
W 09/24/18 15:44:08 05626 activate: ST2-CMDR: Time sync with NTP server failed.
I 09/24/18 15:44:06 05625 activate: ST2-CMDR: Trying to sync switch time with NTP server.
I 09/24/18 15:43:35 02557 chassis: ST2-CMDR: Stack port 3 cable removed.
I 09/24/18 15:43:35 02559 chassis: ST2-CMDR: Stack port 3 is now off-line.
W 09/24/18 15:43:35 03270 stacking: ST2-CMDR: Topology is a Chain
W 09/24/18 15:43:06 05227 activate: ST2-CMDR: Time synchronization failed; retry time sync after 60 seconds.
```


Adding a mismatch MAC-address

```
Aruba-Stack-3810M(config)# stacking member 2 type JL073A mac-address f40343-350470
```

```
This will save the current configuration. Continue [y/n]? y
```

```
Aruba-Stack-3810M(config)# show stacking
```

```
Stack ID      : 0001f403-43350580
MAC Address   : f40343-3505c5
Stack Topology : Chain
Stack Status  : Active
Split Policy  : One-Fragment-Up
Uptime       : 0d 3h 13m
Software Version : KB.16.06.0006
```

Member

ID	Mac Address	Model	Pri	Status
1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Standby
2	f40343-350470	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Not Joined
*3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Member
4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Commander

Stacking added based on the plug & play method

Member

ID	Mac Address	Model	Pri	Status
1	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Standby
2	f40343-350470	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Not Joined
*3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Member
4	00fd45-78f480	Aruba JL074A 3810M-48G-PoE+-1-slot...	128	Commander
5	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	128	Member

Upgrade

KB.16.05.0009 to KB.16.06.0006

Load the software on the commander using TFTP/ USB/ Xmodem

Aruba-Stack-3810M# show flash Image

```
-----
Primary Image   : 33518097 06/20/18 KB.16.05.0009
Secondary Image : 33733822 06/22/18 KB.16.06.0006
```

Boot ROM Version

```
-----
Primary Boot ROM Version : KB.16.01.0008
Secondary Boot ROM Version : KB.16.01.0008
Default Boot Image   : Primary
Default Boot ROM     : Primary
```

Commander:

Aruba-Stack-3810M# boot system flash secondary

Aruba-Stack-3810M# boot system flash secondary This will reboot the system from the secondary image.

Continue (y/n)? Y

All the members will download the firmware from the commander

show stacking

```
Stack ID       : 0001f403-43350580
MAC Address    : f40343-3505c5
Stack Topology : Ring
Stack Status   : Active
Split Policy   : One-Fragment-Up
Uptime        : 0d 0h 14m
```

Software Version : KB.16.06.0006

Mbr

ID	Mac Address	Model	Pri	Status
----	-------------	-------	-----	--------

1	00fd45-75a280	Aruba JL074A 3810M-48G-PoE+-1-slot...	200	Standby
2	f40343-350480	Aruba JL073A 3810M-24G-PoE+-1-slot...	150	Member
3	f40343-350580	Aruba JL074A 3810M-48G-PoE+-1-slot...	100	Member
*4	f40343-34f900	Aruba JL073A 3810M-24G-PoE+-1-slot...	255	Commander

Troubleshooting Stack issues

Check for Bad cabling & LED status

Ensure that the cable is firmly connected at both ends

If the problem continues replace the cable in connectivity

If the problem continues, validate that it's not a faulty module port using a known good cable

Collect:

show stacking

show system

show modules

show boot history

show tech

Event Log

Show logging -r -s

```
Aruba-Stack-3810M# show stacking stack-ports
Member Stacking Port State Peer Member Peer Port
```

Member	Stacking	Port	State	Peer Member	Peer Port
1	1	Up	4	1	
1	2	Down	0	0	
1	3	Down	0	0	
1	4	Down	0	0	
3	1	Down	0	0	
3	2	Down	0	0	
3	3	Down	0	0	
3	4	Down	0	0	
4	1	Up	1	1	
4	2	Down	0	0	
4	3	Down	0	0	
4	4	Down	0	0	
5	1	Down	0	0	
5	2	Down	0	0	
5	3	Down	0	0	
5	4	Down	0	0	

```
Aruba-Stack-3810M# show logging -r -s
```

```
Keys: W=Warning I=Information
```

```
M=Major D=Debug E=Error
```

```
---- Reverse event Log listing: Events Since Boot ----
```

```
I 09/25/18 02:50:08 02557 chassis: ST1-STBY: Stack port 4 cable removed.
```

```
W 09/25/18 02:50:08 03258 stacking: ST1-STBY: Member switch with Member ID 5  
removed due to loss of communication
```

```
W 09/25/18 02:50:08 03258 stacking: ST1-STBY: Member switch with Member ID 3  
removed due to loss of communication
```

```
I 09/25/18 02:50:08 02559 chassis: ST1-STBY: Stack port 4 is now off-line.
```

```
W 09/25/18 02:50:08 03258 stacking: ST4-CMDR: Member switch with Member ID 5  
removed due to loss of communication
```

```
I 09/25/18 02:50:08 03272 stacking: ST4-CMDR: Stack fragment active
```

```
W 09/25/18 02:50:08 03258 stacking: ST4-CMDR: Member switch with Member ID 3  
removed due to loss of communication
```

```
I 09/25/18 02:49:01 05101 amp-server: ST4-CMDR: AMP server configuration is  
disabled due to first configuration.
```

```
I 09/25/18 02:47:25 02559 chassis: ST3-MMBR: Stack port 1 is now off-line.
```

```
I 09/25/18 02:47:25 02557 chassis: ST4-CMDR: Stack port 4 cable removed.
```

```
I 09/25/18 02:47:25 02559 chassis: ST4-CMDR: Stack port 4 is now off-line.
```

When to choose BPF & FPS

FPS	BPS
Low cost	Performance
Simplicity	Reliability
Multi-wiring	stack up to 10 switches

QUESTIONS?

THANK YOU!