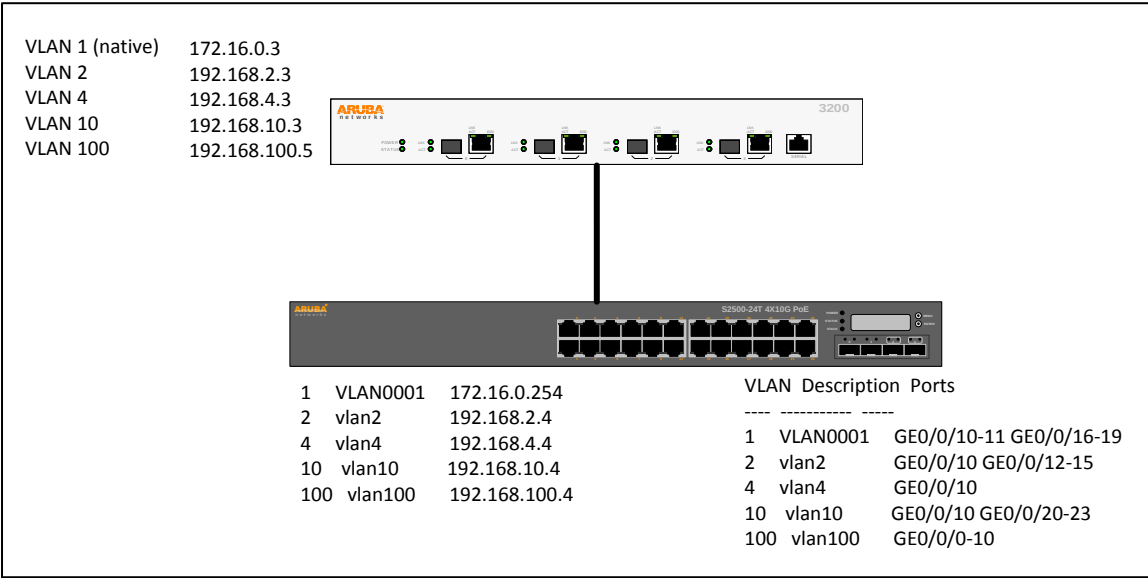


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Example Network

Basic VLAN Configuration

This will get you started, refer to the **User Guide** for a complete description of the below and the full list of commands in the Aruba MAS switch platforms.

Create a VLAN

```
(ArubaS3500-24P) (config) #vlan 4
(ArubaS3500-24P) (VLAN "4") #description vlan4
(ArubaS3500-24P) (VLAN "4") #exit
(ArubaS3500-24P) (config) #
```

Apply an IP address to the VLAN

```
(The name of the interface-group profile is in BOLD)
(ArubaS3500-24P) (config) #interface vlan 4
(ArubaS3500-24P) (vlan "4") #ip address 192.168.4.10 255.255.255.0
(ArubaS3500-24P) (vlan "4") #mtu 1500
(ArubaS3500-24P) (vlan "4") #exit
(ArubaS3500-24P) (config) #
```

Create a switching-profile for the VLAN

(The name of the profile is in BOLD)

```
(ArubaS3500-24P) (config) #interface-profile switching-profile vlan4-sw
(ArubaS3500-24P) (switching profile "vlan4") #switchport-mode access
(ArubaS3500-24P) (switching profile "vlan4") #access-vlan 4
(ArubaS3500-24P) (switching profile "vlan4") #native-vlan 4
(ArubaS3500-24P) (switching profile "vlan4") #exit
(ArubaS3500-24P) (config) #
```

```
(ArubaS3500-24P) #configure terminal
Enter Configuration commands, one per line. End with CNTL/Z

(ArubaS3500-24P) (config) #vlan 10
(ArubaS3500-24P) (VLAN "10") #description vlan10
(ArubaS3500-24P) (VLAN "10") #exit
(ArubaS3500-24P) (config) #
(ArubaS3500-24P) (config) #interface vlan 10
(ArubaS3500-24P) (vlan "10") #ip address 192.168.10.10 255.255.255.0
(ArubaS3500-24P) (vlan "10") #mtu 1500
(ArubaS3500-24P) (vlan "10") #exit
(ArubaS3500-24P) (config) #
(ArubaS3500-24P) (config) #interface-profile switching-profile vlan10-sw
(ArubaS3500-24P) (switching profile "vlan10-sw") #switchport-mode access
(ArubaS3500-24P) (switching profile "vlan10-sw") #native-vlan 10
(ArubaS3500-24P) (switching profile "vlan10-sw") #access-vlan 10
(ArubaS3500-24P) (switching profile "vlan10-sw") #exit
(ArubaS3500-24P) (config) #
(ArubaS3500-24P) (config) #interface-group gigabitethernet vlan10-grp
(ArubaS3500-24P) (gigabitethernet "vlan10-grp") #apply-to 0/0/8-0/0/11
(ArubaS3500-24P) (gigabitethernet "vlan10-grp") #trusted port
(ArubaS3500-24P) (gigabitethernet "vlan10-grp") #no shutdown
(ArubaS3500-24P) (gigabitethernet "vlan10-grp") #switching-profile vlan10-sw
(ArubaS3500-24P) (gigabitethernet "vlan10-grp") #exit
(ArubaS3500-24P) (config) #
```

Only One of the next steps necessary

Apply the VLAN and switch-profile to a single interface or multiple interfaces

Add switch-profile to ONE gig interface (for adding to a single interface)

```
(ArubaS3500-24P) (config) #interface gigabitethernet 0/0/0
(ArubaS3500-24P) (gigabitethernet "0/0/8") #switching-profile vlan4-sw
(ArubaS3500-24P) (gigabitethernet "0/0/8") #exit
(ArubaS3500-24P) (config) #
```

Create interface-group to additional multiple gig interfaces (for adding to multiple interfaces)

(The name of the interface-group profile is in BOLD)

```
(ArubaS3500-24P) (config) #interface-group gigabitethernet vlan4-grp
(ArubaS3500-24P) (gigabitethernet "vlan4") #apply-to 0/0/0-0/0/3
(ArubaS3500-24P) (gigabitethernet "vlan4") #trusted port
(ArubaS3500-24P) (gigabitethernet "vlan4") #no shutdown
(ArubaS3500-24P) (gigabitethernet "vlan4") #switching-profile vlan4
(ArubaS3500-24P) (gigabitethernet "vlan4") #exit
(ArubaS3500-24P) (config) #exit
(ArubaS3500-24P) #write memory
```

Adding / Removing a port to an interface-group

```
(ArubaS3500-24P) (gigabitethernet "vlan4") #apply-to [add | remove] <interface-list>
```

Create a Trunk port for VLAN's

(The name of the interface-group profile is in BOLD)

Adjust as necessary for native vlan, ports, etc.

```
(ArubaS3500-24P) (config) #interface-profile switching-profile TRUNK
```

```
(ArubaS3500-24P) (switching profile "TRUNK") #switchport-mode trunk
```

```
(ArubaS3500-24P) (switching profile "TRUNK") #native-vlan 2
```

```
(ArubaS3500-24P) (switching profile "TRUNK") #trunk allowed vlan all
```

```
(ArubaS3500-24P) (switching profile "TRUNK") #!
```

```
(ArubaS3500-24P) (config) #interface gigabitethernet 0/0/10
```

```
(ArubaS3500-24P) (gigabitethernet "0/0/10") #switching-profile TRUNK
```

```
(ArubaS3500-24P) (gigabitethernet "0/0/10") #!
```

```
(ArubaS3500-24P) (config) #
```

```
(ArubaS3500-24P) (config) #write memory
```

DHCP

```
(ArubaS3500-24P) (config) #ip dhcp pool vlan20-pool
```

```
(ArubaS3500-24P) (dhcp server profile "vlan20-pool") #?
```

clone	Copy data from another dhcp server profile
-------	--

default-router	DHCP default router in A.B.C.D format
----------------	---------------------------------------

dns-server	DNS servers in A.B.C.D format
------------	-------------------------------

domain-name	Specify domain name
-------------	---------------------

exclude-address	Configure exclude address
-----------------	---------------------------

lease	DHCP server pool lease time (Default: 12 hours)
-------	---

netbios-name-server	Configure netbios name servers in A.B.C.D format
---------------------	--

network	DHCP server network pool
---------	--------------------------

no	Delete Command
----	----------------

option	Configure server option
--------	-------------------------

vendor-class-identifi..	Configure vendor-class-identifier (Default: ArubaAP)
-------------------------	--

Basic Route Commands

Accessing the IP route commands are available through the “ip-profile” in the Configuration mode

Create a Default Route

```
(ArubaS3500-24P) (config) #ip-profile
```

```
(ArubaS3500-24P) (ip-profile) #?
```

controller-ip	Configure controller IP
default-gateway	Specify default gateway
no	Delete Command
prefix-list	Configure prefix list
route	Configure static route A.B.C.D

```
(ArubaS3500-24P) (ip-profile) #default-gateway 192.168.2.3
```

Create / Add a Static Route

While in the “ip-profile”

Network, Netmask, Next Hop IP

```
(ArubaS3500-24P) (ip-profile) #route 192.168.1.0 255.255.255.0 192.168.100.3
```

```
(ArubaS3500-24P) (ip-profile) #
```

show ip route

Display the connected and know IP routes

```
(ArubaS3500-24P) #show ip route
```

Codes: C - connected

O - OSPF, O(IA) - OSPF inter area

O(E1) - OSPF external type 1, O(E2) - OSPF external type 2

O(N1) - OSPF NSSA type 1, O(N2) - OSPF NSSA type 2

M - mgmt, S - static, * - candidate default

D - DHCP

Gateway of last resort is 192.168.2.3 to network 0.0.0.0 at cost 0

```
S    * 0.0.0.0 /0 [0] via 192.168.2.3
```

```
S    192.168.1.0/24 [0] via 192.168.100.3
```

```
C    192.168.2.0/24 is directly connected: vlan2
```

```
C    192.168.2.4/32 is directly connected: vlan2
```

```
C    192.168.4.0/24 is directly connected: vlan4
```

```
C    192.168.4.4/32 is directly connected: vlan4
```

```
C    192.168.10.0/24 is directly connected: vlan10
```

```
C    192.168.10.4/32 is directly connected: vlan10
```

```
C    192.168.100.0/24 is directly connected: vlan100
```

```
C    192.168.100.4/32 is directly connected: vlan100
```

show ip interface brief

Display a quick review of the IP addresses assigned to VLAN's and the status

(ArubaS3500-24P) #show ip interface brief

Interface	IP Address / IP Netmask	Admin	Protocol
vlan 1	unassigned / unassigned	Up	Up
vlan 10	192.168.10.4 / 255.255.255.0	Up	Up
vlan 100	192.168.100.4 / 255.255.255.0	Up	Up
vlan 2	192.168.2.4 / 255.255.255.0	Up	Up
vlan 4	192.168.4.4 / 255.255.255.0	Up	Up
mgmt	172.16.0.254 / 255.255.255.0	Up	Down

Useful Display Commands

Note the similarity to other switch CLI commands you may already be familiar with

show vlan

Show the vlan's defined and ports assigned

(ArubaS3500-24P) #show vlan

VLAN CONFIGURATION

```
-----
```

VLAN	Description	Ports
1	VLAN0001	GE0/0/10-11 GE0/0/16-19
2	vlan2	GE0/0/10 GE0/0/12-15
4	vlan4	GE0/0/10
10	vlan10	GE0/0/10 GE0/0/20-23
100	vlan100	GE0/0/0-10

show vlan detail

Show vlan active ports, access/ trunk ports

(ArubaS3500-24P) #show vlan detail

U - Untagged member, T - Tagged member

* - Active interface

Dot1q tag: 100, Description: vlan100

Number of interfaces: 11, Active: 2, Non-Blocking: 2

VLAN membership:

Access:

GE0/0/0(U) GE0/0/1(U) GE0/0/2*(U) GE0/0/3(U)

GE0/0/4(U) GE0/0/5(U) GE0/0/6(U) GE0/0/7(U)

GE0/0/8(U) GE0/0/9(U)

Trunk:

GE0/0/10*(T)

show vlan extensive

Show tagged/untagged, trusted, access/trunk, IGMP, MAC aging

(ArubaS3500-24P) #show vlan extensive

Dot1q tag: 1, Description: VLAN0001

IGMP-snooping profile name: igmp-snooping-factory-initial

IGMP-snooping: Enabled

IGMP-snooping proxy: Disabled

MSTP instance: 0

MAC aging time: 5 minutes

Number of interfaces: 6, Active: 1, Non-Blocking: 1

VLAN membership:

GE0/0/10* Trunk Trusted Untagged

GE0/0/10* Trunk Trusted Tagged

GE0/0/11 Access Trusted Untagged

GE0/0/16 Access Trusted Untagged

GE0/0/17 Access Trusted Untagged

GE0/0/18 Access Trusted Untagged

show interface vlan xxx

Display administrative status, Line protocol, IP address, encapsulation and MTU size

```
(ArubaS3500-24P) #show interface vlan 100
VLAN100 is administratively Up, Line protocol is Up
Hardware is CPU Interface, Address is 00:0b:86:6b:3d:80
Description: 802.1Q VLAN
Internet address is 192.168.100.4, Netmask is 255.255.255.0
IPv6 link-local address is fe80::b:8600:646b:3d80
Global Unicast address(es):
Routing interface is enabled, Forwarding mode is enabled
Directed broadcast is disabled, BCMC Optimization disabled
Encapsulation 802, Loopback not set
Interface index: 50331748
MTU 1500 bytes
```

show vlan-profile

Display additional profiles assigned to a VLAN

```
(ArubaS3500-24P) #show vlan-profile ?
igmp-snooping-profile    Show an igmp-snooping-profile
mld-snooping-profile     Show a mld-snooping-profile
pvst-profile             Show a pvst-profile
```

show interface gigabitethernet X/X/X

Display a specific port configuration, input/output counters, frame stats

```
(ArubaS3500-24P) #show interface gigabitethernet 0/0/10
GE0/0/10 is administratively Up, Link is Up, Line protocol is Up
Hardware is Gigabit Ethernet, Interface is GE0/0/10, Address is 00:0b:86:6b:3d:8c
Encapsulation ARPA, Loopback not set
Configured: duplex (Auto), Speed (Auto), FC (Off), Autoneg (On)
Negotiated: duplex (Full), Speed (1 Gbps)
Interface index: 11
MTU 1514 bytes
Link flaps: 1
Flags: Trunk, Trusted
Link status last changed:    0d 01:37:04 ago
Last update of counters:    0d 00:00:06 ago
Last clearing of counters:   0d 01:38:25 ago
Statistics:
  Received 6334 frames, 835698 octets
  0 pps, 0 bps
  3804 unicast, 10 multicast, 2520 broadcast
```

0 runs, 0 giants, 0 throttles
0 error octets, 0 CRC frames
Transmitted 9653 frames, 1868419 octets
0 pps, 489 bps
5321 unicast, 3276 multicast, 1056 broadcast
0 throttles, 0 errors octets, 0 deferred
0 collisions, 0 late collisions

PoE Information:

Administratively Enable, Port status: Off, Power consumption: 0 mW

PSE port status: Off, non-standard PD

When necessary you can clear the interface counters

(ArubaS3500-24P) #clear counters gigabitethernet 0/0/10

Port Mirroring

Create a mirroring-profile, READ the DOC, there are caveats related to enabling mirroring

(The name of the profile is in BOLD)

(ArubaS3500-24P) (config) #interface-profile mirroring-profile **VOIP**

(ArubaS3500-24P) (Mirroring profile "VOIP") #destination gigabitethernet 0/0/16 (has packet capture)

(ArubaS3500-24P) (Mirroring profile "VOIP") #ratio 1 (ratio 1:1 = mirror all packets)

(ArubaS3500-24P) (Mirroring profile "VOIP") #exit

(ArubaS3500-24P) (config) #

(ArubaS3500-24P) (config) #interface gigabitethernet 0/0/20 (port traffic to be mirrored)

(ArubaS3500-24P) (gigabitethernet "0/0/20") #mirroring-in-profile VOIP

(ArubaS3500-24P) (gigabitethernet "0/0/20") #mirroring-out-profile VOIP

(ArubaS3500-24P) (gigabitethernet "0/0/20") #exit

(ArubaS3500-24P) (config) #exit

(ArubaS3500-24P) #write memory

Saving Configuration...