# Arista internal and dynamic VLAN

Internal VLANs are allocated for L3 interfaces etc. The default allocation range is between VLAN 1006 and VLAN 4094. Internal VLANS are assigned in either ascending (default) or descending order starting with the lowest number for ascending order and dynamic VLANS ( EVPN / VRF's ) are assigned from the other end of the range.

```
## default
d1#show vlan internal allocation policy
Internal VLAN Allocation Policy: ascending
Internal VLAN Allocation Range: 1006-4094

## Specify range
d1#show running-config section internal
vlan internal order ascending range 3006 3999
d1#show vlan internal allocation policy
Internal VLAN Allocation Policy: ascending
Internal VLAN Allocation Range: 3006-3999

d1#show vlan internal usage
3006  Ethernet49/1
3007  Ethernet50/1

# Specify dynamic range as well
d1(config)#vlan dynamic range 3900-3999
d1(config)#show vlan dynamic
Dynamic VLAN source       VLANS
dot1x                     NONE
dynvtep                   NONE
evpn                      3997-3999
```

The default settings might cause vlan collision if a internal vlan is in use already

```
d1(config)#show vlan internal usage
3006  Ethernet49/1
3007  Ethernet50/1
d1(config)#vlan 3006
% VLAN 3006 is in use as an internal VLAN.  Cannot create it.
```

Dynamic vlans will just move dynamically as is seems

```
d1(config)#show vlan dynamic
Dynamic VLAN source       VLANS
dot1x                     NONE
dynvtep                   NONE
evpn                      3997-3999

d1(config)#vlan 3997
d1(config-vlan-3997)#name test
d1(config-vlan-3997)#end
d1#show vlan dynamic
Dynamic VLAN source       VLANS
dot1x                     NONE
dynvtep                   NONE
evpn                      3996,3998-3999
```

Do not set a dynamic vlan range outside of internal range. Things does not really work as intended

```
d1(config)#vlan dynamic range 4000 - 4094
d1(config)#show vlan dynamic
Dynamic VLAN source       VLANS
dot1x                     NONE
dynvtep                   NONE
evpn                      NONE <-- Something went wrong

d1(config)#show ip route vrf MGMT

VRF: MGMT
..
Gateway of last resort:

 C        10.42.0.0/24 is directly connected, Vlan700
 C        10.101.2.2/32 is directly connected, Loopback1
 C        10.101.3.0/24 is directly connected, Vlan30
 B E      10.101.4.6/32 [200/0] via
                                via
 B E      10.101.4.0/24 [200/0] via
                                via
 S        10.101.100.0/24 [1/0] via 192.168.2.25, Vlan99
 C        192.168.0.0/24 is directly connected, Vlan1
 C        192.168.2.0/24 is directly connected, Vlan99
 S        192.168.222.0/24 [1/0] via 192.168.2.25, Vlan99

d1(config)#no vlan dynamic range
d1(config)#show vlan dynamic
Dynamic VLAN source       VLANS
dot1x                     NONE
dynvtep                   NONE
evpn                      3993-3995

d1(config)#show ip route vrf MGMT

VRF: MGMT
..

Gateway of last resort:
 B E      0.0.0.0/0 [200/0] via VTEP 10.101.0.4 VNI 100001 router-mac fc:bd:67:e3:5e:dd

 C        10.42.0.0/24 is directly connected, Vlan700
 B E      10.101.2.0/32 [200/0] via VTEP 10.101.0.0 VNI 100001 router-mac fc:bd:67:d0:e6:bd
 B E      10.101.2.1/32 [200/0] via VTEP 10.101.0.1 VNI 100001 router-mac fc:bd:67:d0:fb:5d
 C        10.101.2.2/32 is directly connected, Loopback1
 B E      10.101.2.3/32 [200/0] via VTEP 10.101.0.3 VNI 100001 router-mac fc:bd:67:b7:68:c9
 B E      10.101.2.4/32 [200/0] via VTEP 10.101.0.4 VNI 100001 router-mac fc:bd:67:e3:5e:dd
 B E      10.101.2.5/32 [200/0] via VTEP 10.101.0.5 VNI 100001 router-mac fc:bd:67:e3:4b:f7
 C        10.101.3.0/24 is directly connected, Vlan30
 B E      10.101.4.6/32 [200/0] via VTEP 10.101.0.5 VNI 100001 router-mac fc:bd:67:e3:4b:f7
                                via VTEP 10.101.0.4 VNI 100001 router-mac fc:bd:67:e3:5e:dd
 B E      10.101.4.0/24 [200/0] via VTEP 10.101.0.5 VNI 100001 router-mac fc:bd:67:e3:4b:f7
                                via VTEP 10.101.0.4 VNI 100001 router-mac fc:bd:67:e3:5e:dd
 S        10.101.100.0/24 [1/0] via 192.168.2.25, Vlan99
 B E      10.103.0.0/31 [200/0] via VTEP 10.101.0.4 VNI 100001 router-mac fc:bd:67:e3:5e:dd
 B E      172.30.89.1/32 [200/0] via VTEP 10.101.0.4 VNI 100001 router-mac fc:bd:67:e3:5e:dd
 C        192.168.0.0/24 is directly connected, Vlan1
 B E      192.168.1.0/24 [200/0] via VTEP 10.101.0.0 VNI 100001 router-mac fc:bd:67:d0:e6:bd
 C        192.168.2.0/24 is directly connected, Vlan99
 S        192.168.222.0/24 [1/0] via 192.168.2.25, Vlan99
 B E      193.10.255.104/32 [200/0] via VTEP 10.101.0.4 VNI 100001 router-mac fc:bd:67:e3:5e:dd
```