

Migration from Cluster to HA configuration:

Follow below steps: -

1. **Disable Cluster on Secondary device (Backup) and configure HA and add FIP's as well (ha off).**

Removing Secondary device (Backup) from the Cluster to avoid traffic fluctuation, at the same time creating complete HA configuration but HA will be in disabled mode, below are the required CLI commands.

#cluster virtual off [*cluster_id*]0] [*interface_name*]

This command is used to disable the virtual clustering capabilities for the APV appliance. The minimum value of a virtual cluster ID is 1 and the maximum decimal value is 255. It defaults to 0, which means all clusters will be enabled. Also with this command, users must specify the appropriate interface name. If no cluster ID or interface name is supplied, all clusters will be enabled.

Basic HA configuration commands:

#ha unit <*unit_name*> <*ip_address*> [*port*]

This command is used to add an HA unit for the HA domain. An HA domain allows at most 31 units. After adding multiple units for an HA domain, the system will establish primary link connections between each two units automatically.

#ha group id <*group_id*>

This command is used to define a floating IP group for the local unit. A maximum of 256 groups can be defined for each unit.

#ha group fip <*group_id*> <*floating_ip*> [*interface_name*]

This command is used to configure a floating IP address for the specified floating IP group. The total number of floating IP addresses and floating IP ranges configured for a floating IP group cannot exceed 16.

OR

#ha group fiprange <*group_id*> <*start_floating_ip*> <*end_floating_ip*> [*interface_name*]

This command is used to configure a floating IP range for the specified floating IP group, and bind it to a specific system interface. Each floating IP range contains utmost 256 IP addresses. The total number of floating IP addresses and floating IP ranges configured for a floating IP group cannot exceed 16.

#ha group priority <*unit_name|ssi*> <*group_id*> <*priority*>

This command is used to configure or change the priority of a specified floating IP group on the specified HA unit.

#ha group {enable|disable} <*group_id*>

This command is used to enable or disable the specified floating IP group on the local unit. By default, all floating IP groups are disabled. If a floating IP group is enabled on multiple units, only the unit whose group status is "Active" will provide services in that group. The floating IP groups can be associated with the application services by executing the command "**ha group fip**" and "**ha group fiprange**".

#ha off

This command is used to disable the HA function.

2. **On Primary (Master) device remove all cluster VIP's and configure HA. (don't configure FIP's and ha off)**

If we keep VIPs under cluster group and in case disabled cluster, master device will not accept any traffic, so removing the VIPs from Cluster Group (Secondary will not participating into HA/Cluster, because we have already disabled) before disabling the Cluster. Also, at the same time configure HA, it should be in disabled mode, and we are not adding any FIP's under HA group to avoid traffic fluctuation. Below are the required CLI commands.

#no cluster virtual vip <*interface_name*> <*cluster_id*> <*vip*>

This command is used to remove the VIP from the specified cluster ID and interface name.

Basic HA configuration commands:

#ha unit <*unit_name*> <*ip_address*> [*port*]

This command is used to add an HA unit for the HA domain. An HA domain allows at most 31 units. After adding multiple units for an HA domain, the system will establish primary link connections between each two units automatically.

#ha group id <*group_id*>

This command is used to define a floating IP group for the local unit. A maximum of 256 groups can be defined for each unit.

#ha group priority <*unit_name|ssi*> <*group_id*> <*priority*>

This command is used to configure or change the priority of a specified floating IP group on the specified HA unit.

#ha group {enable|disable} <*group_id*>

This command is used to enable or disable the specified floating IP group on the local unit. By default, all floating IP groups are disabled. If a floating IP group is enabled on multiple units, only the unit whose group status is "Active" will provide services in that group. The floating IP groups can be associated with the application services by executing the command "**ha group fip**" and "**ha group fiprange**".

#ha off

This command is used to disable the HA function.

3. **Disable Cluster on Primary (Master) device, then enable HA (ha on)**

In 2nd step we have done HA configuration and removed VIPs, now the setup is ready to change cluster to HA, then we are disabling Cluster and Enabling HA. Below are the required CLI commands.

#cluster virtual off [*cluster_id*]0] [*interface_name*]

This command is used to disable the virtual clustering capabilities for the APV appliance. The minimum value of a virtual cluster ID is 1 and the

maximum decimal value is 255. It defaults to 0, which means all clusters will be enabled. Also with this command, users must specify the appropriate interface name. If no cluster ID or interface name is supplied, all clusters will be enabled.

#ha on

This command is used to enable the HA function.

4. Add FIP's on Primary (Master) device

We Have Migrated the Master Device from Cluster to HA configuration with the help step 1 and 2, now we are adding the FIP's before putting secondary device into HA, so all the traffic will be served by Master device without any disturbance. Below is the required CLI command.

#ha group fip <group_id> <floating_ip> [interface_name]

This command is used to configure a floating IP address for the specified floating IP group. The total number of floating IP addresses and floating IP ranges configured for a floating IP group cannot exceed 16.

5. Enable HA on Secondary (Backup) device

Now everything ready to form HA between Primary and secondary device, we are just enabling HA on Secondary device. Below is the required CLI command.

#ha on

This command is used to enable the HA function.

6. Check the HA status after few seconds on both devices

After completing the 5th step, wait for few seconds then check the HA Status, Below is the required CLI command.

#show ha status

This command is used to display the status of floating IP groups.

7. Remove Cluster configuration and Save configuration

Once HA formed successfully and test all Virtual services, if everything looks fine then remove cluster configuration and save configuration using below commands.

#clear cluster virtual ifname <interface_name> <cluster_id>

This command is used to remove a virtual cluster from the specified interface

#write memory

This command allows users to save the current configuration to the file and assigns it to the boot configuration data.

Example configuration:

| Cluster to HA configuration | |
|-----------------------------|---|
| Steps | Follow bellow steps |
| | SLB1(Primary) SLB2(Secondary) |
| 1 | Disable Cluster on Secondary device and configure HA and add FIP's as well (ha off) |
| | cluster virtual off 20 "port1" |
| | ha off |
| | ha unit "unit1" 192.168.1.209 65521 |
| | ha unit "unit2" 192.168.1.209 65521 |
| | ha group id 1 |
| | ha group fip 1 192.168.1.150 |
| | ha group priority "unit1" 1 110 |
| | ha group priority "unit2" 1 100 |
| | ha group preempt off 1 |
| | ha group enable 1 |
| 2 | On Primary device remove all cluster VIP's and configure HA, (don't configure FIP's and ha off) |
| | no cluster virtual vip port1 20 192.168.1.150 |
| | ha off |
| | ha unit "unit1" 192.168.1.209 65521 |
| | ha unit "unit2" 192.168.1.209 65521 |
| | ha group id 1 |
| | ha group priority "unit1" 1 110 |
| | ha group priority "unit2" 1 100 |

| | | | |
|---|---|--|----------------|
| | ha group preempt on 1 | | |
| | ha group enable 1 | | |
| 3 | Disable Cluster on Primary device, then enable HA (ha on) | | |
| | cluster virtual off 20 "port1" | | |
| | ha on | | |
| 4 | Add FIP's on Primary device, then enable ha on secondary device | | |
| | ha group fip 1 192.168.1.150 | | ha on |
| | | | |
| | show ha status | | show ha status |