

CLI Difference

Between TM 6.5.2.27 and APV 8.x

Introduction

ArrayOS APV 8.x is a new release of Array APV multi-core and multi-thread architecture. With the ArrayOS APV 8.x release, the new series 1U and 2U product models are launched, which have been designed to enhance the high performance and maximizes the advantages of a multi-core system.

This document describes the CLI differences between TM 6.5.2.27 and APV 8.x.

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I Route

1.1 Default Route

Now: Only one default route is allowed on APV 8.x. A default route that includes Management Traffic needs to be selected to retain remote access to the box.

Before: Multiple default routes were allowed.

1.2 Static Route

Now: Only one static route per destination subnet is allowed on APV 8.x.

Before: Multiple static routes per destination subnet were allowed.

Need to select or configure one default or static route for Management Traffic before applying the configuring file changes from TM 6.5.2.x to APV 8.x.

Otherwise, only the last route configured on APV 8.x will be saved and others will be overwritten. The CLI will give the prompt like:

Delete duplicated default route: "x.x.x.x"

APV 8.x supports only one default route and one static route per destination. Because “ip eroute” and “link route” are used for LLB configuration instead of default and static route, these commands must be applied to direct LLB traffic to the applicable links. For all other non-LLB traffic and management traffic, one default route and/or static route per destination should be selected and configured.

1.3 Droute

Now: Add “**show statistics droute**” to display the droute statistics and “**clear droute**” to clear the droute statistics on APV 8.x.

Before: Did not support droute display and clearing.

LLB

Now: Executing “**llb link route**” will automatically add a default eroute where the priority is 2 on APV 8.x.

Example:

Configure a link as:

```
llb link route “L1” 10.3.0.1 10.3.0.1 10 1 0.0.0.0
```

The system will automatically generate an eroute as follows:

```
#ip eroute “llb link route” 2 0.0.0.0 0.0.0.0 0 0.0.0.0 0.0.0.0 0 any 10.3.0.1 1
```

Before: The default routes or static routes must be configured for “llb link route”.

No need to change the default or static route configuration for LLB feature before applying the configuring file of TM 6.5.2.x to APV 8.x, because “ip eroute” and “link route” are used for LLB configuration instead of default and static route.

II Direct FWD

Direct FWD is a new L4 TCP handling mechanism; combining a flexible ATCP dispatcher with light weight protocol handling to improve system performance.

New CLI commands on APV 8.x:

- **slb directfwd {on|off}**

This command is used to turn on/off the Direct FWD function. It is off by default.

- **slb directfwd syncache {on|off}**

This command is used to turn on/off Direct FWD module’s syncache function. This function can avoid SYN Flood attacks effectively. The feature is off by default.

III HTTP Turbo

HTTP Turbo mode is a special HTTP handling mechanism; combining with the light weight HTTP protocol to improve HTTP capacity.

New CLI commands on APV 8.x:

- **[no|show|clear] http turbo <vip>**

This command is used to enabled or disabled HTTP Turbo mode on a per-VIP basis.

IV NAT

Now: Added one new command “**show statistics nat**” to display the NAT statistics on APV 8.x.

Before: Did not display NAT statistics.

V SDNS

Six SDNS pool methods are now supported: **rr** (Round Robin), **wrr** (Weighted Round Robin), **ipo** (IP Overflow), **hi** (Hash IP), **pi** (Persistent IP) and **snmp** (Simple Network Management Protocol).

Now: The CLI prompts for the SDNS pool methods hi, pi and snmp have been added on APV 8.x.

Before: The CLI prompt only indicated rr, wrr and ipo.

VI SSL

Removed two SSL related commands on from APV 8.x:

- **ssl settings certparse <host_name>**
- **ssl settings crt <host_name>**

No need to change these two CLIs before applying the configuring file of TM 6.5.2.x to APV 8.x, they could not be configured on APV 8.x.

The CLI will give the prompt like:

```
ssl settings ^ certparse
```

```
ssl settings ^ crt
```

The CLI “**ssl settings certparse**” was related with “**http xclientcert**” on TM 6.4.x. As the design of “**http xclientcert**” was changed from TM 6.5.1.x, this CLI didn’t have any effect since then. This CLI “**ssl settings certparse**” is removed on APV 8.x.

The CLI “**ssl settings crt**” is “**on**” by default on APV 8.x.

VII Clustering

Added new CLIs for Cluster feature on APV 8.x:

- **cluster virtual discreet {on|off}**

This command is used to turn on/off the discreet backup mode. This feature is “off” by default. In this mode, the system determines whether a status transition is needed between a pair of systems based on their status (heartbeat) information detected through a Fast Failover (FFO) cable. This mode makes the status transition more reliable, and any VRRP packet loss will not result in double-master status.

The FFO mode difference between "discreet on" and "discreet off" is as follows:

	cluster virtual ffo on	cluster virtual ffo on
	cluster virtual discreet off	cluster virtual discreet on
Local FFO cable disconnected	switch to FFO_DOWN state	VRRP takes over
Remote FFO cable disconnected	switch to MASTER state and hold	VRRP takes over
Remote NIC carrier loss	switch to MASTER state and hold	switch to MASTER state
Timeout in BACKUP state	switch to MASTER state	No action

*Note: In discreet backup mode, a pair of systems utilizes the Fast Failover cable to exchange the status (heartbeat) information. Please make sure the Fast Failover cable between two systems is well connected. Also, FFO feature is enabled by “**cluster virtual ffo on**” command first.*

- **show cluster virtual discreet**

This command is used to display the discreet backup mode configuration.

- **show cluster virtual transition [interface_name]**

This command is used to display the last 100 cluster state transition logs on the specified interface.

- **clear cluster virtual transition** *[interface_name] [cluster_id]*

This command is used to remove cluster state transition logs on the specified interface of either the specified virtual cluster interface or all virtual cluster interfaces.

As the cluster transition log is added to “cluster virtual” command, one related command is now changed in APV 8.x:

Now: **clear cluster virtual ifname** *<interface_name>*

Before: **clear cluster virtual** *<interface_name>*

VIII Cache

The Cache function has been redesigned on APV 8.x. The functionality of new cache in TM 8.1 is compatible to the cache in TM 6.5.x. However, many architectural and design improvements have been made. All cache related CLIs have been updated accordingly on APV 8.x.

This feature must be configured based on APV 8.x new CLIs, the old cache feature on TM 6.5.2.x will not work at all on APV 8.x.

More details please refer to the TM 8.1.1.x CLI Guide or TM 8.1 Release Notes.

Removed CLI Commands

- The “**cache channel**” set of commands
- **cache evict** *<hostname> <regex>*
- **[no] cache lock** *<hostname> <url_regex>*
- The “**cache override request**” set of commands
- The “**cache override response**” set of commands
- The “**cache policy**” set of commands
- The “**cache response byterange**” set of commands
- **cache settings flowthrough** *{on/off}*
(This is a default action now, and is not configurable.)
- **cache settings lowresource** *{closeclient/keepclient}*
- **cache settings replacement** *<number_of_objects>*

- **cache expire** *<hostname> <url_regex> <time>*
- **no cache expire** *<hostname> <url_regex>*
- **no cache settings** *{expire/objectsize/replacement}*
- **clear cache settings**

Note: The following CLI commands have been removed, but their functions can still be realized via the “cache filter” mechanism.

- **cache override request cachecontrol**
Replaced by: cache filter rule “exact hostname” “url regex” “cache=yes”
- **cache override request urlquery**
Replaced by: cache filter rule “exact hostname” “url regex” “urlquery=yes”
- **cache policy response setcookie**
Replaced by: cache filter rule “exact hostname” “url regex” “cache=yes”
- **cache response cookierequest**
Replaced by: cache filter rule “exact hostname” “url regex” “cache=yes”
- **cache expire**
Replaced by: cache filter rule “exact hostname” “url regex” “ttl=<seconds>”

New CLI Commands

cache filter match *<hostname ><url_regex>*

This command is used to show all configured cache filter rules matching the specified host name and URL regular expression. Administrators use this command to test the correctness of cache filter rules configured previously.

clear statistics cachefilter *[hostname/all]*

This command is used to clear the cache filter statistics. If a host name is specified, the cache filter statistics about the host will be cleared. “all” means all cache filter statistics will be cleared. If no argument is provided, the global cache filter statistics will be cleared.

Modified CLI Commands

cache *{on/off} <virtual_service>*

This command is used to enable the cache function for a specified virtual service. A new parameter “virtual_service” has been added.

Now: Supports the enabling of the cache function per virtual service.

Before: Executing this command would enable the cache function globally.

cache filter rule <hostname> <url> {force_cache|urlquery|ttl}

This command is used to create a cache filter rule that defines the behavior of the objects matched with the specified host name and URL.

The previous parameter option “override” has been removed, and a new parameter option “urlquery” has been added.

urlquery This parameter seeks “urlquery=yes” or “urlquery=no” input to decide whether or not to ignore the URL query string in user requests when doing cache lookup. The default value is “urlquery=no”, which means do not ignore the URL query string.

Now: {force_cache|urlquery|ttl}

Before: <force_cache> [<override>|<ttl>]

(**Note:** For this parameter, at least one option should be used. You may configure two or all the three options.)

cache settings objectsize <size>

This command is used to set the maximum size for an object to be cached. The size must be specified in kilobytes. The default value is 5120KB. The minimum size allowed is 1KB. The maximum size allowed has been changed.

Now: The maximum size allowed depends on different system memories of the Array appliances:

Before: The maximum size allowed for cache is 25% of the total memory size.

The maximum object size now is as follows:

System Memory	Max Size of Cache Object
4GB	10240KB (10MB)
8GB	20480KB (20MB)
16GB	40960KB (40MB)

IX URL Filter

Simplify URL Filter configuration for “global” setting.

Now: Add the parameter “global” support for URL Filter on APV 8.x.

AN(config)#filter vip ?

Virtual Service name (use "global" for global filter, default "global")

Before: Did not support “global” parameter.

AN(config)#filter vip ?

vip (0.0.0.0 denotes global)

X Debugging Tools

10.1 Show tech

Now: show tech

Before: show tech [*sys_message*]

Remove the parameter “sys_message” on APV 8.x.

10.2 Debug snapshot system

Now: The system will generate four tarball files to save the snapshot information by categories:

- sys_snap.tar.gz
- sys_log.tar.gz
- sys_core.tar.gz
- app_core.tar.gz

Before: The system will generate a new file in the “/var/crash/sys_debug/debug” directory to save the snapshot information.

10.3 Debug corefile [*core_files_number*]

Now: The value of the number ranges from 0 to 10. The default value is 0, which means do not collect any core file on APV 8.x.

Before: The value of the number was not limited. The default value is 1.

10.4 Debug ftp

Now: debug ftp <user_name> <remote_ftp_ip> [file_name]

Before: debug ftp <user_name> <remote_ftp_ip>

A new parameter “file_name” has been added in this command on APV 8.x.

10.5 Debug scp

Now: debug scp <username@remote_scp_ip/host> [file_name]

Before: debug scp <username@remote_scp_ip/host>

A new parameter “file_name” has been added in this command on APV 8.x.

10.6 Show debug file

Add one new CLI for debug file on APV 8.x:

- **show debug file**

This command is used to display all the generated tarball files on APV 8.x.

10.7 System Tune

Remove two commands on APV 8.x:

- **system tune maxconnections level** <{0/1}>
- **system tune maxsslconnections level** <{0/1}>

No need any changes of them before applying the configure file of TM 6.5.2.x to APV 8.x, they could not be configured on APV 8.x.

The CLI will give the prompt like:

```
system tune ^ maxconnections level
```

```
system tune ^maxsslconnection level
```

Those two CLIs were used to increase the Layer 4 maxconnections and SSL maximum connections on TM series. On APV series, the capacity of Layer 4 and SSL concurrent connections are much higher than before. These two CLIs are not needed on APV 8.x. For more details please refer to the Market Performance Report.