A10 - ACOS System Configuration & Administration Cheat Sheet

by M. Yasin Çavdar (myasincavdar) via cheatography.com/174311/cs/36608/

Commands

`enable`	To access the Privileged EXEC level of the CLI and allow access to all configuration levels.
`config`	To access the global configuration level.
`clear console`	Terminate the current login process and start a new one.

Time & Date Parameters

`#show clock`	Shows the time.
`#clock set 19:15:33 December 17 2023`	The following example sets the time to 7:15 PM and 33 seconds on December 17, 2015 (for times beyond 12:00 PM, use 24-hour notation).
`#timezone Europe /Is tanbul`	The following example sets the timezone to Europe/Istanbul.
`#ntp server 216.17 1.1 24.36`	To configure a preferred NTP server.
`#prefer`	Then use the prefer command to make this the preferred server:.
`#ntp auth-key 13579 M ascii XxEnc192`	Create authentication keys (13579).
`#ntp truste d-key 13579`	Add key (13579) to the list of trusted keys.
`#ntp server 207.69.13 1.204`	Configure the NTP server at 207.69.131.204 to use trusted key (13579).
`#show runnin g-c onfig | include ntp`	Verify the NTP server and authentication key configuration.

Basic System Parameters

`#hostname ACOS-TPS2`	Change the hostname.
`#ip dns suffix a10net wor ks.com`	To set the default domain name (DNS suffix) for host names on the ACOS device.
`#ip dns primary 10.10.1 28.101`	To set the primary DNS server for resolving DNS requests.
`#ip dns secondary 10.10.1 28.102`	To set the secondary DNS server for resolving DNS requests.
`#show runnin g-c onfig | include dns`	Show running-config command to view your configuration.
`#banner login "welcome to login mode"`	To set the login banner.
`#banner login "welcome to exec mode"`	To set the exec banner.
`#web-s ervice secure wipe`	
`#import cert`	To import a CA-signed certificate.
`#interface management`	Puts you in interface management mode, where you can continue the management interface configuration.
`#ip address 192.16 8.10.2 /24`	To configure IPv4 access.
`#ip defaul t-g ateway 192.16 8.2.1`	To configure IPv4 access.
`#ipv6 address 2001:d b8: :2/32`	To configure IPv6 access.
`#ipv6 defaul t-g ateway 2001:d b8::1`	To configure IPv6 access.
`#show interfaces management`	To verify the configuration.

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System Parameters

`#secur ity -reset`	Destroys all sensitive information.
`#snmp- server SNMPv3`	SNMPv3 Configuration
`#system fips enable`	Enabling FIPS.
`#system fips disable`	Disabling FIPS.
`#system defaul t-mtu`	To configure the MTU for supported physical and logical ports at the global configuration level.
`#syste m-j umb o-g lobal enable -jum bo`	To enable jumbo frame support on FTA models.

`#syste m-j umb o-g lobal enable -jum bo`
`#write memory`
`#reboot`
	To enable jumbo frame support on a non-FTA model.

`#no system -ju mbo -global enable -j umbo`	To disable jumbo frame support on FTA models.

`#no system -ju mbo -global enable -j umbo`
`#write memory`
`#reboot`
	To disable jumbo frame support on a non-FTA model.

`#system defaul t-mtu` **`9216`**	To configure the MTU for all interface ports at the global configuration level.
`#interface ethernet 1` `mtu 1800`	To change the MTU on a particular interface, use the mtu command at the configuration level for the interface.
`#show interface ve 300`	To view VE interface information.
`#show interface ethernet 15`	To view Ethernet interface information.

SSL

`#import key`	To import a key. (RSA & ECDSA)
`#import cert`	To import a CA-signed certificate. (RSA & ECDSA)
`#web-s ervice secure privat e-key load`	(RSA & ECDSA)
`#web-s ervice secure certif icate load`	(RSA & ECDSA)
`#import glm-cert`	(RSA)
`#sshd key load`	(RSA)
`#ssh-p ubkey import`	(RSA)

Backup

```
#backup system scp:// exa mpl eus er@ 192.16 8.3.3/ hom e/u ser s/e xam ple use r/b ack ups /ba cku pfi le.t
z
```

```
#backup log period 1 use-mg mt-port scp:// exa mpl eus er@ 192.16 8.3.3/ hom e/u ser s/e xam ple use r/b ack
/ba cku plo g.t ar.gz
```

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Configuration Management

Save Configurations

`#write memory`	Replaces the configuration profile in the image area with the running-config.
`#write force`	Forces the ACOS device to save the configuration regardless of whether the system is ready.
`#write memory primary`	Replaces the configuration profile stored in the primary image area with the running-config
`#write memory secondary`	Replaces the configuration profile stored in the secondary image area with the running-config.
`#write memory profil e-name`	The ACOS device replaces the commands in the specified profile-name with the running-config.

View Configurations

`#show startu p-c onfig`	To view locally stored configuration information.
`#show startu p-c onfig all`	To display a list of the locally stored configuration profiles.
`#show startu p-c onfig profile profil e-n ame`	Displays the commands that are in the specified configuration profile.

Copy Configurations

`#copy`	To copy configurations.
`#copy startu p-c onfig profil e-name`	Copies the configuration profile that is currently linked to “startup-config” and saves the copy under the specified profile-name.
`#copy startu p-c onfig runnin g-c onfig`	Copies the configuration profile that is currently linked to “startup-config” and replaces the current running-config.
`#copy runnin g-c onfig startu p-c onfig`	Copies the running-config and saves it to the configuration profile currently linked to the startup-config.

Compare Configurations

`#diff startu p-c onfig runnin g-c onfig`	Compares the configuration profile that is currently linked to “startup-config” with the running-config.
`#diff startu p-c onfig profil e-name`	Compares the configuration profile that is currently linked to “startup-config” with the specified configuration profile-name.
`#diff profil e-name1 profil e-name2`	To compare any two configuration profiles.

Link Configuration Profiles

`#link`	To link configuration profiles.

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Configuration Management (cont)

`#link startu p-c onfig test-p rofile primary`	To links the startup-config to a new profile called test_profile.
`#link startu p-c onfig default`	To relink “startup-config” to the configuration profile stored in the image area.

Delete a Profile

`#delete`	To delete configurations.
`#delete startu p-c onfig test_p rofile1`	To remove a specific configuration profile.

Source Interface for Management Traffic

`#show ip route mgmt`	To display the routes in the management route table.
`#show ip route`	To display the data plane routes.
`#show ip fib`	To display the data plane routes.
`#show techsu pport`	To display general information about the router when reporting a problem.
`#ip contro l-a pps -us e-m gmt -port`	To management interface as the source interface for automated management traffic is enable. (Execute in `interface management`)

`#interface loopback 2`
`#ip address 10.10.1 0.66 /24`
`#exit`
	To configure an IP address on loopback interface 2.

`#ip mgmt-t raffic all source -in terface loopbac k 2`	To configures the ACOS device to use loopback interface 2 as the source interface for management traffic of all types listed above.

Boot Options

`#show version`	To shows storage area information.
`#show bootimage`	To view the storage location for future reboots.
`#bootimage hd sec`	To configure the ACOS device to use the secondary storage area on the SSD or hard drive for future reboots, and verify the setting.

Fail-Safe Automatic Recovery

FPGA and Software Fail-Safe

`#fail-safe fpga-b uff -re cov ery -th res hold 2`	Trigger the fail-safe recovery if the number of free (available) FPGA buffers drops below 2 long enough for the recovery timeout to occur.
`#fail-safe sw-err or- rec ove ry- timeout 3`	Trigger the fail-safe recovery if a software error remains in effect for longer than 3 minutes.
`#show fail-safe config`	Verify the configuration.
`#show fail-safe inform ation`	To output differs between models that use FPGAs in hardware and models that do not.

L2/3 ASIC Fail-Safe

Fail-Safe Automatic Recovery (cont)

`#system asic-m mu- fai l-safe recove ry- thr es hold 5`	To configures the error threshold count to 5 (the default value is 2).

Fail-safe for Total Memory Decrease

`#fail-safe total- mem ory -si ze- check 5 log`	The fail-safe feature will be triggered when the total memory size is less than 5 GB. When this happens, this event will be logged.

Power On Auto Provisioning

`#show poap`	To show the status (enabled or disabled) of POAP mode.

Monitoring Tools

System Log Messages

glid 1 pkt-rate-limit 4 over-limit-action drop ! ddos src entry src-v41 10.10.71.7 log-enable log-periodic l4-type tcp glid 1 ! system ddos-attack log !	To configure a custom packet rate limit for TCP traffic from a source, and enable logging of DDoS events for the source.
ddos template logging default log-format-cef use-obj-name !	Enable CEF and object name display for DDoS event messages.
ddos dst entry dst-host8 10.10.10.8 log-enable log-periodic ! vsystem ddos-attack log !	For the template to be used, DDoS event logging also must be enabled globally and in the individual rules that will use logging.
`#logging single -pr iority error`	To configure single-priority logging

Emailing Log Messages

`#logging email buffer`	To configure log email settings.
`#logging email buffer number 32 time 30`	To configures the ACOS device to buffer log messages to be emailed. Messages will be emailed only when the buffer reaches 32 messages, or 30 minutes passes since the previous log message email, whichever happens first.

Monitoring Tools (cont)

`#logging email filter 1 " level inform ation pattern abc and"`	To configures a filter that matches on log messages if they are information-level messages and contain the string “abc”. The messages will be buffered and not emailed immediately.
`#logging email filter 1 " level inform ation pattern abc and" trigg er`	To reconfigures the filter to immediately email matching messages by using the trigger option.

DDoS Event Logging in Common Event Format

ddos template logging default log-format-cef use-obj-name !	To configure the default DDoS logging template.
glid 2 conn-limit 800000 !	To configure GLID 2, to set a custom connection limit.
ddos src entry v4-71 192.168.71.7 log-enable log-periodic l4-type tcp glid 2 !	To configure a rule for source 192.168.71.7
glid 3 bit-rate-limit 8000000 !	To configure GLID 3, to set a custom bandwidth limit (bit rate).
ddos dst entry dst-81 10.10.10.8 log-enable log-periodic l4-type tcp glid 3 !	To configure a rule for protected destination 10.10.10.8
system ddos-attack log !	To globally enables DDoS event logging.
ddos protection enable !	To enables DDoS Mitigation.

Simple Network Management Protocol (SNMP)

`#snmp- server enable traps`	To enable SNMP traps.
`#snmp- server enable traps system start`	To enables system start traps.
`#snmp- server view`	To configure an SNPM view.
`#snmp- server view exampl eview 1.2.3 included`	To creates a view called “exampleview” which includes OID 1.2.3

Monitoring Tools (cont)

```
#snmp- server SNMPv1-v2c user u1
#community read exampl estring
#show runnin g-c onfig | sec snmp
```

```
#snmp- server view exampl eview 1.2.3 included
#snmp- server group exampl egroup v3 auth read exampl eview
#snmp- server SNMPv3 user exampl euser group exampl egroup v3 auth md5 exampl epa ssword1 priv aes exampl ep
sword2
#show runnin g-c onfig | sec snmp
```

```
#remote 192.16 8.20.1 /24
```

```
#oid 1.2.3
remote 192.16 8.40.1 255.25 5.255.0
```

```
#snmp- server group exampl egroup v3 priv read exampl eview
```

```
#snmp- server view exampl eview 1.2.3 included
#snmp- server group exampl egroup v3 auth read exampl eview
#snmp- server SNMPv3 user exampl euser group exampl egroup v3 auth md5 exampl epa ssword1 priv aes exampl ep
sword2
```

```
#snmp enable traps system ?
```

```
#snmp enable traps system packet -drop
```

```
#snmp- server location exampl e-l ocation
```

```
#snmp- server contact exampl e-c ontact
```

```
#snmp- server host exampl e-t rap -host
```

```
#snmp- server community read exampl e-c omm uni ty- string
```

```
snmp-s erver view exampl e-v iew -name exampl e-oid included
```

```
#snmp- server group exampl e-g rou -name v3 auth read exampl e-r ead -vi ew-name
```

```
#snmp- server user exampl e-user group exampl e-group v3 auth md5 exampl e-p assword
```

```
#snmp- server enable traps all
```

Monitoring Tools (cont)

Multiple Port-Monitoring Mirror Ports

`#mirro r-port`	To configure mirror ports.
`#mirro r-port 1 ethernet 4`	Example for mirror ports.
`#mirro r-port 2 ethernet 7 output`	Example for mirror ports.
`#mirro r-port 3 ethernet 9`	Example for mirror ports.
`#mirro r-port 4 ethernet 3 input`	Example for mirror ports.
`#show mirror`	Verifies the mirror configuration.
`#interface ethernet 1` `#monitor input 1`	To access the configuration level for Ethernet interface 1 and enable monitoring of its traffic.
`#interface ethernet 2` `#monitor output 2`	To access the configuration level for Ethernet interface 2 and enable monitoring of its traffic.
`#interface ethernet 2` `#no monitor output 2`	To removing the monitor configuration.
`#no mirror -port 2 ethernet 7 output`	To removing the mirror port configuration.

Link Monitoring

`#ddos template monitor 1`
`#monitor link-down eth 5 sequence 1`
`#monitor link-down eth 6 sequence 2`
`#monitor link-down eth 9 sequence 3`
`#monitor link-down eth 10 sequence 4`
	To configure monitor template 1 and the physical data interfaces and events to monitor.

`#action clear sessions sequence 1`
`#action link-d isable eth 5 sequence 2`
`#action link-d isable eth 6 sequence 3`
`#action link-d isable eth 9 sequence 4`
`#action link-d isable eth 10 sequence 5`
`#exit`
	To configure the actions to take when a monitored event is detected.

`#system template monitor 1`	To activates the template, to place it into effect.
`#clear session`	To clears only data sessions.
`#clear sessions all`	To clear all sessions.

NetFlow

NetFlow Configuration

`#netflow monitor test`
`#record netflow-v5`
`#record netflow-v5-ext`
`#destination 10.10.3.2`
`#show netflow monitor`
	To configure a NetFlow monitor named “test” to collect all NetFlow v5-compatible flow records and export them to the host at IP 10.10.3.2

NetFlow (cont)

```
#netflow monitor test
#protocol v10
#resend-template records 2
#source-address ip 10.10.3.1
#record ddos-general-stat
#record ddos-http-stat
#destination 10.10.3.2
#show netflow monitor
```

To configure a NetFlow monitor named “test” used to export DDoS general statistics and DDoS HTTP statistics to the host IP 10.10.3.2 using IPFIX.

Network Address Translation (NAT)

NAT for DDoS Mitigation Sources and Destinations

```
#ip nat pool p1 172.16 8.6.100 172.16 8.6.100 netmask /24
#ddos dst entry ip-dst -entry 10.10.6.50
#l4-type udp
#stateful
#exit
#source-nat-pool p1
#exit
```

Stateful session mode is required but is disabled by default for UDP. To configure NAT at the Layer 4 UDP level or on individual UDP ports within a rule, you first must enable stateful mode. The following example configures source NAT for client traffic allowed to go to destination 10.10.6.50

```
#ddos dst entry ip-des t-entry 10.10.6.60
#dest-nat 192.16 8.6.50
```

To configure destination NAT for destination 10.10.6.60

Configuring NAT ALG for PPTP

```
#acces s-list 1 permit 10.1.1.0 0.0.0.255
#ip nat pool pptp-pool 192.16 8.1.100 192.16 8.1.110 netmask /
24
```

Define the ACL and configure the IP address pool.

```
#interface ethernet 1
#ip address 10.2.2.254 255.255.255.0
#ip nat inside
#exit
#interface ethernet 2
#ip address 10.3.3.254 255.255.255.0
#ip nat outside
```

Enable inside source NAT and outside source NAT on the interfaces.

```
show ip nat alg pptp statistics
```

To displays PPTP NAT ALG statistics.

Make sure you are in Global Configuration mode.

System Command Reference

Session Access Levels

`ACOS>` User EXEC Level. This is the first level entered when a CLI session begins. At this level, users can view basic system information but cannot configure system or port parameters. (>)

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System Command Reference (cont)	
`ACOS#`	Privileged EXEC Level. Critical commands (configuration and management) require that the user be at the “Privileged EXEC” level. To change to the Privileged EXEC level, type `enable` then press Enter at the `ACOS>` prompt. (#)
`ACOS(c onfig)#`	Privileged EXEC Level - Config Mode. The Privileged EXEC level’s configuration mode is used to configure the system IP address and to configure switching and routing features. To access the configuration mode, you must first be logged into the Privileged EXEC level. Enter the `config` command.
`?`	System prompt to display a list of available commands for each command mode. The context-sensitive help feature provides a list of the arguments and keywords available for any command.
`#terminal history size 500` `#show terminal | sec history`	To set the buffer size for the current session. For example, to set the buffer to 500, then verify the change with the show terminal command.
`no terminal history size`	To reset the buffer size for this session to the default value.
`> show history`	While in EXEC mode, lists the most recent commands entered.
`begin string`	Begins the output with the line containing the specified string.
`include string`	Displays only the output lines that contain the specified string.
`exclude string`	Displays only the output lines that do not contain the specified string.
`section string`	Displays only the lines for the specified section (for example, “ddos dst entry”, or “logging”). To display all DDoS-related configuration lines, you can enter “ddos”.
`|`	Delimiter between the `show` command and the display filter.
`show arp | include 192.16 8.1.3 *`	The output filter in this example displays only the ARP entries that contain IP addresses that match “192.168.1.3” and any value following “3”. The asterisk (*) matches on any pattern following the “3”.

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System Command Reference (cont)	
`show startu p-c onfig | section loggi ng`	To displays the startup-config lines for “logging".
EXEC Commands	
`enable`	Enter privileged EXEC mode, or any other security level set by a system administrator.
`exit`	When used from User EXEC mode, this command closes an active terminal session by logging off the system. In any other mode, it will move the user to the previous configuration level.
`help`	Display a description of the interactive help system of the ACOS device.
`no`	Most configuration commands have a `no` form. Typically, you use the no form to disable a feature or function. The command without the `no` keyword is used to re-enable a disabled feature or to enable a feature that is disabled by default.
`ping`	Send an ICMP echo packet to test network connectivity.
`show`	Show system or configuration information.
`ssh`	Establish a Secure Shell (SSH) connection from the Thunder Series to another device.
`telnet`	Open a Telnet tunnel connection from the Thunder Series to another device.
`traceroute`	Display the router hops through which a packet sent from the ACOS device can reach a remote device.
Privileged EXEC Commands	
`axdebug`	Access the AXdebug subsystem.
`backup log`	Configure log backup options and save a backup of the system log.
`backup system`	Back up the system. The startup-config file, and SSL certificates and keys will be backed up to a tar file.
`clear`	Clear statistics or reset functions. Sub-command parameters are required for specific sub-commands.
`clock`	Set the system time and date.
`configure`	Enter Global configuration mode from the Privileged EXEC mode.

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System Command Reference (cont)	
`ddos run-ti me- use r-s t ring`	Set the DDoS runtime user string. The runtime user string provides a way to add a nonpersistent memo to the device. The runtime user string does not appear in the runningconfig and is not saved across reboots or reloads.
`debug`	Access debug options.
`diff`	Display a side-by-side comparison of the commands in a pair of locally stored configurations.
`disable`	Exit the Privileged EXEC mode and enter the EXEC mode.
`enable -bg p-a dve rti se ment`	Enable BGP advertisements.
`exit`	Exit the Privileged EXEC mode and enter the EXEC Mode.
`export`	Export a file to a remote site using the specified transport method.
`help`	Display a description of the interactive help system of the ACOS device.
`import`	Get a file from a remote site.
`locale`	Set the locale for the current terminal session.
`no`	Negate a command or set it to its default setting.
`ping`	Test network connectivity.
`reboot`	Reboot the device.
`reload`	Restart ACOS system processes and reload the startup-config, without rebooting.
`repeat`	Periodically re-enter a `show` command.
`show`	Display system or configuration information.
`shutdown`	Schedule a system shutdown at a specified time or after a specified interval, or cancel a scheduled system shutdown.
`ssh`	Establish a Secure Shell (SSH) connection from the Thunder Series to another device.
`telnet`	Establish a Telnet connection from the ACOS device to another device.
`terminal`	Set terminal display parameters for the current session.
`traceroute`	Display the route hops to a destination.
`write force`	Forces the ACOS device to save the configuration regardless of whether the system is ready.

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System Command Reference (cont)

`write memory`	Write the running-config to a configuration profile.
`write terminal`	Display the current running-config on your terminal.

System Command Reference 2

Global Configuration Commands

`access -list`	Standard. Configure a standard Access Control List (ACL) to permit or deny source IP addresses.
`access -list`	Extended. Configure an extended Access Control List (ACL) to permit or deny traffic based on source and destination IP addresses, IP protocol, and TCP/UDP ports.
`accounting`	Configure TACACS+ as the accounting method for recording information about user activities.
`admin`	Configure an admin account for management access to ACOS.
`admin- lockout`	Set lockout parameters for admin sessions.
`admin- session clear`	Clear current ACOS admin sessions.
`arp`	Create a static ARP entry.
`arp-ti meout`	Change the aging timer for dynamic ARP entries.
`audit`	Configure command auditing.
`authen tic ation console type`	Configure a console authentication type.
`authen tic ation enable`	Configuration authentication of admin enable (Privileged mode) access.
`authen tic ation login privil ege - mode`	Place admins into the CLI directly at the Privileged EXEC level following successful authentication. The admin does not need to navigate to the Privileged EXEC level from the User EXEC level.
`authen tic ation mode`	Enable tiered authentication.
`authen tic ation multip le- aut h-r eject`	Configure support for multiple concurrent admin sessions using the same account.
`authen tic ation type`	Set the authentication method used to authenticate administrative access to ACOS.
`author ization`	Configure authorization for controlling access to functions in the CLI. The ACOS device can use TACACS+ for authorizing commands executed under a specified privilege level. This command also allows you to specify the level for authorization debugging.

System Command Reference 2 (cont)	
`backup log`	Configure log backup options and save a backup of the system log.
`backup store`	Configure and save file access information for backup. When you back up system information, you can save typing by specifying the name of the store instead of the options in the store.
`backup system`	Back up the system. The startup-config file, and SSL certificates and keys will be backed up to a tar file.
`backup -pe riodic`	Schedule periodic backups.
`banner`	Set the banners to be displayed when an admin logs onto the CLI or accesses the Privileged EXEC mode.
`bfd echo`	Enables echo support for Bidirectional Forwarding Detection (BFD).
`bfd enable`	Globally enable BFD packet processing.
`bfd interval`	Configure BFD timers.
`bgp`	The commands in this section apply globally to the BGP process running on the ACOS device.
`bootimage`	Specify the boot image location from which to load the system image the next time the Thunder Series is rebooted.
`boot-b loc k-fix`	Repair the master boot record (MBR) on the hard drive or compact flash.
`bridge -vl an- group`	Configure a bridge VLAN group for VLAN-to-VLAN bridging.
`captur e-c onfig`	This command configures DDoS packet capture so that the packets causing DDoS violations can be reviewed and analyzed.
`class-list`	Configure a class list.
`conver t-s tar tup -co nfig`	Convert configuration profile from version 3.0/3.1 to 3.2.
`copy`	Copy a running-config or startup-config.
`ddos`	Configure DDoS Mitigation settings.
`debug`	Legacy debug command. It is recommended to use the AXdebug subsystem instead of these `debug` commands.
`delete`	Delete an axdebug capture file.
`diff`	Display a side-by-side comparison of the commands in a pair of locally stored configurations.

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System Command Reference 2 (cont)	
disabl e-f ailsafe	Disable fail-safe monitoring for software-related errors.
disabl e-m ana gement service	Disable management access to specific protocols on specific Ethernet interfaces.
do	Run a Privileged EXEC level command from a configuration level prompt, without leaving the configuration level.
domain -group	Create a group of related domain -list configurations
domain -list	Create a domain classification list.
enable -core	Change the file size of core dumps.
enable -ma nag ement	Enable management access to specific protocols on specific Ethernet interfaces.
enable -pa ssword	Set the enable password, which secures access to the Privileged EXEC level of the CLI.
end	Return to the Privileged EXEC level of the CLI.
enviro nment temper ature thresho ld	Configure the temperature condition under which a log is generated.
enviro nment update -in terval	Configure the hardware polling interval for fault detection and log generation.
erase	Erase the startup-config file. This command returns the device to its factory default configuration after the next reload or reboot.
exit	Return to the Privileged EXEC level of the CLI.
export	Export a file to a remote site using the specified transport method.
export -pe riodic	Export file to a remote site periodically.
fail-safe	Configure fail-safe automatic recovery.
fan-speed	Control fan speed setting.
glid	Configure a Global Limit ID (GLID). A GLID is a set of traffic limits that can be used with other features, such as DDoS Mitigation.
hd-monitor enable	Enable hard disk monitoring on your ACOS device.
hostname	Set the ACOS device's hostname.
icmpv6 -ra te- limit	Configure ICMPv6 rate limiting for IPv6 to protect against denial-of-service (DoS) attacks.
icmp-r ate -limit	Configure ICMP rate limiting, to protect against denial-of-service (DoS) attacks.
import	Get a file from a remote site.
import -pe riodic	Get files from a remote site periodically.

System Command Reference 2 (cont)	
`interface`	Access the CLI configuration level for an interface.
`ip`	Configure global IP settings.
`ipmi`	Configure Intelligent Platform Management Interface (IPMI) settings on the ACOS device.
`ipv6`	Configure global IPv6 settings.
`key`	Configure a key chain for use by routing authentication features.
`lacp-p ass through`	Configure an LACP tunnel for LACP passthrough. This feature allows the ACOS device to forward traffic on one trunk that originates on another trunk that is down. With this feature, if an LACP trunk goes down, the other trunk is used to continue connectivity for the traffic.
`lacp system -pr iority`	Set the Link Aggregation Control Protocol (LACP) priority.
`ldap-s erver`	Set Lightweight Directory Access Protocol (LDAP) parameters for authenticating administrative access to the ACOS device.
`link`	Link the “startup-config” token to the specified configuration profile. By default, “startup-config” is linked to “default”, which means the configuration profile stored in the image area from which the ACOS device most recently rebooted.
`lldp enable`	Enable the Link Layer Detection Protocol (LLDP). You can enable LLDP to either receive only, transmit only, or transmit and receive.
`lldp manage men t-a ddress`	Specify the hostname or IP address and Ethernet interface to use as the management interface for the LLDP agent on the ACOS device.
`lldp notifi cation interva l`	Configure the interval between transmission of LLDP notifications during normal transmission periods. (In the IEEE 802.3AB specification, this the msgTxInterval parameter.)
`lldp system -de scr iption`	Defines the alpha-numeric string that describes the system in the network.
`lldp system -name`	Defines the string that will be assigned as the system name.

System Command Reference 2 (cont)	
`lldp tx fast-count`	Set the initial value for the txFast variable, which determines the number of LLDP data packets that are transmitted during a fast transmission period. (In the IEEE 802.3AB specification, this the txFastInit parameter.)
`lldp tx fast-i nterva l`	Configure the LLDP PDU transmission interval for fast periods. (In the IEEE 802.3AB specification, this the msgFastTx parameter.)
`lldp tx hold`	Configure the time to live (TTL) transmission interval that is carried in LLDP frames during normal (non-fast) periods. (In the IEEE 802.3AB specification, this the msgTxHold parameter.)
`lldp tx interval`	Configure the LLDP packet transmit interval. (In the IEEE 802.3AB specification, this the msgTxInterval parameter.)
`lldp tx reinit -delay`	Configure the delay between a change to administrative “disabled” status of LDDP and reinitialization of the protocol.
`locale`	Set the locale for the current terminal session.
`logging auditlog host`	Configure audit logging to an external server.
`logging buffered`	Configure the event log on the ACOS device.
`logging console`	Set the logging level for messages sent to the console.
`logging email- addres s`	Specify the email addresses to which to send event messages.
`logging email buffer`	Configure log email settings.
`logging email filter`	Configure a filter for emailing log messages.
`logging export`	Send the messages that are in the event buffer to an external file server.
`logging facility`	Enable logging facilities.
`logging host`	Specify a Syslog server to which to send event messages.
`logging monitor`	Set the logging level for messages sent to the terminal monitor.
`logging syslog`	Set the syslog logging level for events sent to the syslog host.
`logging trap`	Set the logging level for traps sent to the SNMP host.
`mac-ad dress`	Configure a static MAC address.

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System Command Reference 2 (cont)	
mac-ag e-time	Set the aging time for dynamic (learned) MAC entries. An entry that remains unused for the duration of the aging time is removed from the MAC table.
maximu m-paths	Change the maximum number of paths a route can have in the Forwarding Information Base (FIB).
mirror -port	Specify a port to receive copies of another port's traffic.
monitor	Specify event thresholds for utilization of resources.
multi- config	Enable simultaneous admin sessions.
multi- ctr l-cpu	Enable use of more than one CPU for control processing.
netflow common max-pa cke t-q ueu e-time	Specify the maximum amount of time ACOS can hold onto a NetFlow record packet in the queue before sending it to the NetFlow collector. ACOS holds a NetFlow packet in the queue until the packet payload is full of record data or until the queue timer expires.
netflow common select or- alg orithm ran dom	Configures the algorithm that Netflow uses to sample traffic. The only option is the random algorithm.
netflow monitor	Enable ACOS to act as a NetFlow exporter, for monitoring traffic and exporting the data to one or more NetFlow collectors for analysis.
no	Remove a configuration command from the running configuration.
ntp	Configure Network Time Protocol (NTP) parameters.
ntp-status	Get the status of the NTP servers.
overla y-t unnel	Configure a remote tunnel endpoint for remote sites where protected objects reside. This can be used in conjunction with OSPF neighbor adjacency via GRE or VXLAN tunnels.
pki delete	Deletes a self-signed certificate or the CSR file.
radius -server host	Set RADIUS parameters, for authenticating administrative access to the ACOS device.

System Command Reference 2 (cont)	
`restore`	Restore the startup-config, aFleX policy files, <<when aFlex support is added>> and SSL certificates and keys from a .tar file previously created by the backup command. The restored configuration takes effect following a reboot.
`router log file`	Configure router logging to a local file.
`router log log-buffer`	Sends router logs to the logging buffer.
`router protocol`	Enter the configuration mode for a dynamic routing protocol.
`route-map`	Configure a route map.
`runnin g-c onfig`	Enable display of file information in the running-config.
`run-hw -diag`	Access the hardware diagnostics menu.
`sflow`	Configure parameters for sFlow packet sampling.
`single -bo ard -mode forc ed`	On the Thunder 14045 device with dual processing modules, this command causes all traffic to be processed by the master only.
`smtp`	Configure a Simple Mail Transfer Protocol (SMTP) server to use for sending emails from the ACOS device.
`ssh-lo gin -gr ace -time`	Configures the time to establish an SSH connection.
`sshd`	Perform an SSHD operation on the system.
`system all-vl an- limit`	Set the global traffic limits for all VLANs. The limit applies system-wide to all VLANs; collectively, all ACOS device VLANs cannot exceed the specified limit.
`system anomaly`	Enable logging for packet anomaly events. This type of logging applies to system-wide attacks such as SYN attacks.
`system asic-m mu- fai l-s afe`	Configures fail-safe parameters for the Layer 2/3 ASIC.
`system attack`	Enable logging for DDoS attacks. This type of logging applies to violations of DDoS Mitigation rules.

System Command Reference 3	
`system cpu-lo ad- sharing`	Configure thresholds for CPU load sharing. If a threshold is exceeded, CPU load sharing is activated to relieve the stressed CPUs. When activated, CPU load sharing distributes processing of the stressed CPU's operations across the device's other CPUs. Load sharing remains in effect until the threshold is no longer exceeded.
`system ddos-a ttack log`	Enable logging for DDoS attack events.
`system defaul t-mtu`	Configure the MTU for all interfaces.
`system ext-on ly- logging`	Enable external only logging for packet driven DDoS logs. When enabled, DDoS non-event logs will not be displayed through `show log`. Other types of logs are unaffected.
`system fips`	Enable/Disable FIPS Mode for ACOS devices.
`system glid`	Globally apply the specified GLID to the whole system.
`system -ju mbo -global enable -j umbo`	Globally enable jumbo frame support. In this release, a jumbo frame is an Ethernet frame that is more than 1522 bytes long.
`system module -ct rl-cpu`	Throttle CLI and SNMP output when control CPU utilization reaches a specific threshold.
`system mon-te mplate monitor`	Configure monitoring of a set of ports for link-state changes, and change the link states of another set of ports, or clear sessions based on the detected changes.
`system pbslb sockst res s-d isab le`	Globally disable Sockstress protection on the system.
`system per-vl an- limit`	Configure the packet flooding limit per VLAN. The limit applies to each VLAN. No individual can exceed the specified limit.
`system -reset`	Restore the ACOS device to its factory default settings.
`system resour ce- usage`	Change the capacity of a system resource.
`system sessio n-r ecl aim -limit`	Set limits for SMP session reclaim; this controls how the system should recover and reclaim DDoS entries.
`system templa te-bind monitor`	Apply a monitor template to the whole TPS system.
`system timeou t-value`	Set the timeout to stop transferring a file.

System Command Reference 3 (cont)	
system trunk load-b alance	Configure trunk load balancing for Layer 2 switched packets (applicable for both static and LACP trunks).
system ve-mac -scheme	Configure MAC address assignment for Virtual Ethernet (VE) interfaces.
system -ju mbo -global enable -jumbo	Globally enable jumbo frame support. In this release, a jumbo frame is an Ethernet frame that is more than 1522 bytes long.
system defaul t-mtu	Configure the MTU for all interfaces.
tacacs -server host	Configure TACACS+ for authorization and accounting. If authorization or accounting is specified, the ACOS device will attempt to use the TACACS+ servers in the order they are configured. If one server fails to respond, the next server will be used.
tacacs -server monitor	Check the status of TACACS+ servers.
techreport	Configure automated collection of system information. If you need to contact Technical Support, they may ask you to for the techreports to help diagnose system issues.
terminal	Set the terminal configuration.
tftp blksize	Change the TFTP block size.
timezone	Configure the time zone on your system.
tx-con ges tio n-ctrl	Configure looping on the polling driver, on applicable models.
upgrade	Upgrade the system.
ve-stats	Enable statistics collection for Virtual Ethernet (VE) interfaces.
vlan	Configure a virtual LAN (VLAN). This command changes the CLI to the configuration level for the VLAN.
vlan-g lobal enable -de f-v lan -l2 -fo r wa rding	Enable Layer 2 forwarding on the default VLAN (VLAN 1).
vlan-g lobal l3-vla n-f wd- disable	Globally disable Layer 3 forwarding between VLANs.
vlan-group	Configure a group of VLANs.
vrrp-a	Enter VRRP-A configuration mode.
web-se rvice	Configure access parameters for the Graphical User Interface (GUI).
write	Save the configuration.

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A10 - ACOS System Configuration & Administration Cheat Sheet

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SNMP Commands

#snmp- server community	Deprecated command to configure an SNMP community string.
#snmp- server contact	Configure SNMP contact information.
#snmp- server enable servic e	Enable SNMP service on the ACOS device
#snmp- server enable traps	Enable ACOS to accept SNMP MIB data queries and to send SNMP v1/v2c traps.
#snmp- server engineID	Set the SNMPv3 engine ID of this ACOS device.
#snmp- server group	Configure an SNMP group.
#snmp- server host	Configure an SNMP v1/v2c trap receiver.
#snmp- server location	Configure SNMP location information.
#snmp- server SNMPv1-v2c	Define an SNMPv1 or SNMPv2c community. The members of the community can gain access to the SNMP data available on this device.
#snmp- server SNMPv3	Define an SNMPv3 user.
#snmp- server user	Deprecated command to configure an SNMPv3 user.
#snmp- server view	Configure an SNMP view.

Show Commands

show access -list	Display the configured Access Control Lists (ACLs). The output lists the configuration commands for the ACLs in the running-config.
show admin	Display the administrator accounts.
show arp	Display ARP table entries.
show audit	Show the command audit log.
show axdebug capture	Display a list of debug files.
show axdebug config	Display the debug filter configuration currently applied on ACOS.
show axdebug config -file	Display a list of the debug configuration files.
Display debug capture files or their contents.	show axdebug file
show axdebug filter	Display the configured debug output filters.
show axdebug status	Display per-CPU packet capture counts for AXdebug.
show backup	Display information about scheduled backups.
show bfd	Display information for Bidirectional Forwarding Detection (BFD).
show bgp	Display information for Border Gateway Protocol (BGP).
show bootimage	Display the software images stored on the ACOS device.
show bridge -vl an- group	View information for any configured bridge VLAN groups.
show captur e-c onfig	View capture-config information.

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Show Commands (cont)	
`show class-list`	Display information for class lists.
`show class- lis t-group`	Display information for class-list groups.
`show clns`	Show Connectionless Network Service (CLNS) information.
`show clock`	Display the time, timezone, and date.
`show context`	View the configuration for the sub-module in which the command is run.
`show core`	Display core dump statistics.
`show cpu`	Display CPU statistics.
`show ddos`	Show the DDoS action-list configuration on the device.
`show disk`	Display status information for the device hard disks.
`show domain -group`	Show domain-group configuration information.
`show domain -list`	Show domain-list configuration information.
`show dumpthread`	Show status information about the system threads.
`show enviro nment`	Display temperature, fan, and power supply status.
`show errors`	Show error information for the system. This command provides a way to quickly view system status and error statistics.
`show fail-safe`	Display fail-safe information.
`show glid`	View the configuration for global IP limiting rules.
`show hardware`	Displays hardware information for the ACOS device.
`show history`	Show the CLI command history for the current session.
`show interfaces`	Display interface configuration and status information.
`show interfaces media`	Display information about 1-Gbps and 10-Gbps small form-factor pluggable (SFP+) interfaces.
`show interfaces statistics`	Display interface statistics.
`show ip`	Show the IP mode in which the ACOS device is running, gateway or transparent mode.
`show ip bgp`	Show IPv4 BGP information.
`show ip dns`	Display the DNS configuration.
`show ip fib` `show ipv6 fib`	Display Forwarding Information Base (FIB) entries.

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Show Commands (cont)

`show ip fragme ntation statistics` `show ipv6 fragme ntation statistic s`	Show statistics for IP fragmentation.
`show ip helper -ad dress`	Display DHCP relay information.
`show ip interfaces` `show ipv6 interfaces`	Display IP interface information.
`show ip isis` `show ipv6 isis`	Display the IS-IS routing table.
`show ip map-list`	Show IP map list information.
`show ip nat` `show ipv6 nat`	Display NAT information.
`show ip ospf` `show ipv6 ospf`	Display OSPF status information.
`show ip prefix -list` `show ipv6 prefix -list`	Show information about configured IP prefix lists.
`show ip protocols` `show ipv6 protocols`	Show information for dynamic routing protocols.
`show ip route` `show ipv6 route`	Display the IPv4 or IPv6 routing table.
`show ipmi`	Show information for the Intelligent Platform Management Interface (IPMI) on the ACOS device.
`show ipv6 ndisc`	Display information for IPv6 router discovery.
`show ipv6 neighbor`	Display information about neighboring IPv6 devices.
`show ipv6 stats`	Show IPv6 statistics.
`show ipv6 traffic`	Display IPv6 traffic statistics.
`show isis`	Display information for Intermediate System to Intermediate System (IS-IS).
`show json-c onfig`	View the JSON/aXAPI data format associated with the running-config, or for a specific object.
`show json-c onf ig- detail`	View detailed JSON/aXAPI data format associated with the running-config, or for a specific object.The output is similar to the output for `show json-c onfig` with the addition of the `a10-url` and `obj-type` fields.
`show json-c onf ig- wit h-d efault`	View JSON/aXAPI data format associated with the running-config, or for a specific object. The output is similar to the output for `show json-c onf ig- detail` with the addition of default values for objects not explicitly configured.

Show Commands (cont)	
`show key-chain`	Show configuration information for an authentication key chain.
`show lacp`	Show configuration information and statistics for Link Aggregation Control Protocol (LACP).
`show lacp-p ass throug h`	Show LACP passthrough configuration.
`show license`	Display the host ID and, if applicable, serial number of the license applied to this ACOS device.
`show lldp neighbors`	Displays information on all remote neighbors or on the specified interface.
`show lldp statistics`	Displays LLDP receive or send error statistics, You can display information on all interfaces or only display information on a specified interface.
`show locale`	Display the configured CLI locale.
`show log`	Display entries in the syslog buffer or display current log settings (policy). Log entries are listed starting with the most recent entry on top.
`show mac-ad dre ss- ta ble`	Display MAC table entries.
`show management`	Show the types of management access allowed on each of the device's Ethernet interfaces.
`show memory`	Display memory usage information.
`show mirror`	Display port mirroring information.
`show monitor`	Display the event thresholds for system resources.
`show netflow`	Display NetFlow information.
`show ntp`	Show the Network Time Protocol (NTP) servers and status.
`show overla y-t unnel`	Shows statistics of overlay tunnels on the ACOS device.
`show pki`	Shows information about the certificates on the ACOS device.
`show poap`	View the POAP status of your system.
`show process system`	Display the status of system processes.
`show radius -server`	Display RADIUS statistics.
`show reboot`	Display scheduled system reboots.
`show route-map`	Show the configured route maps.
`show router log file`	Show router logs.
`show runnin g-c onfig`	Display the running-config.

Show Commands (cont)	
show session	Display session information.
show sflow	Show sFlow information.
show shutdown	Display scheduled system shutdowns.
show snmp	Display SNMP OIDs for the specified objects.
show snmp stats	Display SNMP statistics.
show startu p-c onfig	Display a configuration profile or display a list of all the locally saved configuration profiles.
show statistics	Display packet statistics for interfaces.
show store	Display the configured file transfer profiles in the credential store. The credential store is a saved set of access information for file transfer between the ACOS device and remote file servers.
show system cpu-lo ad- shari ng	Displays CPU load sharing information.
show system platform	Display platform-related information and statistics.
show system resour ce- usage	Display Layer 4 session capacity information.
show tacacs -server	Display TACACS statistics.
show techsu pport	Display or export system information for use when troubleshooting.
show terminal	Show the terminal settings.
show tftp	Display the currently configured TFTP block size.
show trunk	Show information about the trunks configured on the system.
show version	Display software, hardware, and firmware version information.
show vlans	Display the configured VLANs.
show vrrp-a	Display VRRP-A information.

AX Debug Commands	
apply- config	Apply an AXdebug configuration file.
capture	Start capturing packets.
count	Specify the maximum number of packets to capture.
delete	Delete an axdebug capture file.
filter -config	Configure an AX debug filter, to specify the types of packets to capture.
incoming	Specify the Ethernet interfaces and traffic direction for which to capture packets.

AX Debug Commands (cont)	
`length`	Specify the maximum length of packets to capture. Packets that are longer are not captured.
`maxfile`	Specify the maximum number of axdebug packet capture files to keep.
`outgoing`	Limits the packet capture to outbound packets on Ethernet interface "x".
`save-c onfig`	Save your AXdebug configuration to a file.
`sess-f ilt er-dis`	Disable the session-based filter.
`tcpdump`	Capture packets for analysis.
`timeout`	Specify the maximum number of minutes to capture packets.

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