

Start Guide: OmniSwitch running AOS 8.x

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Before you start

ALE OmniSwitch ship with all ports in VLAN 1. No default IP is set to avoid conflicts. PoE is disabled by default for safety and security. Do not discard or lose the included grey RJ45 console adapter. Adapters wired for Cisco equipment will **not** work. Default login is username: <u>admin password: switch</u>

First login

There are two methods of logging into a factory default switch, via the serial console port or using DHCP and an Ethernet connection.

Starting with the serial console, connect a standard Ethernet cable to the RJ45 console port on the switch and connect the grey RJ45 adapter. Connect your standard RS-232 DB9 cable to the other end of the grey adapter and your laptop.



ALE CONSOLE CONNECTION

You may add OS6900 X24C2/T24C2 too.

Set your serial port to 9600 baud (or 115200 as needed), 8, none, 1, no flow control on the laptop and terminal emulator. In this example, we are using a Prolific USB to Serial adapter that Windows has installed on COM 3 based on the USB port where the adapter was inserted. Your COM port may be different.

COM3 - Tera Term VT File Edit Setup Control	Tera Term: Serial port set	up and connection	×		×
	Port: Speed:	COM3 ~ 9600 ~	New setting		^
	Data: Parity:	8 bit ~	Cancel		
	Stop bits: Flow control:	1 bit v	Help		
	0 Device Friendly	ID: USB\VID_067B& urer: Prolific Prolific 1-2021	msec/line		~

Using the correct settings, press return several times. If no login prompt appears or "garbage" appears with each return, check your settings and cables, and try again.

VT	СОМЗ	- Tera Te	erm VT							-	\times
File	Edit	Setup	Control	Window	Help						
			in: in: in: in:		Help						
											~

The switch will automatically obtain a dynamic IP address from DHCP if available at first boot. Please note the switch will only make 3 attempts and then stop if DHCP is not functioning. You must power cycle the switch to restart the DHCP process if needed. Attach port 1 of the switch to your existing network with DHCP and power it on. Wait for the boot sequence to complete and obtain the dynamic IP. An example is shown where the DHCP server assigned the 192.168.39.142 address to an ALE OmniSwitch.

C# Safe Mode	Seasi	pn: 192.168.39.1								
P Quick Set	DHC	P Server								
CAPSMAN	DH	CP Networks Leases	Optione Option Sets	Vendor Classes Alert	2					
* interfaces	+		Check Statue						End	
Wireless					1.			1		
Bridge	0	Address /	MAC Address BC-2E-48-2E-58-AE	Dient ID	Server	Active Address Active MAC Address 192 168 39 101 BC 2F 48 2F 08 AF	Active Host Name TIVO-A550057C29E57A1	Expires After Status 00:54:51 bound		
PPP	6	192 168 39 104	00.1E.4C.3A.6F.33	10 1er4c 3a @ 33	defcorf	192 168 39 104 00 1E 4C 3A 6F 33	1110-130003/02303/11	00.37.36 bound		
Switch	D.	192 168 39 105	00 11 D9 96 DB DF		defcort	192 168 39 105 00:11 D9:96 DB DF	TIVO-849600190488FF6	00.54.56 bound		
Meeh	D	192 168 39 106	B0:CE:18:22:4D F7	1b0:ce:18:22:46f7	defcorf	192 168 39 106 B0 CE 18 22 4D F7		00:56:43 bound		
EIP P	D	192.168.39.107	E2:04:C1:58:24:CC	1:e2:4:c1:58:24:cc	defcorf	192.168.39.107 E2.04:C1:58:24:CC		00:33:36 bound		
MPLS P	D	192.168.39.108	B0.68.E6.3D B8 D6	160.68#6.3d58.d6	defcoril	192.168.39.108 B0.68.E6.30.88.D6	BRWB068E63DB8D6 8058e-045C9C	00:52:56 bound		
	B	192 168 39 109 192 168 39 111	48 7A 55 04 5C 9C 00 05 CD 71 22 58	1.48:7a 55.4.5c 9c 1.0.5 cd 71.22:58	defcorf	192.168.39.109.48:7A 55.04.5C.9C 192.168.39.111.00:05.CD 71:22:58	B058s-045C9C Denon-AVR-X4300H	00 50 34 bound 00 41 43 bound		
Routing P	16	192.168.39.113	B8:5F 98:EF:37:58	1b8:9:98 ef 37:58	defcont	192 168 39 111 00 05 CD 71 22 56 192 168 39 113 88 5F 98 EF 37 58	Denon-AVR-A4300H	00 33 30 bound		
System F	6	192 168 39 114	7C:05:66:68:FE:36	1.7c:d5:66:68.fe:36	defcart	192,168,39,113, 20, 37, 30, EP 37, 36 192,168,39,114,7C 05:66,68:FE 36		00.40.34 bound		
Queues	D	192 168 39 115	60 12 8B 48 2A 17	1.60:12:0b 48:2a:17	defoorf	192 168 39 115 60 12 88 48 2A 17		00-42-18 bound		
files	D	192.168.39.117	DC:08:56:3E 2F C0		defoorf	192.168.39.117 DC.08.56.3E.2F.C0		00.32.50 bound		
Log	D	192.168.39.123	04:03:D6:73:3A:45		defcont	192.168.39.123 04:03:D6:73:34:45		00.33:59 bound		
BADIUS	D	192 168 39 124	F8:0F:F9:67:30:66		defcorf	192.168.39.124 F8-0F-F9-67-30-66	Google-Nest-Mini	00:41:33 bound		
	D	192 168 39 126 192 168 39 127	AC:CC:8E:F5:A4:70 A8:76:50:2F:C1:38	1 ac cc 8e f5 a4 70 1 a8 76 50 2f c1 38	defcorf	192 168 39 126 AC CC 8E F5 A4 70 192 168 39 127 A8 76 50 2F C1 38	axis-accc5ef5a470 S+:Tab-S7	00:57:10 bound 00:36:46 bound		
Tools P	D.	192 168 39 131	AC:CF:5C:9A:6A:1D	1 ac:d:5c 3a 6a 1d	defcont	192, 168, 39, 127, A8, 76, 50, 2F, CT, 38 192, 168, 39, 131, AC, CF, 5C, 9A, 6A, 1D	S+01aD-S7 showards.iPad	00.47.19 bound		
New Terminal	0	192 168 39 133	AC-\$7:50-83-A8-01	1 ac:67.5d 83 a8 1	defcorf	192 168 39 133 AC 67 5D 83 48 01	Trish-lanton	00.55-08 bound		
Dot1X	D	192 168 39 134	D6:49.57.08:1F:15	1.d5:49:57b.11:15	defcorf	192.168.39.134 D6:49.57.08.1F.15	Conceptor .	00.54.58 bound		
Partition	D	192.168.39.138	00.08.61.8F:77.82	1.0.48.61.1.77.52	defcorf	192.168.39.138.00:D8.61.8F:77.82	DESKTOP-M5HM6R	00.51.01 bound		
Make Supput of	D	192 168 39 140	08:84:50 CB 27:53	18:84:9d cb 27:53	defcorf	192 168 39 140 08:84 9D:CB 27 53	amazon 96bc2859e	00:40:48 bound		
New WinBox	D	192 168 39 142	94:24:E1:6C:AA:DD	194:24 e1 6c aa dd	defcont	192.168.39.142.94:24 E1-6C-AA-DD	OSSECN	00:54:22 bound		
Det	D	192, 12, 39, 164	00:56:CD:2E:D4:59	1.0.56.cd 2e d4.59	defcorf	192.168.39.164 00:56:CD 2E:D4:59	2	00:59:18 bound		
Windows										
- managers										
	22.2	ems (1 selected)								
	200				_					

Obtain a DHCP address from the same server on your MS Windows laptop. Verify the address and subnet mask.





Once successful, you can then ssh to the switch.

Notice the command line prompt -> and verify the dhcp-client IP interface using the: *show ip interface* command.

192.168.39.142 - Tera Term VT File Edit Setup Control Window Help			-	D X
-> -> -> show ip interface Total 3 interfaces Flags (D=Directly-bound)				
Name Device Flags	IP Address	Subnet Mask	Status	Forward
EMP-CMMA-CHAS1	0.0.0	0.0.0.0	DOWN	NO
EMP Loopback Loopback	127.0.0.1	255.255.255.255	UP	NO
Loopack dhcp-client vlan 1 -> ∎	192.168.39.142	255.255.255.0	UP	YES

Tasks to complete after login

These instructions are tailored for vendors deploying cameras on a small to medium video surveillance network. Please contact your authorized ALE reseller if this is not the case. The following CLI commands should be issued. The command will be in *italics* followed by # and comment explaining what the command does.

aaa authentication default "local" # Enables web interface, and local logins to the switch.

Telnet and FTP are insecure services and likely should be disabled.

ip service telnet admin-state disable

ip service ftp admin-state disable

(this enables unsecure telnet and ftp too, it's may better to explicitly only allow ssh, http, snmp - if I remember well, we do redirect http to https by default)

lanpower slot 1/1 service start # Enables PoE

loopback-detection enable # Helps prevent loops on the network. Enable this globally and then add per port as needed. Example: *loopback-detection port 1/1/1 enable*

Choose a static management IP for the switch. An example is below but you must customize this for your needs.

ip interface "MGT1" address 192.168.39.142 mask 255.255.255.0 vlan 1 # Set a management IP interface. (Note that the new MGT1 IP subnet cannot conflict with the existing DHCP subnet. Use a console cable to configure the switch if you cannot avoid this situation.)

Add a default route if needed

ip static-route 0.0.0.0/0 gateway 192.168.39.1 # Note your default route IP may be different.

(having the default route with 39.1 as same address as MGT1 address doesn't work 😔)

Change the default password

password # Follow the prompts. Old password, new password, password confirmation. The password must contain at least 8 characters. Do not share the password with unauthorized people. Do not forget your password. Contact your reseller if the password is lost and you have physical access to the switch console ports.

write memory # Save the configuration changes from RAM to /flash/working directory. Failure to issue this command will result in all changes being lost upon any reboot or power cycle.

copy running certified # Copy working firmware and configuration to the backup /flash/certified directory. Failure to issue this command will result in the switch loading into a rescue mode upon any reboot or power cycle. See trouble shooting comments below for more information.

reload from working no rollback-timeout # Reboot the switch from /flash/working directory and do not use the rollback (rescue) mode.



Note that not every command required is illustrated here. Screen shot included for illustration purposes only. Note any errors that may occur and contact tech support if needed.

Test your new settings. ssh to the new management IP address and login as admin. Correct any errors if needed and remember to *write memory* and *copy running certified* after configuration changes. Once verified, reboot the switch if required. (Changed IP management settings, etc.)

Connect your first camera and verify correct operations. Check the PoE status of devices from the switch.

192.168.39.26							-	×
	er1-≻ show	w Help lanpower slot 1 Actual Used(m₩)		Priority	0n/0ff	Class	Туре	^
12 Watts A 438 Watts A 450 Watts 1 Power Sup BPS power: '*' append:	ctual Power Actual Power Total Power Sply Availa Not Availa ing port ma	er Budget Remain – Budget Availab able	Searching Searching Powered On Searching	Low Low Low Low Low Low Low Low Low Low	ON ON ON ON ON ON ON ON ON ON ON ON ON O	**************************************		
6860E-Route	er1->-							~

Common errors and troubleshooting tips

write memory fails with an error message. The switch is in certified (rescue) mode. Reboot the switch from the working directory using the following command: *reload from working no rollback*-timeout

The switch was rebooted, or power cycled, and all configuration changes were "lost". This means the *copy running certified* command was not issued after previous configuration changes were made. Log into the switch.

cd / flash/working # Change directory to working

more vcboot.cfg # View and verify correct configuration. Tap the space bar once to advance the screen.

reload from working no rollback-timeout # Reboot from the correct (working) directory. Log back into the switch.

write memory

copy running certified

The configuration will now be stored in both working and certified directories.

How can I tell if I'm in working or certified (rescue) mode? Run the following command: *show running-directory*

I want to view the entire configuration file. Run the following command: *show configuration snapshot*

I need to know what version of AOS is running on the switch. Run the following command: *show system*

I need the serial number of the switch from the command line: Run the following command: *show cmm*

I need to see how much of the PoE budget is being consumed and the wattage per port. Run the following command: show lanpower slot 1/1