

GUIDE 01 · NETWORK SETUP

Multiple VLANs on one Mac network interface

Management, internet and sACN down a single cable. Every click, every number, with a picture of every screen — then add as many more VLANs as your show needs.

WHAT YOU NEED

- A Mac running macOS Ventura or later
- Its Ethernet port, or a USB / Thunderbolt dock with one
- One cable to a NETGEAR AV Line M4250, on a port set to Manual Trunk
- The show's IP address ranges — the defaults are printed inside

The three VLANs shown here follow the **netmap VLAN and IP scheme defaults**. Your show may use different tags, ranges or masks — take the steps as written and substitute your own numbers.

INSIDE

1. Read this first — and why three is not the limit
2. The plan, and one diagram
3. Create the two VLANs
4. Address each VLAN
5. Prove it, and fix it
6. Addendum — the trunk port on an M4250
7. Words this guide uses
8. One-page summary to print

SYSTEM SETTINGS ONLY
No Terminal commands.

Rev A · August 2026
uplink.show/resources

Read this first

The switch port has to be a trunk. To run more than one VLAN down a single cable to an M4250, that port must be set to **Manual Trunk** and forced to carry all traffic. Left on a single-VLAN profile, the tagged traffic never reaches the Mac and every VLAN you build below will look dead.

The router only touches the internet VLAN. It hands out DHCP there and nowhere else. Management and sACN have no router, no DNS and no search domains — they are flat, local networks.

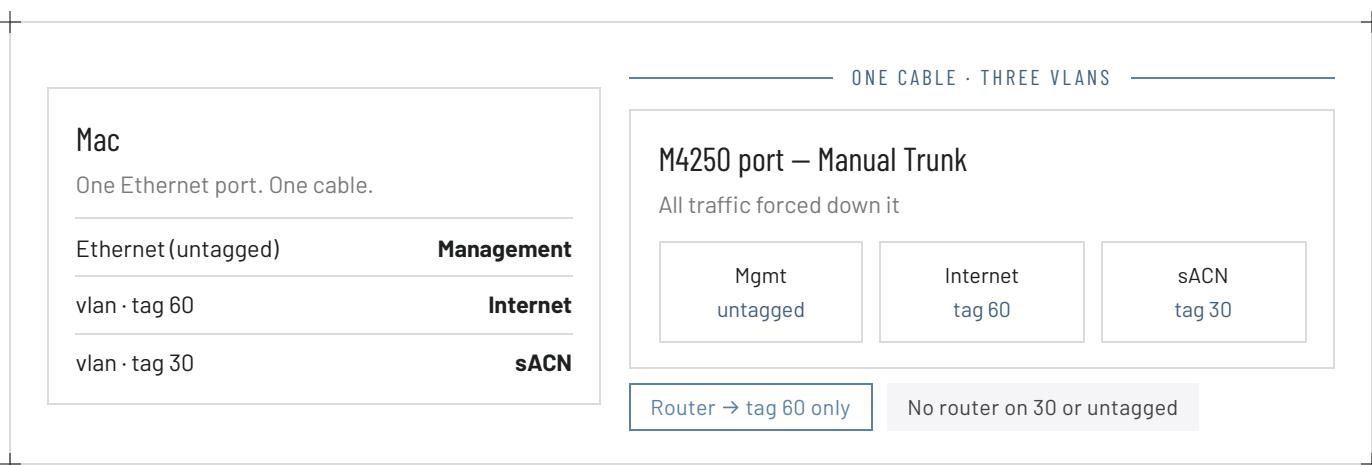
Three is the example, not the limit. Every VLAN you add is just another virtual interface on the same port, and macOS does not cap them — cameras, comms, media servers, a spare. Repeat part one with a new name and tag for each, and give it its own IP address in part two.

Plug the trunk cable in before you start. macOS only offers a port as a VLAN's parent while that port is present and live — and that parent can be the built-in Ethernet or a dock, whichever one carries your trunk.

The plan

VLAN	TAG	ADDRESS	SUBNET MASK	ROUTER / DNS
Management The Ethernet port itself	none untagged	10.224.2.1 – 10.224.2.255 pick one, set it manually	255.240.0.0	Leave blank
Internet Virtual interface	60	DHCP	From DHCP	From DHCP
sACN Virtual interface	30	192.168.30.xxx pick one in your show's range	255.255.255.0	Leave blank

The mask 255.240.0.0 is a /12 — the 4Wall standard, written 10.224.0.1/12. It runs from 10.224.0.0 to 10.239.255.255, so the whole 10.224.2.x range is open and works alongside 4Wall switches. Tags 30 and 60 are the netmap and 4Wall defaults — if your show sheet says otherwise, the show sheet wins. The screens in this guide use 10.224.2.21 and 192.168.30.21 as examples.



Part one — create the VLANs

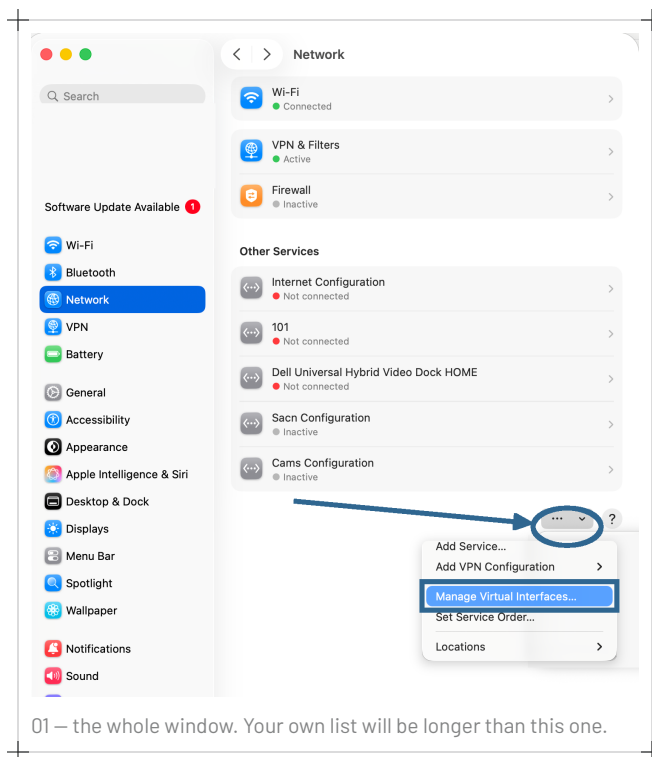
Four clicks and one small form per VLAN. Two here; the same form makes the tenth.

01

Open Manage Virtual Interfaces

System Settings > Network > the ... button under the list > Manage Virtual Interfaces...

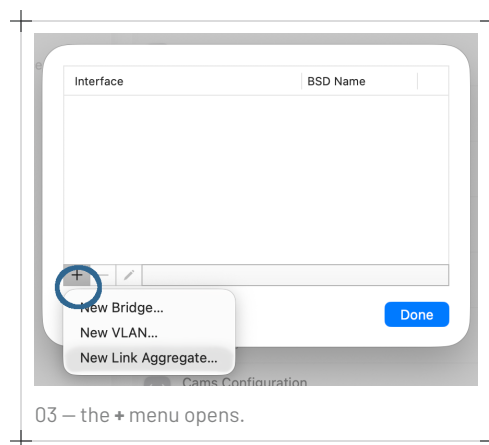
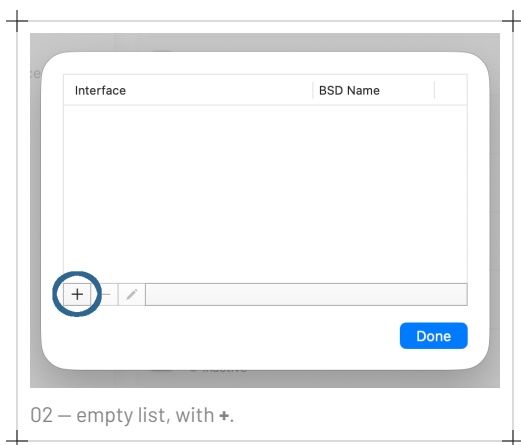
The three-dot button sits below your list of connections, next to the ?. Everything in this guide starts there.



02

Click +, then New VLAN

The sheet lists the virtual interfaces on this machine — empty, the first time. The + at the bottom left offers New Bridge, New VLAN and New Link Aggregate. You want **New VLAN**.



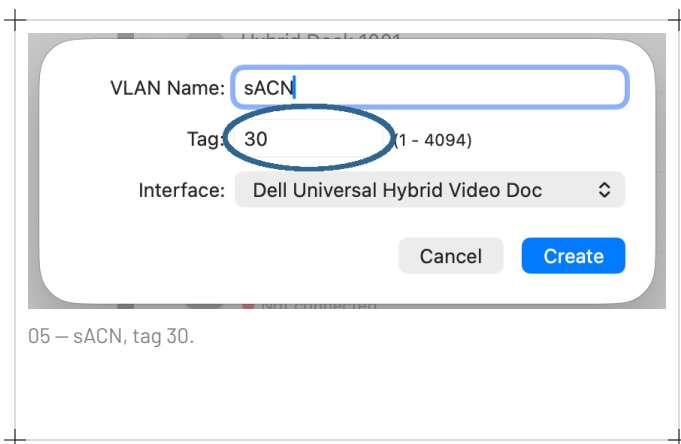
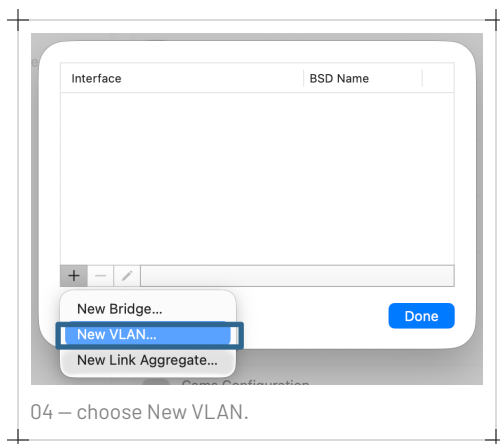
03

Fill in three fields. Twice.

Name it, tag it, and pick the port your trunk is plugged into. Click **Create**, then **+** again for the next one — as many times as you have VLANs.

VLAN ONE	VLAN TWO
VLAN Name: sACN	VLAN Name: Internet
Tag: 30	Tag: 60
Interface: your trunk port	Interface: the same port

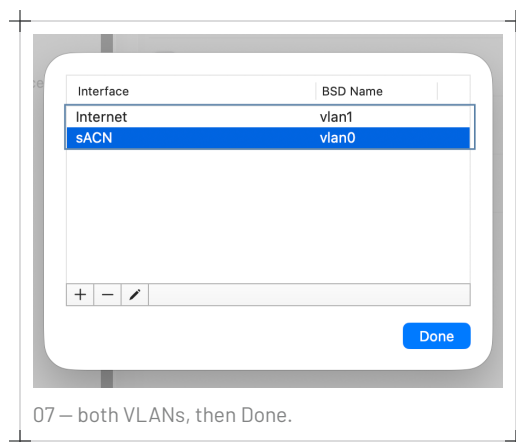
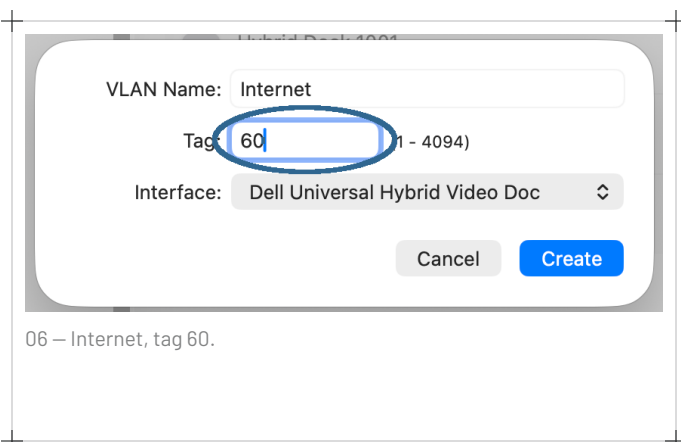
The **Interface** menu only lists ports that can carry a VLAN. If yours is missing, the cable is unplugged or the adapter cannot tag.



04

Check the list, then click Done

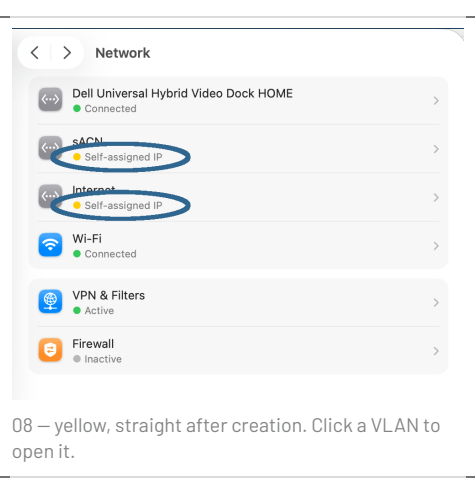
Both VLANs appear with a **BSD Name** beside them — vlan0, vlan1. That is macOS's internal name for each one; it does not have to match anything on the switch. Keep adding and they simply count up: vlan2, vlan3, and so on.



Part two – address each VLAN

Expect yellow. The moment they are created, both VLANs appear in the Network list with a yellow dot and **Self-assigned IP**. That is normal – they exist, but nobody has told them what IP address to use yet.

Each VLAN is now its own connection in that list, with its own TCP/IP and DNS settings. Click into it to set them – that is where the rest of this guide happens, and it is the same handful of fields however many VLANs you built.



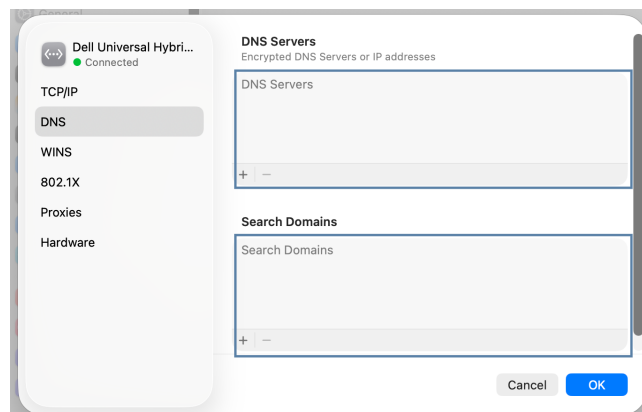
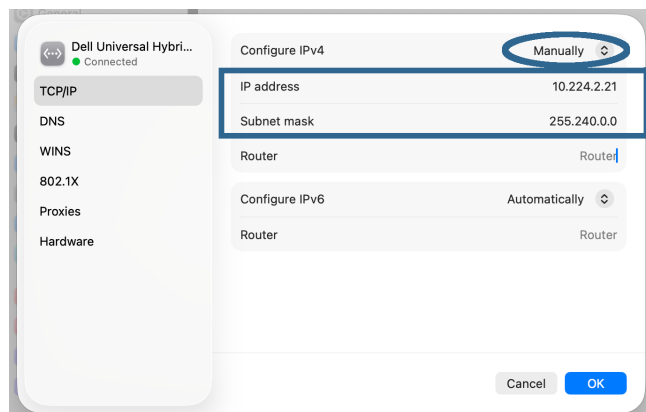
05

Management – on the physical port

Network > your Ethernet port or dock > Details... > TCP/IP

- Configure IPv4: **Manually**
- IP address: **10.224.2.xxx**
- Subnet mask: **255.240.0.0**
- Router: **leave blank**

Then click **DNS** in the same sheet and leave both lists empty. Click **OK**.



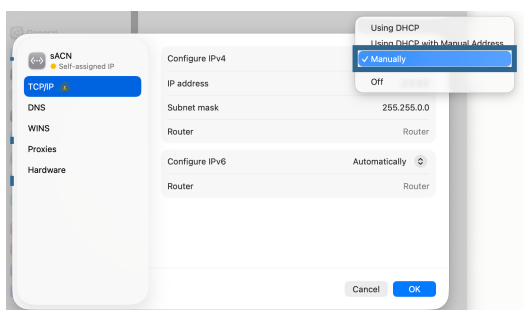
06

sACN — switch it off DHCP

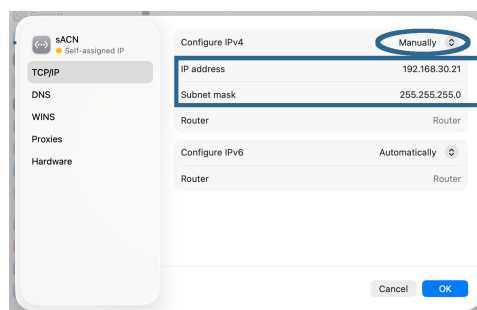
Network › sACN › Details... › TCP/IP

A new VLAN arrives set to **Using DHCP**, which is why it is yellow. Open the **Configure IPv4** menu and choose **Manually**, then type:

- IP address: **192.168.30.xxx** — inside your show's range
- Subnet mask: **255.255.255.0**
- Router: **blank**. DNS and search domains: **blank**



11 — Configure IPv4 → Manually.



12 — the sACN IP address.

07

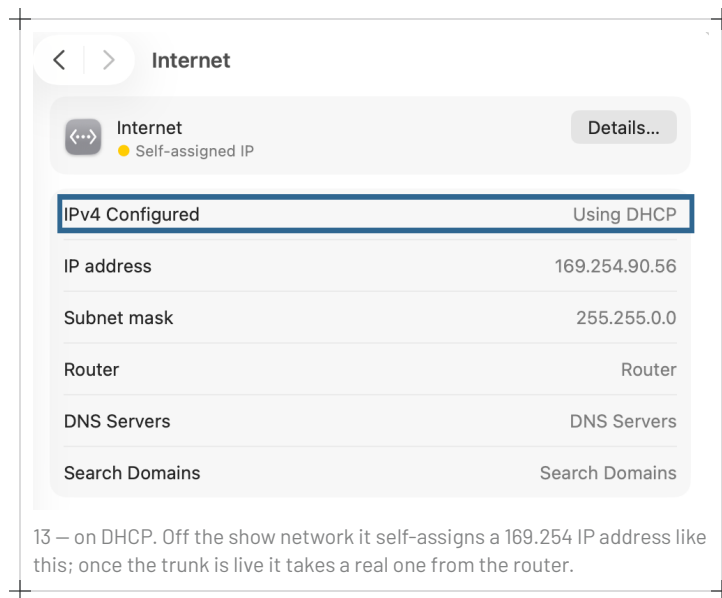
Internet — leave it on DHCP

Open the **Internet** connection and change nothing: **Using DHCP** is correct. This is the only VLAN the router serves, and the only place an IP address, a gateway and DNS should arrive on their own.

IMPORTANT — YOU STILL NEED A ROUTER

You cannot plug an internet line straight into the switch. The internet VLAN gets its IP address from DHCP, and that DHCP has to come from a router. Something has to sit between the incoming line and the show network to hand out IP addresses on the internet VLAN and route traffic out to the world. A NETGEAR switch does not do that job.

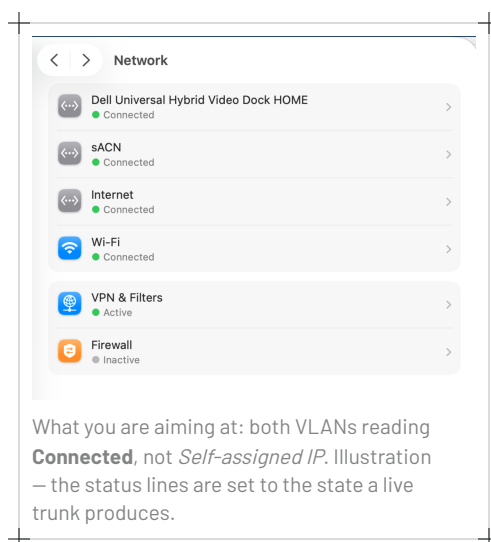
Put a router in line. A **NETGEAR PR460X** is the tidy answer because Engage configures it natively alongside the switches. A small travel router such as a **GL.iNet** also does the trick. Either way its WAN side takes the incoming line and its LAN side lands on the internet VLAN — and management and sACN stay routerless.



Prove all three

Back in the Network list, a VLAN that was yellow now reads **Connected** once its IP address is set and the trunk is live. Management and sACN go green because you addressed them; internet goes green when the router answers.

- **Management:** ping the switch on 10.224.x.x, or open its web page.
- **Internet:** load a website.
- **sACN:** ping a console or node on 192.168.30.x. If the desk sees output, you are done.



Rules that keep it working

ONE GATEWAY

Only the internet VLAN has a router

Put a gateway on sACN, management or any other local VLAN and macOS may send show traffic out the wrong door. Blank is correct, not lazy.

BOTH ENDS AGREE

Tags on the Mac match tags on the port

30 is sACN and 60 is internet on both sides, or that VLAN is silent. The trunk carries only the tags the switch was told to carry — add a VLAN on the Mac and you add it on the port too.

NAMING

Name them the day you make them

A VLAN's connection is not always named after the VLAN — an unnamed one shows up as something like **VLAN (vlan1) Configuration**. Make it read sACN and Internet on every machine.

HOUSEKEEPING

Delete stale duplicates

macOS only honours the active connection. If an IP address will not stick, there is usually a second, inactive copy of it sitting in the list.

When it does not work

WHAT YOU SEE	WHAT IT USUALLY IS
No interface to pick in the New VLAN sheet	The trunk cable is unplugged, or the adapter cannot tag. macOS only offers a live, capable port.
The VLAN stays yellow, Self-assigned IP	It is still on Using DHCP with nothing answering. Set it to Manually, or check the trunk.
VLAN has an IP, but nothing answers	The switch port is not a manual trunk, or it is not passing that tag.
Internet is fine, consoles are not	Wrong IP address or mask on sACN. It must be 192.168.30.x with 255.255.255.0.
Web pages die when the show network comes up	A router got typed into management or sACN. Blank it.
The IP you set does not stick	Two connections on one interface — remove the inactive one and set the IP address again.
Everything looks right and still nothing	Confirm at the switch: is that port trunked, and are 30 and 60 actually on it?

ADDENDUM

Set the trunk port on an M4250

The Mac half is done. This is the switch half — the one port that carries all of it, set in NETGEAR Engage. The example sets **port 7**.

A trunk port carries several VLANs at once: management untagged, everything else tagged. That is exactly what the Mac expects at the other end of the cable. An ordinary access port carries one VLAN, and the tagged traffic never arrives.

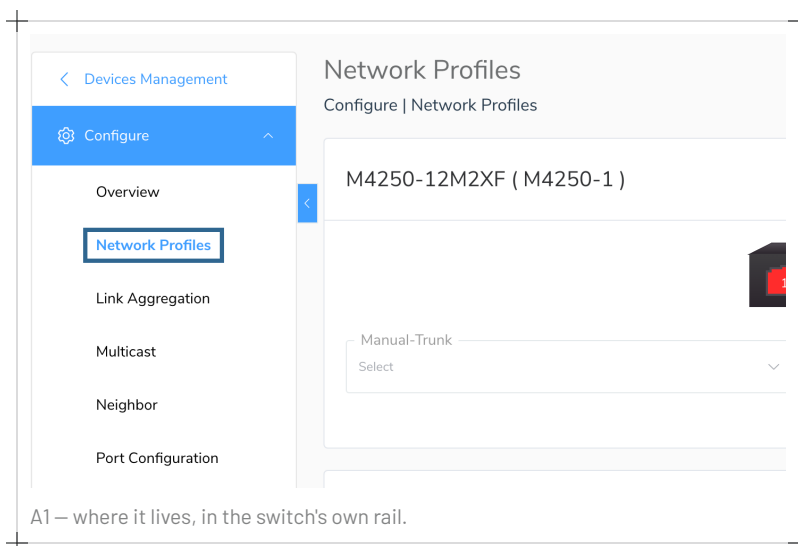
01

Open the switch's Network Profiles

Engage › Devices › your switch › Configure › Network Profiles

Check the header names the right switch — model and system name, like **M4250-12M2XF (M4250-1)**. The port map is colour-coded by profile, and **Configured Profiles** underneath says what those colours mean. On the switch shown here that is Default on VLAN 1, MA Net 3 on 20, sACN on 30 and ArtNet on 40.

Two selectors sit under the map. **Manual-Trunk** is the one you want. **Add-Ports-Untagged-To-Profile** is its opposite — that makes a port a plain access port on one VLAN. Leave **Auto-Trunk** off; you are doing this deliberately.



02

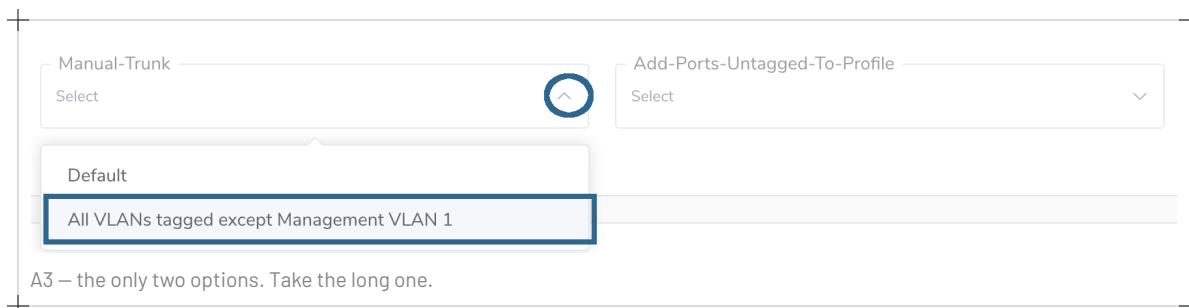
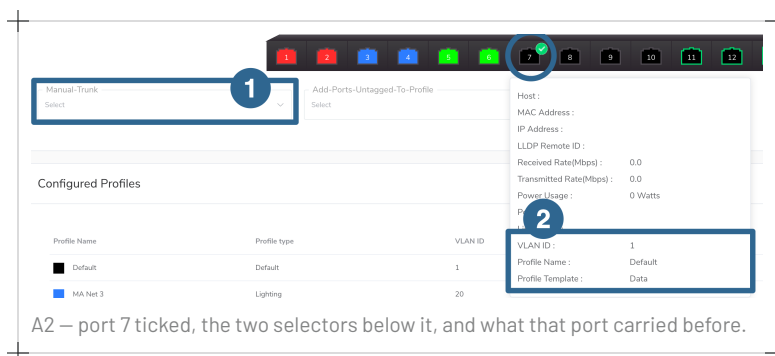
Click the port

Click **7** on the map. A green tick appears on it — that is your selection, not a setting. Hover a port first if you want to see what it carries today: the tooltip gives its **VLAN ID**, **Profile Name** and **Profile Template**. An untouched port reads VLAN ID 1, Default, Data.

03

Manual-Trunk → All VLANs tagged except Management VLAN 1

Open the **Manual-Trunk** selector. It offers two things: **Default**, and **All VLANs tagged except Management VLAN 1**. Choose the second. Management stays untagged and every other VLAN rides tagged — the arrangement part one builds on the Mac.

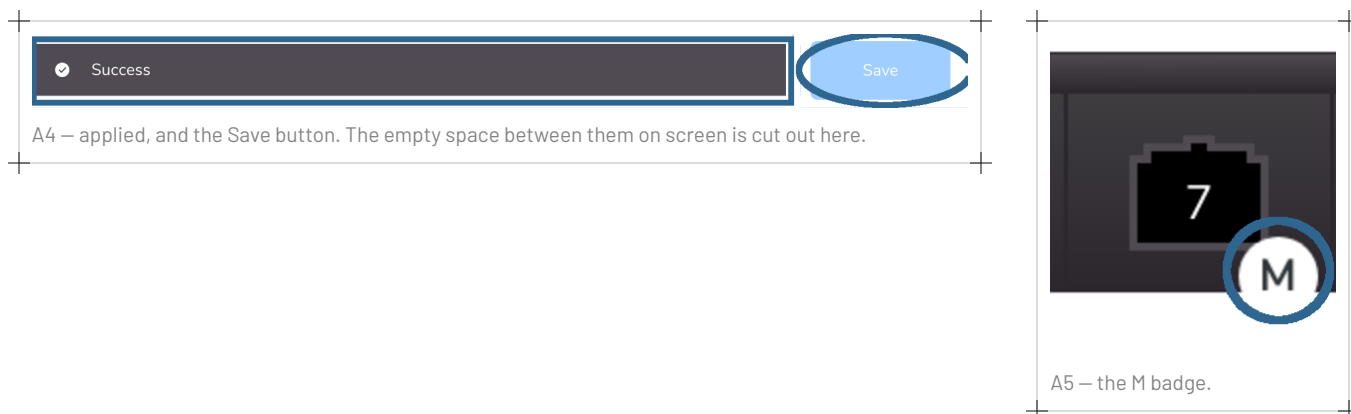


04

Check the badge, then Save

A success message confirms it, and a small **M** appears under port 7 on the map — that is how you spot a manual trunk at a glance, on this visit or in six months.

Then press **Save** at the top right of Engage. Until you do, the switch has not been told.



Plug the Mac into port 7 and go back to part two. Every VLAN you add later needs its profile to exist on this switch — the trunk carries what the switch knows about, and nothing else.

Words this guide uses

Plain definitions, in the sense they carry on a show network.

VLAN

One physical network divided into separate ones. Devices on different VLANs cannot see each other, even on the same switch.

Tag

The number stamped on traffic so the switch knows which VLAN it belongs to. Both ends of the cable must agree on it. 1–4094.

Untagged

Traffic with no tag. On a trunk, one VLAN is usually left untagged — here that is management, which is why the Mac's Ethernet port needs no VLAN at all.

Trunk

A port that carries several VLANs at once. The opposite is an access port: one VLAN, no tags.

Virtual interface

What macOS calls a VLAN once you create one. It behaves like another Ethernet port, with its own IP address and its own row in the Network list.

Subnet mask

How much of an IP address is the network and how much is the device. 255.255.255.0 keeps you inside 192.168.30.x; 255.240.0.0 spans a much wider block.

Router / gateway

The way out to another network. A VLAN with no router is a closed room, which is what you want for show traffic.

DHCP

Addresses handed out automatically. Here only the internet VLAN uses it; everything else is typed by hand so it never moves.

Self-assigned IP

A 169.254 IP address macOS invents when it asked for one and nobody answered. Normal on a VLAN you have just created; a problem later.

sACN

Streaming ACN — lighting control over the network. It is just traffic, but it is unforgiving about being on the wrong VLAN.

One page, for the rack

[PRINT THIS PAGE ALONE](#)

ON THE MAC

1. Network › ... › Manage Virtual Interfaces
2. + › New VLAN › name, tag, interface › Create
3. Repeat for every VLAN, then **Done**
4. Ethernet › TCP/IP › Manually › management IP address
5. Each VLAN › TCP/IP › its own IP address
6. DNS tabs empty except the internet VLAN

ON THE SWITCH

1. Configure › Network Profiles
2. Click the port the Mac is on
3. Manual-Trunk › All VLANs tagged except Management VLAN 1
4. Look for the **M** badge
5. **Save**, top right

Auto-Trunk stays off. Add-Ports-Untagged-To-Profile is for access ports, not this.

VLAN	TAG	ADDRESS	MASK	ROUTER / DNS
Management	none	10.224.2.xxx	255.240.0.0	blank
Internet	60	DHCP	from DHCP	from DHCP
sACN	30	192.168.30.xxx	255.255.255.0	blank

Your own VLAN: name _____ · tag _____ · IP address _____ · mask _____

THREE THINGS THAT BREAK IT

- A router typed into management or sACN
- A tag on the Mac that the switch port does not carry
- The port left as an access port instead of a trunk

IF YOU GET STUCK

The other guides in this set cover the switch's DHCP server and the Uplink Cockpit. All of them live at **[uplink.show/resources](#)**.