

GUIDE 02 · NETWORK SETUP

DHCP on the management VLAN

Turn on the switch's own DHCP server in NETGEAR Engage, so an access point — or anything else you plug into management — gets an IP address without a router. Every screen in this guide is the real thing.

BEFORE YOU START

- Your laptop is on the management VLAN with a static IP address in the 10.224.2.x range.
- The switch already appears under **Devices › Managed Devices** in Engage and reads Online.
- You are on the right **Site** — the picker sits at the top right, next to Save.
- Pick one configuration method and stay on it. If this site is run from Engage, do not also configure it from the AV UI or the main web UI.
- Only one switch serves IP addresses on the lane. Choose it deliberately — the others still get static IP addresses of their own, they just do not serve.

INSIDE

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NETGEAR ENGAGE ONLY

No command line.

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uplink.show/resources

What you are about to type

FIELD IN ENGAGE	VALUE	WHY
IP Address (the serving switch)	10.224.0.1	The switch's own IP address on management — 10.224.0.1/12
Subnet Mask	255.240.0.0	The 4Wall /12 — 10.224.0.0 to 10.239.255.255
Default Router	10.224.0.1	Engage means "the VLAN's own IP" here
DHCP Server Pool Start	10.224.0.2	Everything above the switch's own IP address
DHCP Server Pool End	10.239.255.254	
DNS Server 1	1.1.1.1	Optional on a closed lane; harmless to set
DNS Server 2	8.8.8.8	
Search Domain	google.com	Only matters if this lane reaches the internet
Lease Time	240	Minutes. Four hours suits a show week

10.224.0.1 with 255.240.0.0 is a /12 — the 4Wall standard. It runs from 10.224.0.0 to 10.239.255.255, so the switch at 10.224.0.1 and the laptops at 10.224.2.x are all on one flat lane. A pool this wide covers hand-set IP addresses too: reserve them, or keep the statics above the pool.

Profile Name	Profile Template	VLAN ID	Management VLAN
 Default	Default	1	
 MA Net 3	Lighting	20	
 sACN	Lighting	30	
 ArtNet	Lighting	40	

Where the lanes are defined — **Site Settings › Network Profiles**. **Default** on **VLAN ID 1** carries the Management VLAN tick: that is the profile this guide configures. The lighting profiles beside it (MA Net 3 on 20, sACN on 30, ArtNet on 40) get no DHCP and no router.

Turn it on

Six steps. Engage holds your changes until you press Save.

01

Name the switch

Devices › Managed Devices › pencil icon under System Name

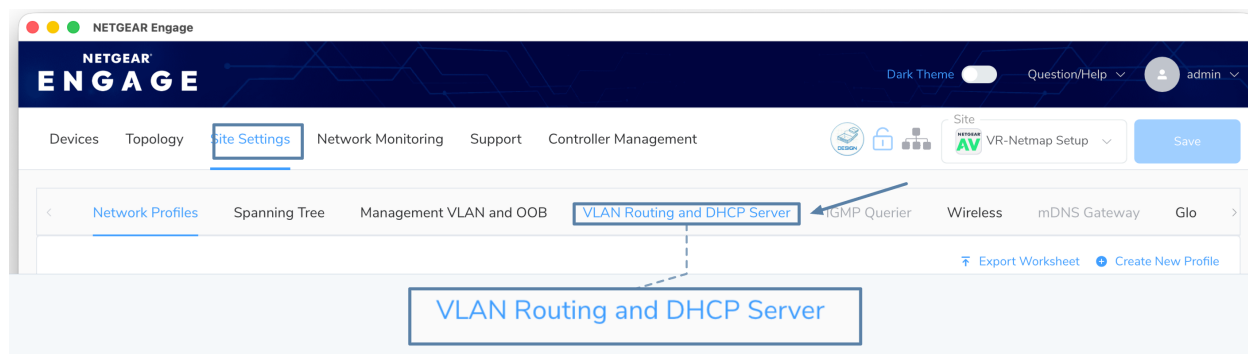
Type a name you will recognise — **FOH 1, Dome Main** — and click **Apply**. Skip this and every screen from here on identifies the switch by serial number.

02

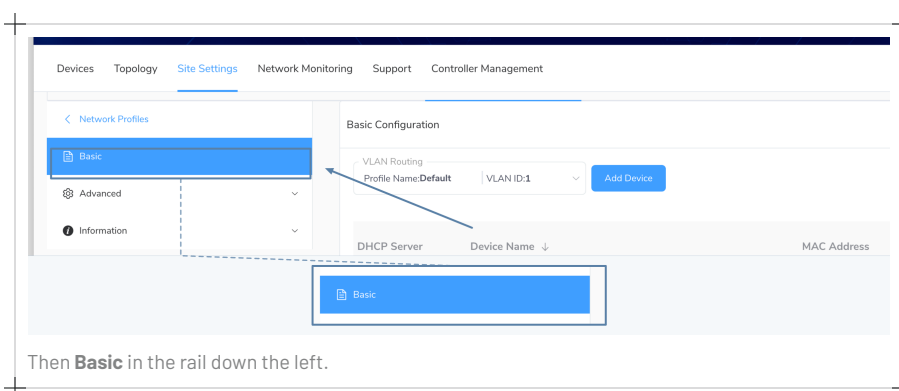
Open the DHCP page

Site Settings › VLAN Routing and DHCP Server › Basic

Site Settings holds the network tabs; you want **VLAN Routing and DHCP Server**, then **Basic** in the rail on the left. Advanced and Information sit under it — you do not need either today.



Step 02 — the top of Engage: **Site Settings**, then the **VLAN Routing and DHCP Server** tab. Throughout this guide the strip under a screen is the marked control, magnified.



Then **Basic** in the rail down the left.

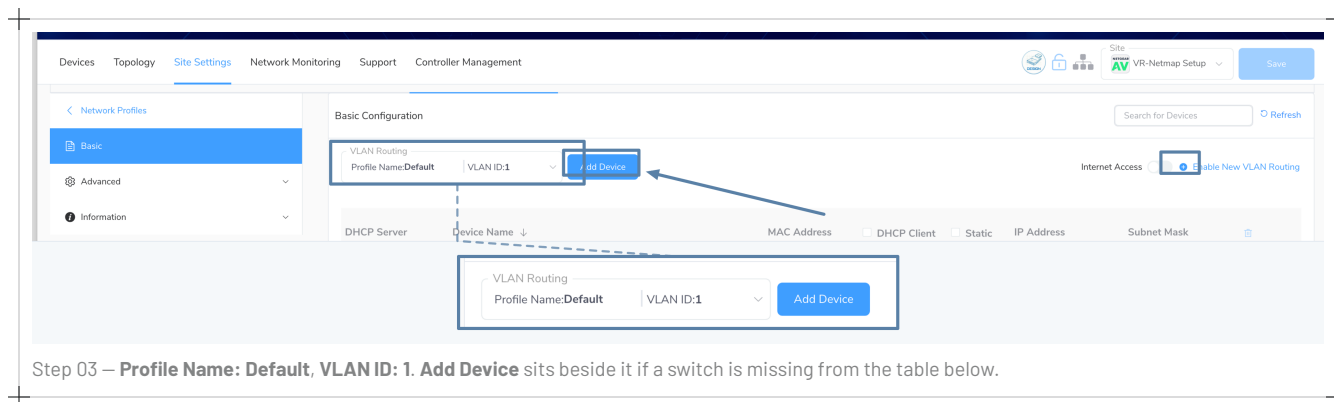
03

Pick the management VLAN

At the top of Basic Configuration there is a **VLAN Routing** box showing **Profile Name** and a **VLAN ID** drop-down. Choose the management profile — **Default, VLAN ID 1**. If a switch you need is not in the list below, click **Add Device** and pick it.

Leave the **Internet Access** toggle at the right of that row alone unless this lane is genuinely meant to route out.

Do this for management only. Leave sACN alone — it wants no server, no router and no help.



04

Give the switch a static IP address on that VLAN

The table lists every device by **Device Name** and MAC address, with a checkbox for **DHCP Client** and one for **Static**. In the row for the switch that will serve IP addresses: tick **Static**, type **10.224.0.1** under IP Address and **255.240.0.0** under Subnet Mask, then tick **DHCP Server** at the far left of that same row. Do the same on the other switches — every switch on the site sits on **Static** with its own IP address; only this one also gets **DHCP Server**.

A switch cannot hand out IP addresses on a lane it has no IP address on. This step is that IP address.

Most 4Wall “blue line” switches arrive with a static IP address already baked in, inside the 10.224.0.1/12 range. That is fine — leave it as its static IP. You only need to add **DHCP Server** to the one switch that will serve the lane.

05

Fill in the pool

Scroll to the **DHCP Server** block underneath and enter the values from the table: Default Router 10.224.0.1, pool 10.224.0.2 to 10.239.255.254, DNS 1.1.1.1 and 8.8.8.8, Search Domain google.com, Lease Time 240. Click **Apply**.

Leaving the DNS fields empty is allowed — a closed management lane has nothing to resolve. Engage may query the omission on the way through; filling them in, as above, keeps the path clear.

The screenshot shows the NETGEAR Engage web interface. The left sidebar has a menu with 'Basic', 'Advanced', and 'Information'. The main content area is titled 'Basic Configuration' and shows a table of DHCP servers. The first row is selected, and its configuration is shown in the 'DHCP Server' block below.

DHCP Server	Device Name	MAC Address	DHCP Client	Static	IP Address	Subnet Mask
☒	Virtual-M4250-1	54:07:7D:AA:00:04	☐	☒	10.224.0.1	255.240.0.0
☐	Virtual-M4250-2	54:07:7D:AA:00:05	☐	☒	10.224.0.12	255.240.0.0
☐	M4250-1	54:07:7D:AA:00:01	☐	☒	10.224.0.11	255.240.0.0

The 'DHCP Server' configuration block shows the following values:

- Default Router: 10.224.0.1
- DHCP Server Pool Start: 10.224.0.2
- DHCP Server Pool End: 10.239.255.254
- DNS Server 1: 1.1.1.1
- DNS Server 2: 8.8.8.8
- Search Domain: google.com
- Lease Time (minute): 240

Steps 04 and 05 on one screen. **1** — **DHCP Server** ticked on the serving switch's row, and only that row. **2** — the same row's **Static** tick, **IP Address 10.224.0.1** and **Subnet Mask 255.240.0.0**; the other switches are static too, with their own IP addresses. **3** — the **DHCP Server** block underneath, holding the pool, DNS and lease values from the table on page 2.

06

Apply, confirm, then Save

Apply writes the pane; Save sends it to the switch. Both, in that order – until you press the blue **Save** at the top right, nothing has reached the switch.

A screenshot of a configuration pane for DHCP. It contains several input fields: 'Default Router' (10.244.0.1), 'DHCP Server Pool Start' (10.244.0.2), 'DNS Server 1' (1.1.1.1), 'Search Domain' (google.com), 'DHCP Server Pool End' (10.244.255.254), 'DNS Server 2' (8.8.8.8), and 'Lease Time (minutes)' (240). At the bottom right, there are 'Cancel' and 'Apply' buttons. A blue arrow points to the 'Apply' button.

Apply first, at the foot of the pane.

A warning dialog box with the title 'Warning'. The text inside asks: 'Are you sure that you want to do Vlan Routing and DHCP Server Configuration?'. At the bottom, there are two buttons: 'No' and 'Yes'.

Engage then asks to confirm: *Are you sure that you want to do Vlan Routing and DHCP Server Configuration?* Click **Yes**.

A screenshot of the 'Controller Management' page. The top navigation bar includes 'Dark Theme' toggle, 'Question/Help' dropdown, and a user profile 'admin'. The main content area has a 'VR-Netmap Setup' dropdown and a 'Save' button. A blue arrow points to the 'Save' button. Below the main content, there is a 'Search for Devices' input and a 'Refresh' button. A large 'Save' button is also visible in the center of the page.

Only then **Save**, top right. It greys out again once the switch has it.

Check that it worked

Plug something into a management port and watch it take a lease. A laptop set to DHCP is the quickest test: it should land on 10.224.x.x, not 169.254.x.x. An IP address in the 169 range means it asked and nobody replied — which is the same symptom as no DHCP server at all.

- The IP address is inside the pool you set, above 10.224.0.2.
- Its mask reads 255.240.0.0 and its router reads 10.224.0.1.
- The switch is still reachable at 10.224.0.1 from your own static IP address.

NEXT

To put an access point on this network — adopt it, trunk its port and give it an SSID on the VLAN you choose — carry on with **Guide 03: Access points on a VLAN**. It starts where this one ends.

When it does not work

WHAT YOU SEE	WHAT IT USUALLY IS
Nothing changed on the switch	Apply is not Save. Press Save at the top right.
A device gets no IP address	Its port is not on the management VLAN, or it is a trunk port.
A device got 169.254.x.x	Same answer: it asked and nobody replied.
Two devices claim one IP address	A hand-set IP address was also handed out by the pool. Reserve it, or move the static.
You cannot reach Engage or the switch	Your own laptop is off the 10.224.x.x lane, or its mask does not cover it.
Settings keep reverting	The site is being configured from two places. Pick Engage or the switch UI, not both.