

NETGEAR® ProSAFE® WC7520 Wireless Controller

Configuring a Dedicated VLAN Using the
Internal DHCP Server

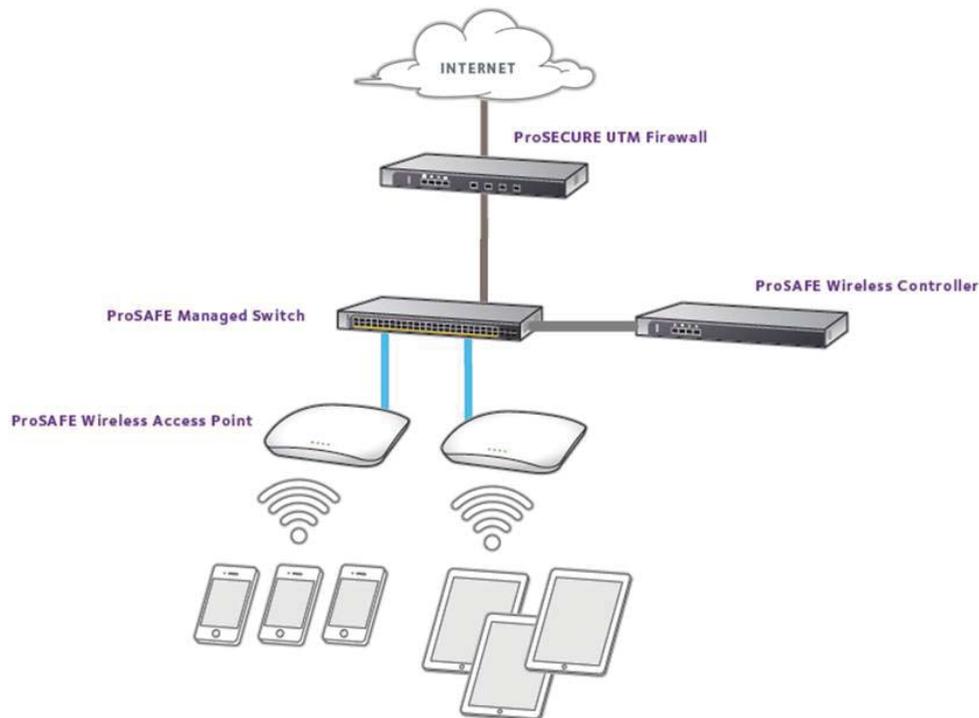
INTRODUCTION

Most business environments require hybrid wired and wireless networks to maximize productivity and effectively manage diverse traffic needs. It is often desirable to partition different traffic types into separate, independent virtual local area network (VLANs) using different IP subnets for clients that are accessing the guest and staff networks.

This paper will discuss how organizations that lack a centralized DHCP server can use the internal DHCP server of the NETGEAR® ProSAFE® WC7520 Wireless Controller to configure a dedicated VLAN for the wireless system and to provide IP addresses to clients.

OVERVIEW

When deploying a wireless network, a security best practice is to segment it from the rest of the network using a separate, specific VLAN for the wireless system on an internal DHCP server. By default, all NETGEAR ProSAFE access points and controllers are set to VLAN 1. You can connect this to an access port configured for another VLAN and it will communicate on that VLAN without need to change it.



CONFIGURATION

Pick an unused subnet; in this case we use 192.168.250.0/24. Here's the address scheme we'll use:

Switch

192.168.250.2

WC7520

192.168.250.3

PC

192.168.250.4

In this scenario we're assuming that there is already a wired corporate network set up on VLAN 100, 192.168.100.0/24

Internet/Corporate Router

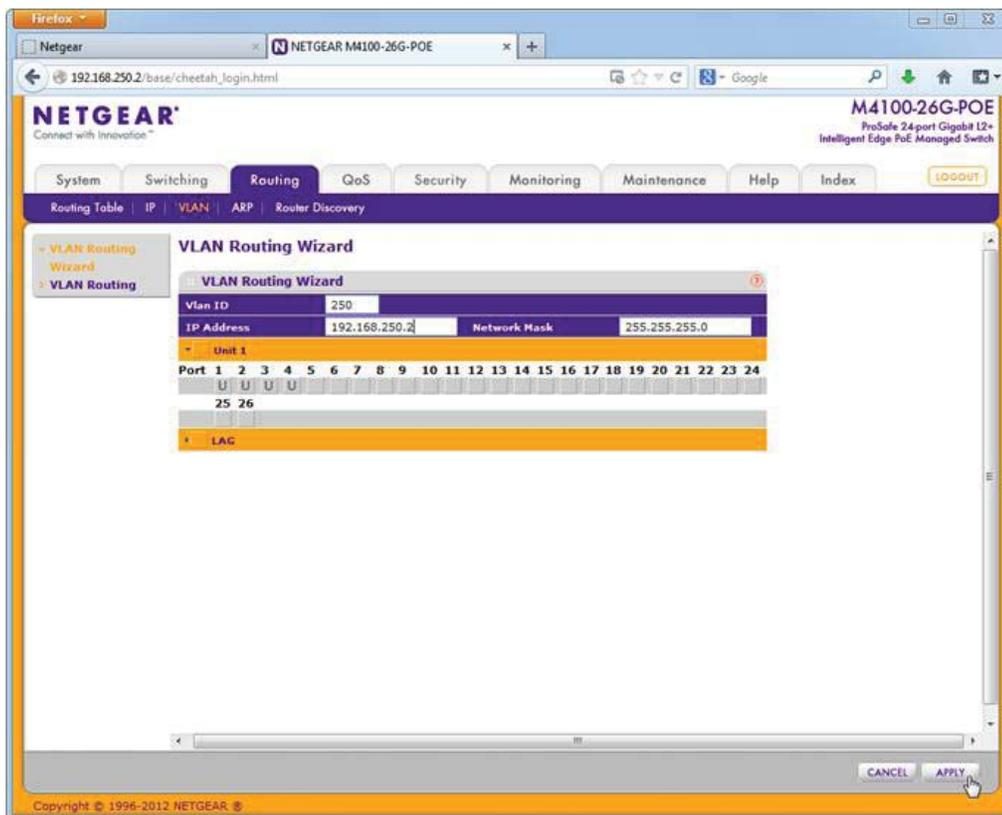
192.168.100.1

Switch

192.168.100.2

M4100 Switch**Step 1 – Add VLAN 250 for Wireless**

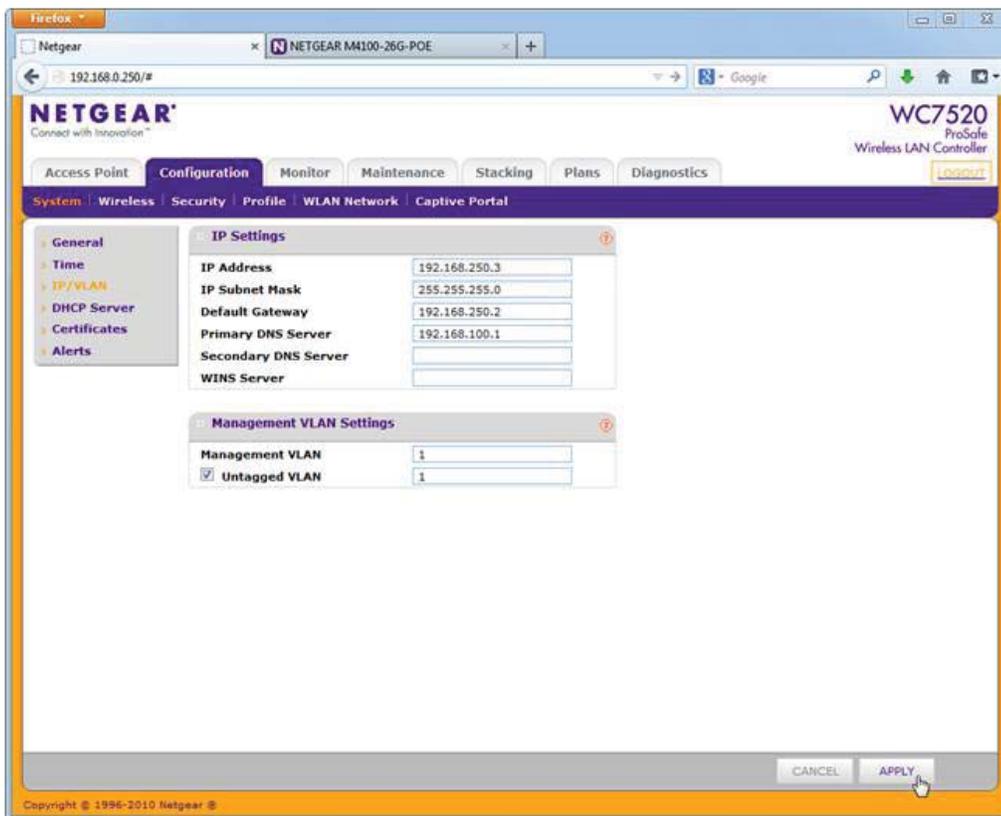
Select *Configuration – Routing – VLAN – VLAN Routing Wizard* to add the VLAN and IP address, and to enable routing.



WC7520

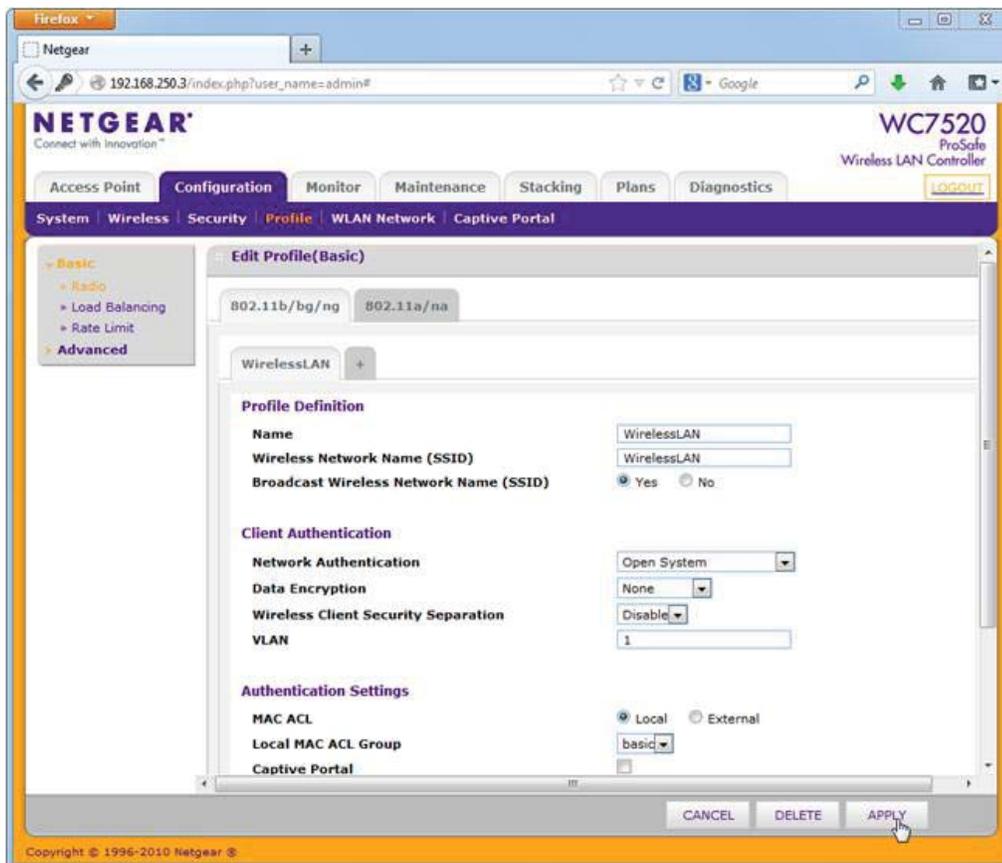
Step 1 – Configure IP

Select *Configuration – System – IP/VLAN*. Connect to the default IP of the WC7520, 192.168.0.250. Change the IP address; we'll use 192.168.250.3/24. The default gateway will be the switch on 192.168.250.2 and the DNS server will be the router on 192.168.100.1. You'll have to change the IP now, then reconnect to the WC7520 on its new IP address.



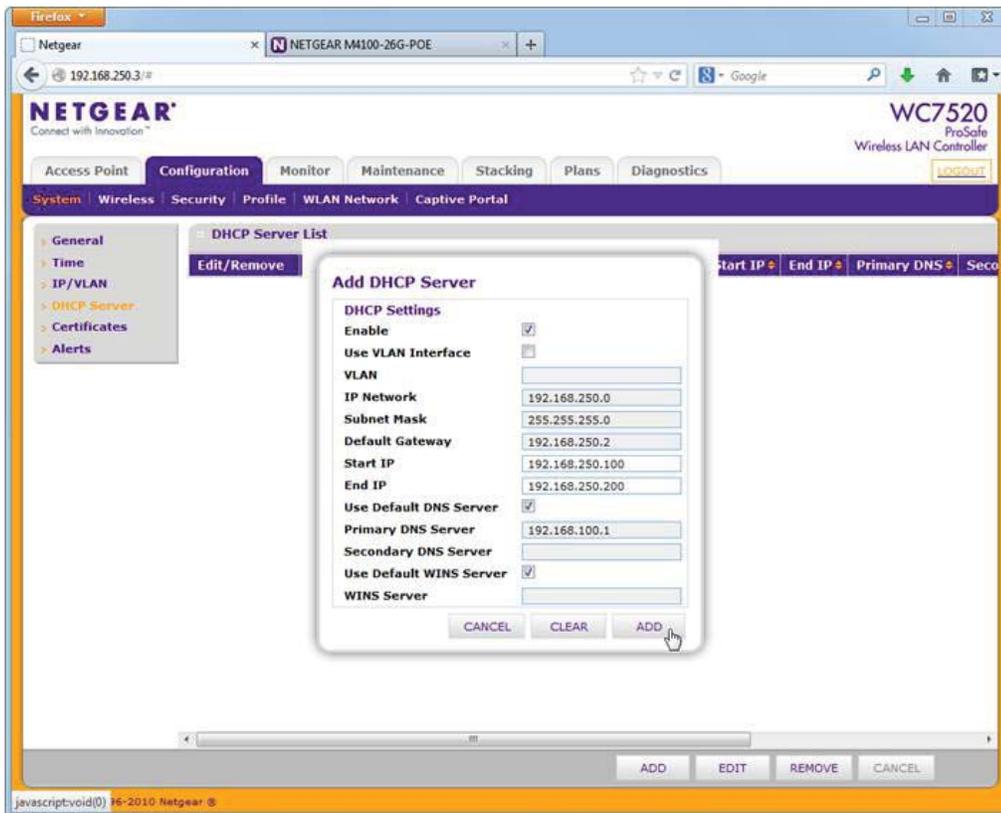
Step 2 – Configure the SSID

Select *Configuration – Profile – Basic – Radio*. We will call this wireless network *WirelessLAN*. We won't use any encryption for now.



Step 3 - Configure the DHCP scope

Select *Configuration – System – DHCP Server*. Select *Add* to add a DHCP server for your Wireless LAN. Again, the default gateway will be the switch on 192.168.250.2 and the DNS server will be the router on 192.168.100.1. The range will exclude the static addresses, in this case we will use 192.168.250.100-192.168.250.200.



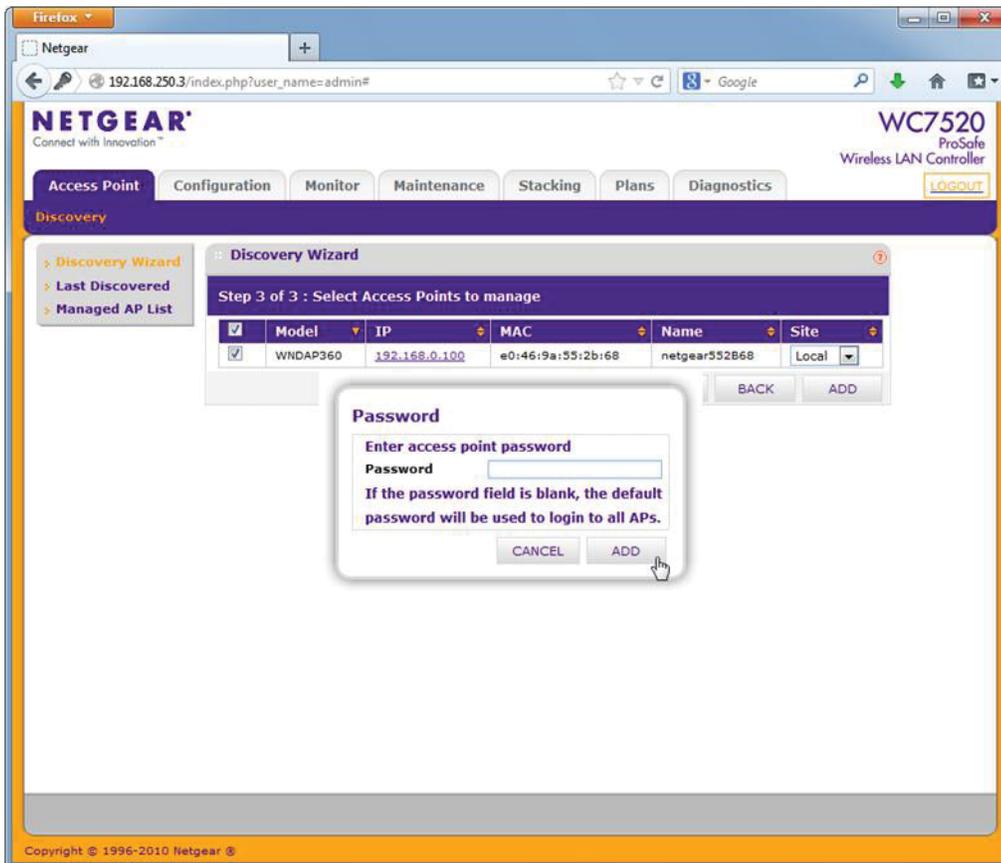
Step 4 - Plug in your Access Point to port 4

Make sure the Access Point is on Factory Defaults, and wait until it's fully booted up.

Step 5 - Discover and add your AP

Select Access Point – Discovery Wizard

Choose *Factory Default State*, then *Same L2 network*. You should find your Access Point on its default IP address. Select it, and select *Add*. Leave the password field blank and press “ADD”. Wait until you see “Connected” in the Status column, this will take a few minutes.



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WC7520
ProSafe
Wireless LAN Controller

Access Point Configuration Monitor Maintenance Stacking Plans Diagnostics

Discovery

- Discovery Wizard
- Last Discovered
- Managed AP List

Edit	IP	MAC	Model	Name	Status	Site	Group
	192.168.0.100	e0:46:9a:55:2b:60	WNDAP360	netgear552868	Firmware upgrade required	Local	basic

REMOVE EDIT REFRESH

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Router

Step 1 – Add static route to new Wireless LAN

The router needs to know about this new IP subnet, so we will need to add a static route. This is done by selecting *Network Configuration – Routing* on a NETGEAR firewall.

Network Configuration | Security | VPN | Users | Administration | Monitoring | Web Support | Logout

WAN Settings | Protocol Binding | Dynamic DNS | LAN Settings | DMZ Setup | Routing

Add Static Route

Operation succeeded.

Static Route help

Route Name: toWirelessLAN

Active Private

Destination IP Address: 192.168.250.0

IP Subnet Mask: 255.255.255.0

Interface: LAN

Gateway IP Address: 192.168.100.2

Metric: 2

Apply Reset

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NOTES

This guide is based on a factory default WC7520, running firmware 2.5.0.5_3215.

SECURITY

Security is outside of the scope of this document. ACLs can be implemented on the switch to limit traffic.