

Accessing the Captive portal from different VLANs on the WFS709TP

INTRODUCTION

This documents provide information on how to setup the WFS709TP to allow multiple SSID to use the Captive portal option for Authentication.

Relevant information are provided on the routing details required to enable routing across VLAN1 and other VLANs associated to the different SSIDs.

The document should be used as a blue-print.

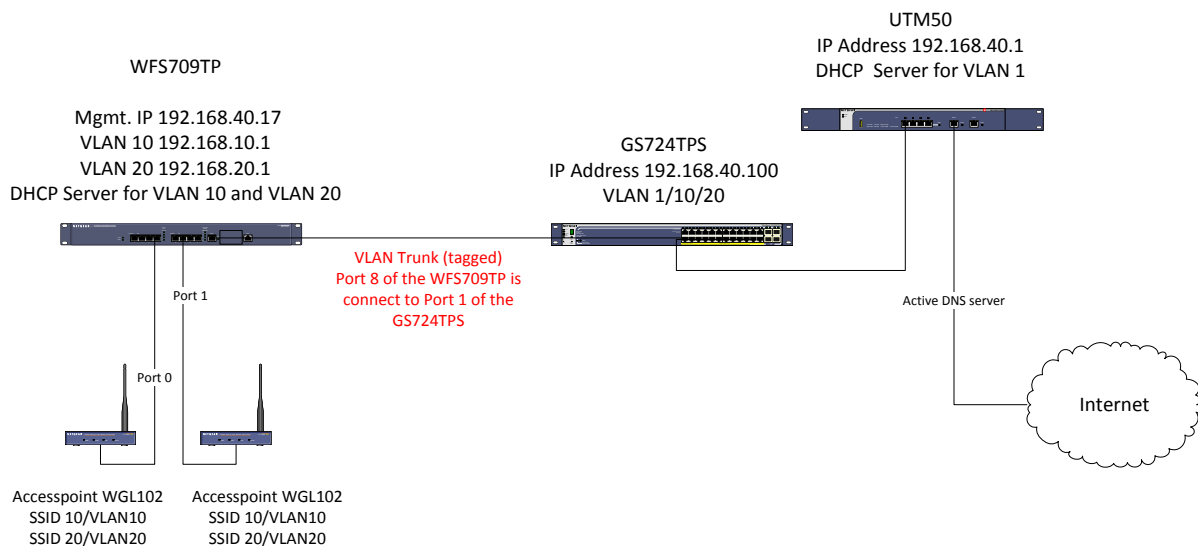


Figure I – Network setup used to test the Captive Portal feature

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CONFIGURATION ON THE WFS709TP

1. Create an SSID called VLAN 10 , with Captive Portal authentication against the WFS709TP internal database.

NETGEAR PROSAFE Configuration

Configuration | Monitoring | Diagnostics | Maintenance | Plan | Events | Reports

Basic | Advanced

WLAN

Security

Network

Management

Access Point

Installation Wizard

WLAN > New

netgear-ap/Global | wfs709tp/Global | Guest/Global | **Vlan10/Global** | VLA20/Global | New

Network

Network Name (SSID)

Radio Type

802.11 Security

Network Authentication ☒ None ☐ 802.1x/WEP ☐ WPA ☐ WPA-PSK ☐ WPA2 ☐ WPA2-PSK

Encryption ☒ Open ☐ WEP

Advanced Authentication ☐ None ☐ Registration Web Page ☒ **Captive Portal (Web)** ☐ MAC

Auth Server Type ☒ **Internal**

Keys

PSK Key/Passphrase

Retype PSK Key/Passphrase

Format

The PSK Hex Key should be a 64 character hexadecimal string
The PSK Passphrase should be an ASCII string 8-63 characters in length

VLAN

VLAN ID

2. Create a 2nd SSID named VLAN 20 , with Captive Portal authentication against the WFS709TP internal database.

NETGEAR PROSAFE Configuration

Configuration | Monitoring | Diagnostics | Maintenance | Plan | Events | Reports

Basic | Advanced

WLAN

Security

Network

Management

Access Point

Installation Wizard

WLAN > New

netgear-ap/Global | wfs709tp/Global | Guest/Global | Vlan10/Global | **VLA20/Global** | New

Network

Network Name (SSID)

Radio Type

802.11 Security

Network Authentication ☒ None ☐ 802.1x/WEP ☐ WPA ☐ WPA-PSK ☐ WPA2 ☐ WPA2-PSK

Encryption ☒ Open ☐ WEP

Advanced Authentication ☐ None ☐ Registration Web Page ☒ Captive Portal (Web) ☐ MAC

Auth Server Type ☒ **Internal**

Keys

PSK Key/Passphrase

Retype PSK Key/Passphrase

Format

The PSK Hex Key should be a 64 character hexadecimal string
The PSK Passphrase should be an ASCII string 8-63 characters in length

VLAN

VLAN ID

Commands

- Go to the VLAN section under Configuration, Advanced, Controller, General. An edit VLAN 10 and 20 one at a time.

VLAN ID	IP Address	Net Mask	Associated Ports	Admin State	Operation State	Actions
1	192.168.40.17	255.255.255.0	Fa1/0-7,Gig1/8	Enabled	Up	Disable Edit Delete
10			N/A	N/A	N/A	Enable Edit Delete
20			N/A	N/A	N/A	Enable Edit Delete

- Edit VLAN 10, specify the IP address , subnet mask and associate to port 8 (trunk port to the switch)

Controller > VLAN > Edit VLAN (10)

Details

VLAN ID: 10

☐ Obtain an IP address from DHCP

☒ Use the following IP address

IP Address: 192.168.10.1

Net Mask: 255.255.255.0

DHCP Helper Addresses

No Helper Addresses

NAT

Enable source NAT for this VLAN ☐

Assign this VLAN to Ports

0 1 2 3 4 5 6 7 8

Commands

View Commands

- Edit VLAN 20, specify the IP address, subnet mask and associate to port 8 (trunk port on the switch)

Controller > VLAN > Edit VLAN (20)

Details

VLAN ID: 20

☐ Obtain an IP address from DHCP

☒ Use the following IP address

IP Address: 192.168.20.1

Net Mask: 255.255.255.0

DHCP Helper Addresses

No Helper Addresses

NAT

Enable source NAT for this VLAN ☐

Assign this VLAN to Ports

0 1 2 3 4 5 6 7 8

Commands

View Commands

NOTE: When returning to the VLAN summary page the VLAN will appear as enabled.

Controller > VLAN

General Port **VLAN** IP Routing VRRP DHCP Server

VLAN ID	IP Address	Net Mask	Associated Ports	Admin State	Operation State	Actions		
1	192.168.40.17	255.255.255.0	Fa1/0-7,Gig1/8	Enabled	Up	Disable	Edit	Delete
10	192.168.10.1	255.255.255.0	Gig1/8	Enabled	Up	Disable	Edit	Delete
20	192.168.20.1	255.255.255.0	Gig1/8	Enabled	Up	Disable	Edit	Delete

Add

- On the DHCP pane, create two DHCP pools, one per VLAN 10 and one per VLAN 20 as follows:

Controller > DHCP > Edit DHCP Pool

« Back

Default Router: 192.168.10.1

DNS Servers: 192.168.40.1 ☐ Import from DHCP (Multiple DNS Servers should be separated by spaces)

Domain Name:

WINS Servers: ☐ Import from DHCP (Multiple WINS Servers should be separated by spaces)

Lease: Days Hrs Mins

Network: IP Address 192.168.10.0 Net Mask 255.255.255.0

Apply

Controller > DHCP > Edit DHCP Pool

« Back

Default Router: 192.168.20.1

DNS Servers: 192.168.40.1 ☐ Import from DHCP (Multiple DNS Servers should be separated by spaces)

Domain Name:

WINS Servers: ☐ Import from DHCP (Multiple WINS Servers should be separated by spaces)

Lease: Days Hrs Mins

Network: IP Address 192.168.20.0 Net Mask 255.255.255.0

Apply

NOTE: See the DHCP summary below

Controller > DHCP Server

General Port VLAN IP Routing VRRP **DHCP Server**

Enable DHCP Server ☒

Pool Configuration

Name	Default Router	Network	Range	Action
VLAN10	192.168.10.1	192.168.10.0	192.168.10.2-192.168.10.254	Edit Delete
VLAN20	192.168.20.1	192.168.20.0	192.168.20.2-192.168.20.254	Edit Delete

[Add](#)

7. Configure the default Gateway to be the LAN address of the router

NETGEAR Advanced Configuration

Configuration Monitoring Diagnostics Maintenance Plan Events Reports

Basic | Advanced

Controller

General Management

WLAN

Network Radio Advanced

RF Management

Calibration Optimization Protection Monitoring Advanced

Controller > IP

General Port VLAN **IP Routing** VRRP DHCP Server

Default Gateway ☐ (Obtain an IP address automatically)

Destination IP Address **Destination mask**

[Add](#)

Commands

8. Enable the trunk port (Port 8, the port that will connect to a trunk port on the switch)

NETGEAR Configuration

Configuration Monitoring Diagnostics Maintenance Plan Events Reports

Basic | Advanced

WLAN

Security Network Management Access Point Installation Wizard

Network > Port

Port VLAN IP Interfaces IP Routing

Port Selection - Click port to configure

0 1 2 3 4 5 6 7 **8**

Configure Selected Port 1/8

Enable Port ☒

Enable 802.3af Power Over Ethernet ☒

Enable Cisco Power Over Ethernet ☐

Make Port Trusted ☒

Port Mode

Enter VLAN(s)

Spanning Tree

☒ Access ☒ **Trunk**

Native VLAN

☒ Allow All VLANs

☐ Allowed VLAN list

Allowed VLANs

Disallowed VLANs

Port Cost ☒ Enabled

Priority ☐ Port Fast

[Apply](#)

Commands [View Commands](#)

CONFIGURATION ON THE SWITCH

1. Add two VLANs, VLAN 10 and Vlan 20

The screenshot shows the Netgear Switch Configuration interface. The 'Switching' tab is selected, and the 'VLAN' sub-tab is active. The 'VLAN Configuration' section displays a table with columns for 'VLAN ID', 'VLAN Name', and 'VLAN Type'. The table lists three VLANs: VLAN 1 (Default, Default Type), VLAN 10 (VLAN10, Static Type), and VLAN 20 (VLAN20, Static Type). A 'Reset' button is visible below the table.

VLAN ID	VLAN Name	VLAN Type
1	Default	Default
10	VLAN10	Static
20	VLAN20	Static

Add Ports 3 to 8 untagged to VLAN 10. Add Port 1 to 2 and Port 9 tagged to VLAN 10

The screenshot shows the Netgear Switch Configuration interface, specifically the 'VLAN Membership' section. The 'VLAN ID' is set to 10, and the 'VLAN Name' is 'VLAN 10'. The 'VLAN Type' is 'static'. The 'Group Operation' is set to 'Tag All'. The 'Unit 1' section shows a table of ports (01 to 24) with their status (T for Tagged, U for Untagged). Ports 3 to 8 are marked as 'U' (Untagged), and Ports 1, 2, and 9 are marked as 'T' (Tagged).

GE Port	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Unit 1	T	T	U	U	U	U	U	U	T															

Add Ports 10 to 14 untagged to VLAN 20. Add Ports 1 to 2 and Port 9 tagged to VLAN 10

NETGEAR
Connect with Innovation™

System Switching QoS Security Monitoring Maintenance Help

Ports | LAG | **VLAN** | Voice VLAN | STP | Multicast | Address Table

Basic
Advanced
 » VLAN Configuration
 » **VLAN Membership**
 » Port PVID Configuration

VLAN Membership

VLAN ID: 20 Group Operation: Tag All

VLAN Name: VLAN 20

VLAN Type: static

Unit 1

GE Port	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
	T	T							T	U	U	U	U	U										

LAG

Configure PVID Settings-Port 3 to 8 with PVID 10, and Port 10 to 14 with PVID 20, PVID on Trunk ports 1, 2 and 9 are not relevant.

NETGEAR
Connect with Innovation™

System Switching QoS Security Monitoring Maintenance Help

Ports | LAG | **VLAN** | Voice VLAN | STP | Multicast | Address Table

Basic
Advanced
 » VLAN Configuration
 » VLAN Membership
 » **Port PVID Configuration**

Port PVID Configuration

1 LAGS All GO TO INTERFACE GO

Select	Interface	PVID
☐		
☐	1/g1	1
☐	1/g2	1
☐	1/g3	10
☐	1/g4	10
☐	1/g5	10
☐	1/g6	10
☐	1/g7	10
☐	1/g8	10
☐	1/g9	1
☐	1/g10	20
☐	1/g11	20
☐	1/g12	20
☐	1/g13	20
☐	1/g14	20
☐	1/g15	1
☐	1/g16	1
☐	1/g17	1
☐	1/g18	1

CONFIGURATION ON THE INTERNET ROUTER

Add two static Routes on your Router, and use the management IP address of the WFS709TP as the Gateway.

Routing RIP Configuration

Static Routes ?

	Name	Destination	Gateway	Interface	Metric	Active	Private	Action
☐	modeconfigvx538	192.168.33.0/24	192.168.40.14	defaultVlan	2	Yes	No	Edit
☐	wfsvlan20	192.168.20.0/24	192.168.40.17	defaultVlan	2	Yes	No	Edit
☐	wfsvlan10	192.168.10.0/24	192.168.40.17	defaultVlan	2	Yes	No	Edit

Select All Delete Add...

TROUBLESHOOTING STEPS

These steps apply to any SSID (any VLAN) in case the portal cannot be accessed.

- Disable Captive Portal Authentication as the advanced authentication method and test connection to the Internet

and

- Ensure routing to VLAN1 is possible

and

- Ensure DNS resolution is possible (there must be at least one active DNS between the client and the WAN side of the Internet router)