

Configuration Guide



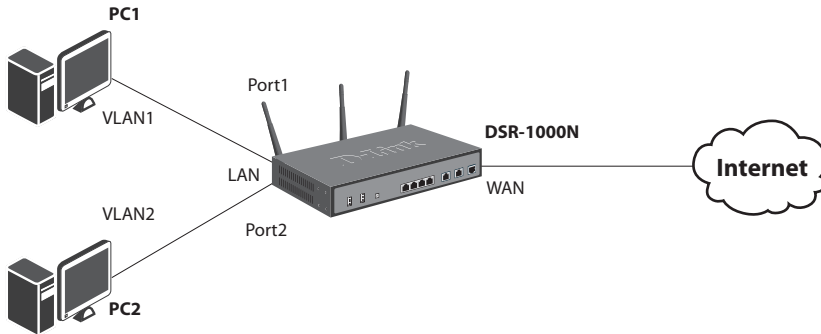
How to Configure VLAN with Multiple Subnet in DSR Series

Overview

This document describes how to configure the D-Link DSR-1000N to implement multiple subnet with different VLANs. Moreover, DHCP server will be enabled to assign dynamic IP addresses in each VLAN subnet.

Situation note

Generally, VLAN is an ideal network implementation by multiple subnet in company. Each department/group is separated into different subnet which can offer better security and reduce packet congestion in network. This document will be very useful when you intend to implement VLAN in DSR router.



Firmware version
1.03B12_WW

Configuration Step

1. Under **SETUP->VLAN Settings**, click **VLAN Configuration**.

DSR-1000N	SETUP	ADVANCED	TOOLS	STATUS
Wizard				
Internet Settings	INTERNET CONNECTION			LOGOUT
Wireless Settings	This page will guide you through common configuration tasks such as changing the password, timezone and setting up of your internet connection.			
Network Settings	Internet Connection Setup Wizard			
DMZ Setup	If you would like to utilize our easy to use Web-based Wizards to assist you in connecting your new D-Link Systems Router to the Internet, click on the button below.			
VPN Settings	<input type="button" value="Internet Connection Setup Wizard"/>			
USB Settings	If you would like to configure the Internet settings of your new D-Link Systems Router manually, then click on the button below.			
VLAN Settings	VLAN Configuration			
	Port VLAN			
	Multiple VLAN Subnets			
	Available VLANs			
	Connection Options			

2. Make sure the **Enable VLAN** check box has been checked then click save settings.

The screenshot shows the configuration page for a DSR-1000N router. The top navigation bar includes 'DSR-1000N', 'SETUP', 'ADVANCED', 'TOOLS', and 'STATUS'. The left sidebar lists various settings: Wizard, Internet Settings, Wireless Settings, Network Settings, DMZ Setup, VPN Settings, USB Settings, and VLAN Settings. The main content area is titled 'VLAN CONFIGURATION' and contains the text: 'This page allows user to enable/disable VLAN functionality on the router.' Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'. A second 'VLAN CONFIGURATION' section is visible below, containing the 'Enable VLAN' checkbox, which is checked. The footer of the page reads 'UNIFIED SERVICES ROUTER'.

3. Under the **SETUP->VLAN Settings**, click the **Available VLANs** to create additional VLAN.

The screenshot shows the 'VLAN Settings' page in the DSR-1000N web interface. The top navigation bar is the same as in the previous screenshot. The left sidebar has 'VLAN Settings' highlighted. The main content area is titled 'VLAN CONFIGURATION' and contains the text: 'This page will guide you through common configuration tasks such as changing the password, timezone and setting up of your internet connection.' Below this text is the 'Internet Connection Setup Wizard' section, which includes a button labeled 'Internet Connection Setup Wizard'. The 'Available VLANs' option is highlighted in the left sidebar. The footer of the page reads 'UNIFIED SERVICES ROUTER'.

4. Click **Add** to create a VLAN on available VLAN page.

The screenshot shows the DSR-1000N web interface. The left sidebar contains navigation options: Wizard, Internet Settings, Wireless Settings, Network Settings, DMZ Setup, VPN Settings, USB Settings, and VLAN Settings. The main content area is titled 'AVAILABLE VLANS' and includes a 'LOGOUT' link. Below the title, there is a text box explaining the page's purpose: 'This page shows a list of available VLANs which a user can edit or delete. A user can add a new VLAN from this page as well.' A table titled 'List of available VLANs' contains one entry: 'Default' with ID '1'. Below the table are three buttons: 'Edit', 'Delete', and 'Add'. The 'Add' button is highlighted with a green border.

5. Giving a **Name** and **ID** for the VLAN in this step. In this case, we name it as VLAN2 and VLAN ID is 2 like following photograph then click **Save Settings**.

The screenshot shows the DSR-1000N web interface. The left sidebar is the same as in the previous screenshot. The main content area is titled 'AVAILABLE VLANS' and includes a 'LOGOUT' link. Below the title, there is a text box: 'This page allows user to enable/disable VLAN support on the LAN.' Below this text are two buttons: 'Save Settings' and 'Don't Save Settings'. The 'Save Settings' button is highlighted with a green border. Below the buttons is a section titled 'VLAN Configuration'. This section contains three fields: 'Name' with the value 'VLAN2', 'Id' with the value '2', and 'Inter VLAN Routing Enable' with a checked checkbox. The entire 'VLAN Configuration' section is highlighted with a green border.

6. Under **SETUP->VLAN Settings**, click **Multiple VLAN Subnets**. The screen should be like the figure shown below.

DSR-1000N // SETUP ADVANCED TOOLS STATUS

Wizard

Internet Settings

Wireless Settings

Network Settings

DMZ Setup

VPN Settings

USB Settings

VLAN Settings

UNIFIED SERVICES ROUTER

Operation succeeded

AVAILABLE VLANS LOGOUT

This page shows a list of available VLANs which a user can edit or delete. A user can add a new VLAN from this page as well.

List of available VLANs

	Name	ID
<input type="checkbox"/>	Default	1
<input type="checkbox"/>	VLAN2	2

Edit Delete Add

7. Select the VLAN what you want to modify and click **Edit**.

DSR-1000N // SETUP ADVANCED TOOLS STATUS

Wizard

Internet Settings

Wireless Settings

Network Settings

DMZ Setup

VPN Settings

USB Settings

VLAN Settings

UNIFIED SERVICES ROUTER

Operation succeeded

MULTI VLAN SUBNETS LOGOUT

This page shows a list of available multi-vlan subnets. User can even edit the multi-vlans from this page.

MULTI VLAN SUBNET List

	Vlan ID	IP Address	Subnet Mask
<input type="checkbox"/>	1	192.168.10.1	255.255.255.0
<input checked="" type="checkbox"/>	2	192.168.2.1	255.255.255.0

Edit

8. You can change the DHCP setting on this pages. In this case, we enable DHCP server and assign a different network subnet for VLAN 2.

DSR-1000N	SETUP	ADVANCED	TOOLS	STATUS
Wizard	MULTI VLAN SUBNET CONFIG LOGOUT			
Internet Settings	This page shows the list of available multiple VLAN subnets.			
Wireless Settings	<input type="button" value="Save Settings"/> <input type="button" value="Don't Save Settings"/>			
Network Settings	MULTI VLAN SUBNET			
DMZ Setup	Vlan ID: 2			
VPN Settings	IP Address: <input type="text" value="192.168.2.1"/>			
USB Settings	Subnet Mask: <input type="text" value="255.255.255.0"/>			
VLAN Settings	DHCP			
	DHCP Mode: <input type="text" value="DHCP Server"/>			
	Domain Name: <input type="text" value="DLink"/>			
	Starting IP Address: <input type="text" value="192.168.2.100"/>			
	Ending IP Address: <input type="text" value="192.168.2.254"/>			
	Primary DNS Server (Optional): <input type="text"/>			
	Secondary DNS Server (Optional): <input type="text"/>			
	Lease Time: <input type="text" value="24"/> (Hours)			

9. Under **SETUP** -> **VLAN Settings**, click **Port VLAN** to specify what VLAN belongs to certain LAN port.

DSR-1000N	SETUP	ADVANCED	TOOLS	STATUS
Wizard	MULTI VLAN SUBNET CONFIG LOGOUT			
Internet Settings	This page shows the list of available multiple VLAN subnets.			
Wireless Settings	<input type="button" value="Save Settings"/> <input type="button" value="Don't Save Settings"/>			
Network Settings	MULTI VLAN SUBNET			
DMZ Setup	Vlan ID: 2			
VPN Settings	IP Address: <input type="text" value="192.168.2.1"/>			
USB Settings	Subnet Mask: <input type="text" value="255.255.255.0"/>			
VLAN Settings	<ul style="list-style-type: none"> VLAN Configuration <input type="text" value="192.168.2.1"/> Port VLAN <input type="text" value="255.255.255.0"/> Multiple VLAN Subnets Available VLANs 			
	DHCP Mode: <input type="text" value="DHCP Server"/>			

10. Select the port you want to change the VLAN setting and click the **Edit** like the follows.

The screenshot shows the 'PORT VLANS' configuration page. The left sidebar contains navigation options: Wizard, Internet Settings, Wireless Settings, Network Settings, DMZ Setup, VPN Settings, USB Settings, and VLAN Settings. The main content area has a blue header 'PORT VLANS' with a 'LOGOUT' link. Below the header is a descriptive text: 'This page allows user to configure the port VLANs. A user can choose ports and can add them into a VLAN.' A table titled 'Port VLANs' lists four ports with their respective modes and PVIDs. The 'Port 2' row is highlighted with a green border, and its checkbox is checked. Below the table is an 'Edit' button, also highlighted with a green box.

	Port Name	Mode	PVID	VLAN Membership
<input type="checkbox"/>	Port 1	Access	1	1
<input checked="" type="checkbox"/>	Port 2	Access	1	1
<input type="checkbox"/>	Port 3	Access	1	1
<input type="checkbox"/>	Port 4	Access	1	1

11. It's able to edit the VLAN mode and PVID on this page. In this case, please configure **VLAN mode** to **Access** and set the **PVID** to **2**. Regarding VLAN mode instruction, please refer to the user manual for more detail information.

The screenshot shows the 'VLAN CONFIGURATION' page. The left sidebar is the same as in the previous screenshot. The main content area has a blue header 'VLAN CONFIGURATION' with a 'LOGOUT' link. Below the header is a descriptive text: 'This page allows user to configure the port VLAN.' A section titled 'VLAN Configuration' contains the following fields: 'Port Name' (Port 2), 'Mode' (Access), and 'PVID' (2). The 'Mode' dropdown and 'PVID' input field are highlighted with a green border. Below these fields are 'Apply' and 'Cancel' buttons. A section titled 'VLAN Membership Configuration' contains a table with two columns: 'VLAN Membership' and a checkbox. The first row shows '1' with a checked checkbox, and the second row shows '2' with an unchecked checkbox. Below this table are 'Apply' and 'Cancel' buttons. The footer of the page reads 'UNIFIED SERVICES ROUTER'.

DSR-1000N // SETUP ADVANCED TOOLS STATUS

Wizard

Internet Settings

Wireless Settings

Network Settings

DMZ Setup

VPN Settings

USB Settings

VLAN Settings

VLAN CONFIGURATION LOGOUT

This page allows user to configure the port VLAN.

VLAN Configuration

Port Name: Port 2

Mode: Access

PVID: 3

Apply Cancel

VLAN Membership Configuration

Notes: If you specify a wrong/unavailable PVID number, it will show following alert message. This example indicates that no any current VLANs belongs to PVID3.

12. After applying the setting, you will see that both LAN Port 2 and VLAN membership belong to PVID 2 like following:

DSR-1000N // SETUP ADVANCED TOOLS STATUS

Wizard

Internet Settings

Wireless Settings

Network Settings

DMZ Setup

VPN Settings

USB Settings

VLAN Settings

PORT VLANS LOGOUT

This page allows user to configure the port VLANs. A user can choose ports and can add them into a VLAN.

Port VLANs

	Port Name	Mode	PVID	VLAN Membership
<input type="checkbox"/>	Port 1	Access	1	1
<input type="checkbox"/>	Port 2	Access	2	2
<input type="checkbox"/>	Port 3	Access	1	1
<input type="checkbox"/>	Port 4	Access	1	1

Edit

Now, We have finished all steps to configure port based VLAN in DSR router. PC1 and PC2 will be assigned different IP/Subnet because they are already in different VLAN. Following steps can assist you to verify the result.

13. Under the **SETUP-> Network Settings**, click **LAN DHCP Leased Clients**.

DSR-1000N	SETUP	ADVANCED	TOOLS	STATUS
Wizard	<p>PORT VLANS LOGOUT</p> <p>This page allows user to configure the port VLANs. A user can choose ports and can add them into a VLAN.</p>			
Internet Settings				
Wireless Settings				
Network Settings				
DMZ Setup				
VPN Settings				
USB Settings				
VLAN Settings				
	LAN Setup Configuration			
	LAN DHCP Reserved IPs			
	LAN DHCP Leased Clients			
	<input type="checkbox"/>	Port 3	Access	1
	<input type="checkbox"/>	Port 4	Access	1
	<input type="button" value="Edit"/>			

14. Both PC1 and PC2 are assigned to different IP/subnet via DHCP LEASED CLIENTS page.

DSR-1000N	SETUP	ADVANCED	TOOLS	STATUS
Wizard	<p>DHCP LEASED CLIENTS LOGOUT</p> <p>This table displays the list of DHCP clients connected to the LAN DHCP Server and to whom DHCP Server has given leases.</p>			
Internet Settings				
Wireless Settings				
Network Settings				
DMZ Setup				
VPN Settings				
USB Settings				
VLAN Settings				
	DHCP Leased Clients (LAN)			
	IP Address		MAC Address	
	192.168.10.100		00:0a:cd:19:9b:02	
	192.168.2.100		00:26:2d:f4:39:6f	

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