

Configuration Guide



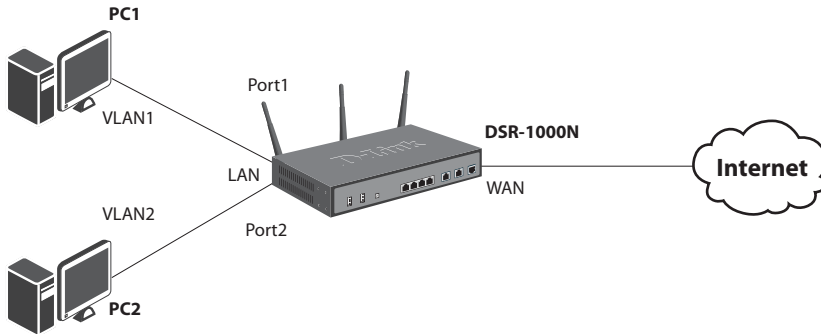
How to Configure VLAN with Multiple Subnet in DSR Series

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	These wizards, please make sure you have followed all steps outlined in the Quick Start Guide included in the package.		
	Multiple VLAN Subnets	Connection Options		
	Available VLANs			

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

The screenshot shows the DSR-1000N web interface. 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 DSR-1000N web interface. 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 'INTERNET CONNECTION' 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 are two buttons: 'Internet Connection Setup Wizard' and 'Internet Connection Setup Wizard'. A second 'INTERNET CONNECTION' section is visible below, containing the text: '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.' Below this text are two buttons: 'Internet Connection Setup Wizard' and 'Internet Connection Setup Wizard'. The left sidebar is expanded to show 'VLAN Settings' with sub-items: 'VLAN Configuration', 'Port VLAN', 'Multiple VLAN Subnets', and 'Available VLANs'. The 'Available VLANs' sub-item is highlighted. 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 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 'AVAILABLE VLANS' and includes a 'LOGOUT' link. Below the title, there is a message: '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 box.

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 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 'AVAILABLE VLANS' and includes a 'LOGOUT' link. Below the title, there is a message: 'This page allows user to enable/disable VLAN support on the LAN.' Below the message are two buttons: 'Save Settings' and 'Don't Save Settings'. The 'Save Settings' button is highlighted with a green box. Below the buttons is a section titled 'VLAN Configuration'. It contains three fields: 'Name' with the value 'VLAN2', 'Id' with the value '2', and 'Inter VLAN Routing Enable' with a checked checkbox. The 'Name' and 'Id' fields are highlighted with a green box.

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

The screenshot shows the DSR-1000N web interface. The top navigation bar includes 'DSR-1000N', 'SETUP', 'ADVANCED', 'TOOLS', and 'STATUS'. The left sidebar lists various settings, with 'VLAN Settings' expanded to show 'VLAN Configuration', 'Port VLAN', 'Multiple VLAN Subnets' (highlighted), and 'Available VLANs'. The main content area shows a message 'Operation succeeded' and a section titled 'AVAILABLE VLANS' with a 'LOGOUT' link. Below this is a description: '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 the following data:

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

Below the table are buttons for 'Edit', 'Delete', and 'Add'. The footer of the page reads 'UNIFIED SERVICES ROUTER'.

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

The screenshot shows the DSR-1000N web interface. The top navigation bar includes 'DSR-1000N', 'SETUP', 'ADVANCED', 'TOOLS', and 'STATUS'. The left sidebar lists various settings, with 'VLAN Settings' expanded to show 'VLAN Configuration', 'Port VLAN', 'Multiple VLAN Subnets', and 'Available VLANs'. The main content area shows a message 'MULTI VLAN SUBNETS' with a 'LOGOUT' link. Below this is a description: 'This page shows a list of available multi-vlan subnets. User can even edit the multi-vlans from this page.' A table titled 'MULTI VLAN SUBNET List' contains the following data:

	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

Below the table is an 'Edit' button. The footer of the page reads 'UNIFIED SERVICES ROUTER'.

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: 192.168.2.1			
USB Settings	Subnet Mask: 255.255.255.0			
VLAN Settings	DHCP			
	DHCP Mode: DHCP Server			
	Domain Name: DLink			
	Starting IP Address: 192.168.2.100			
	Ending IP Address: 192.168.2.254			
	Primary DNS Server (Optional):			
	Secondary DNS Server (Optional):			
	Lease Time: 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: 192.168.2.1			
USB Settings	Subnet Mask: 255.255.255.0			
VLAN Settings	<ul style="list-style-type: none"> VLAN Configuration Port VLAN Multiple VLAN Subnets Available VLANs 			
	DHCP Mode: 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 in the DSR-1000N web interface. The page title is 'PORT VLANS' with a 'LOGOUT' link. Below the title is a description: 'This page allows user to configure the port VLANs. A user can choose ports and can add them into a VLAN.' The main content is a table titled 'Port VLANs' with the following data:

	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

Below the table is an 'Edit' button, which is highlighted with a green box.

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. rent IP/Subnet because they are already in different VLAN. Following steps can assist you to verify the result.

The screenshot shows the 'VLAN CONFIGURATION' page in the DSR-1000N web interface. The page title is 'VLAN CONFIGURATION' with a 'LOGOUT' link. Below the title is a description: 'This page allows user to configure the port VLAN.' The main content is a form titled 'VLAN Configuration' with the following fields:

Port Name: Port 2

Mode: Access (dropdown menu)

PVID: 2 (text input field)

Below the form are 'Apply' and 'Cancel' buttons. The 'Apply' button is highlighted with a green box.

Below the form is a section titled 'VLAN Membership Configuration' with the following fields:

VLAN Membership: 1 2

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