

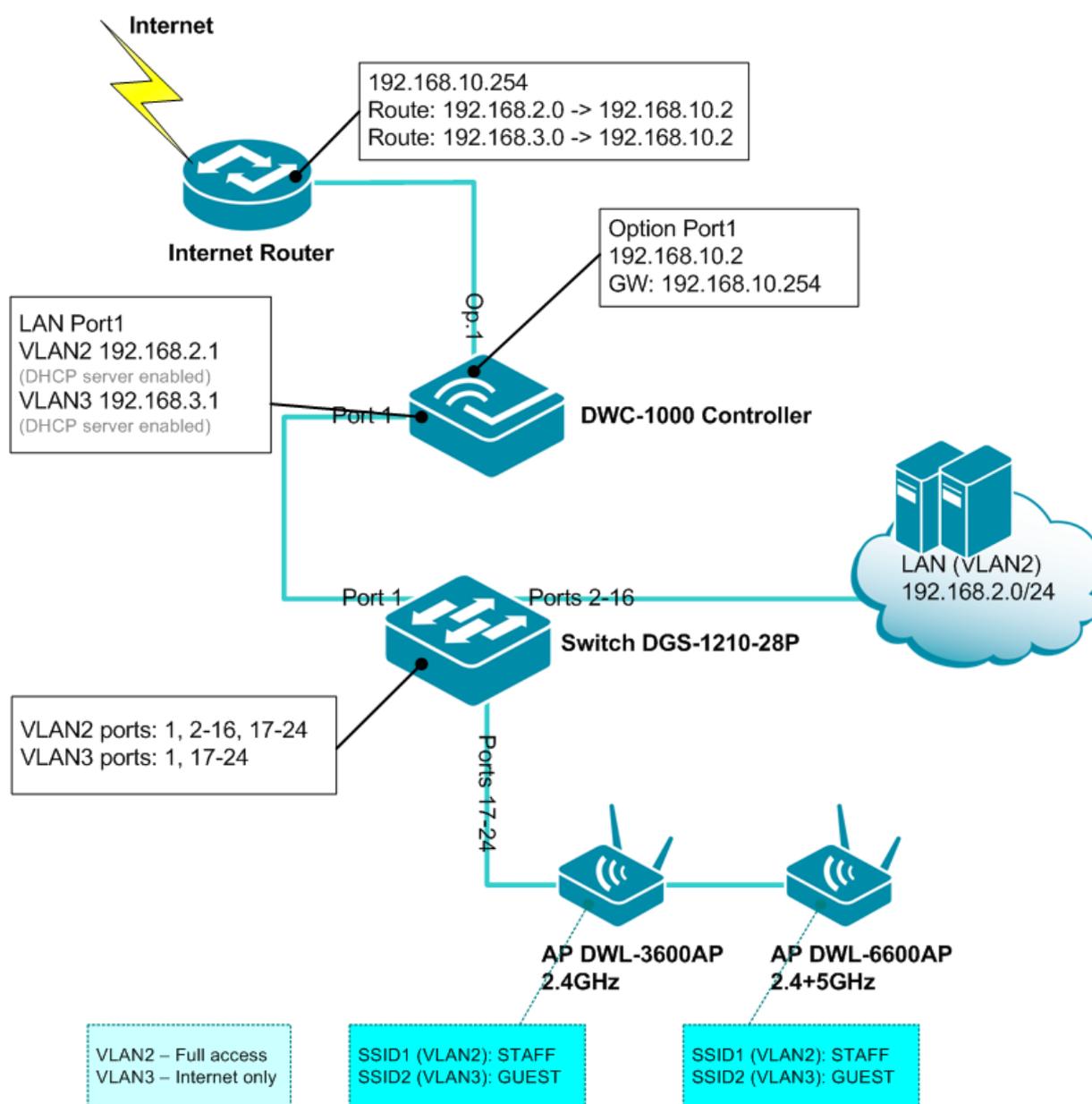
# DWC-1000 Wireless Controller Step-by-Step Configuration Guide

## Example scenario

Wireless Network with two WLANs for staff and guests:

“Staff” with WPA2 security, with access to all network resources.

“Guest” with limited access (Internet only).



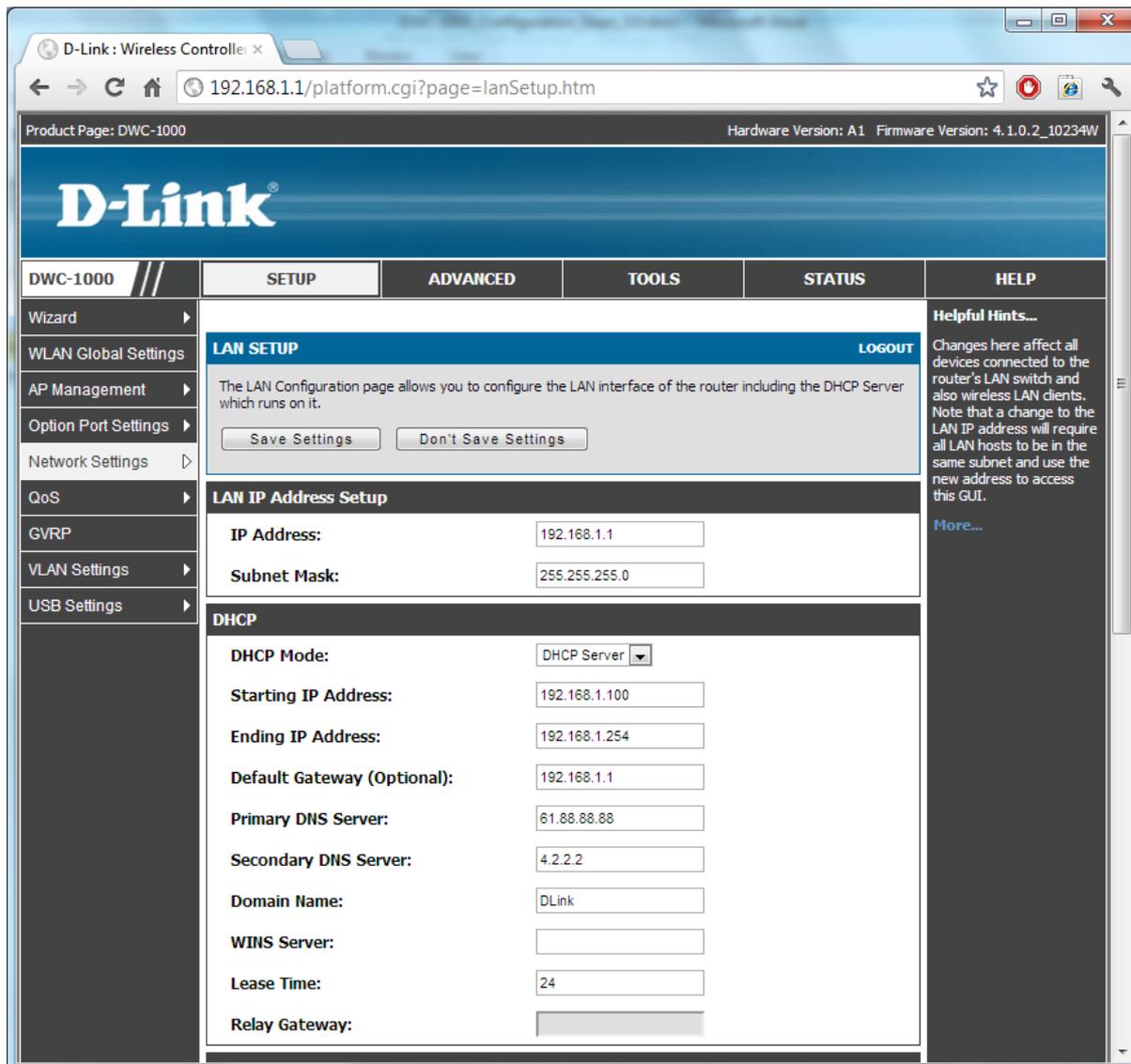
## DWC-1000 Wireless Controller configuration

### 1. Set IP configuration on LAN interface of the WLAN controller.

Default IP address of the DWC-1000 is 192.168.10.1. Default Username/Password is admin/admin.

Go to Setup > Network Settings > LAN Setup. Specify the IP address for the LAN interface of the controller.

Set DHCP Mode to DHCP SERVER. Specify the IP settings of DHCP server. Note that Default Gateway should be the IP address of the LAN interface of the DWC-1000 controller.



The screenshot shows the D-Link DWC-1000 web interface in a browser window. The address bar shows the URL `192.168.1.1/platform.cgi?page=lanSetup.htm`. The page title is "D-Link: Wireless Controller". The interface includes a navigation menu with options like Wizard, WLAN Global Settings, AP Management, Option Port Settings, Network Settings, QoS, GVRP, VLAN Settings, and USB Settings. The main content area is titled "LAN SETUP" and includes a "LOGOUT" link. Below the title, there is a description: "The LAN Configuration page allows you to configure the LAN interface of the router including the DHCP Server which runs on it." There are two buttons: "Save Settings" and "Don't Save Settings". The "LAN IP Address Setup" section contains the following fields:

IP Address:	<input type="text" value="192.168.1.1"/>
Subnet Mask:	<input type="text" value="255.255.255.0"/>

The "DHCP" section contains the following fields:

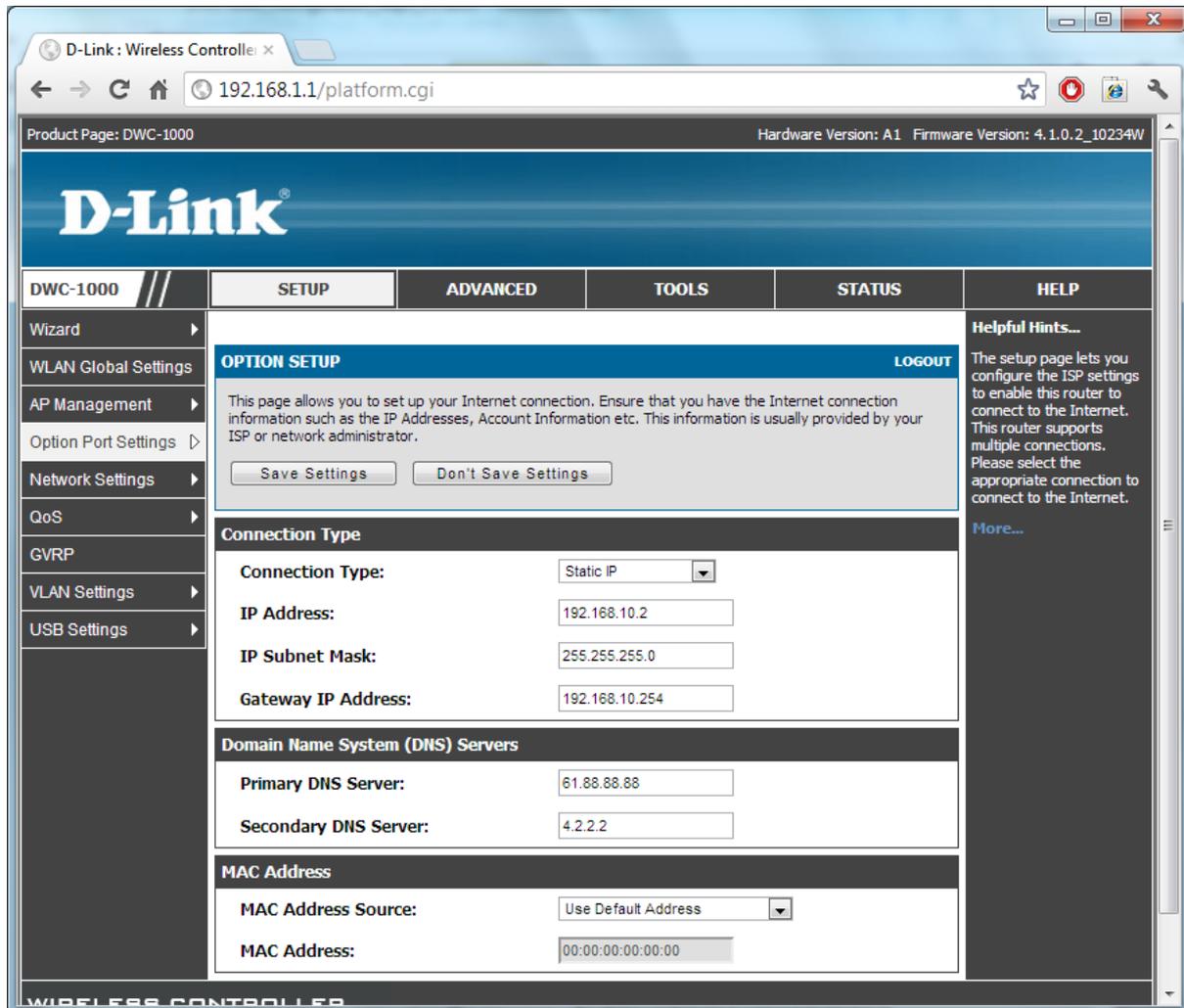
DHCP Mode:	<input type="text" value="DHCP Server"/>
Starting IP Address:	<input type="text" value="192.168.1.100"/>
Ending IP Address:	<input type="text" value="192.168.1.254"/>
Default Gateway (Optional):	<input type="text" value="192.168.1.1"/>
Primary DNS Server:	<input type="text" value="61.88.88.88"/>
Secondary DNS Server:	<input type="text" value="4.2.2.2"/>
Domain Name:	<input type="text" value="DLink"/>
WINS Server:	<input type="text"/>
Lease Time:	<input type="text" value="24"/>
Relay Gateway:	<input type="text"/>

On the right side, there is a "Helpful Hints..." section with the text: "Changes here affect all devices connected to the router's LAN switch and also wireless LAN clients. Note that a change to the LAN IP address will require all LAN hosts to be in the same subnet and use the new address to access this GUI." There is also a "More..." link.

## 2. Set IP configuration on “Option 1” interface of the WLAN controller.

Go to Setup > Option Port Settings > Option Setup. Set Connection Type as “Static IP” and specify the settings. The Default Gateway should be your Internet Router’s LAN IP address.

*(Note: the DWC-1000 controller can also be used as Internet Router with optional DWC-1000-VPN licence).*



The screenshot shows the D-Link Wireless Controller web interface. The browser address bar displays `192.168.1.1/platform.cgi`. The page title is "D-Link : Wireless Controller". The hardware version is A1 and the firmware version is 4.1.0.2\_10234W. The main navigation menu includes SETUP, ADVANCED, TOOLS, STATUS, and HELP. The left sidebar lists various settings categories, with "Option Port Settings" selected. The main content area is titled "OPTION SETUP" and includes a "LOGOUT" link. A descriptive text states: "This page allows you to set up your Internet connection. Ensure that you have the Internet connection information such as the IP Addresses, Account Information etc. This information is usually provided by your ISP or network administrator." Below this text are two buttons: "Save Settings" and "Don't Save Settings". The "Connection Type" section has a dropdown menu set to "Static IP". The "IP Address" field contains "192.168.10.2", the "IP Subnet Mask" field contains "255.255.255.0", and the "Gateway IP Address" field contains "192.168.10.254". The "Domain Name System (DNS) Servers" section has a "Primary DNS Server" field with "61.88.88.88" and a "Secondary DNS Server" field with "4.2.2.2". The "MAC Address" section has a "MAC Address Source" dropdown set to "Use Default Address" and a "MAC Address" field with "00:00:00:00:00:00". A "Helpful Hints..." section on the right provides additional information about the setup page.

### 3. Enable VLANs.

Go to Setup > VLAN Settings > VLAN Configuration. Make sure VLAN is enabled.

Go to VLAN Settings > Available VLANs. Add new VLANs “Staff” with ID set to 2 and “Guest” with ID set to 3.

Inter-VLAN routing should be enabled.

The screenshot shows the D-Link Wireless Controller web interface. The browser address bar displays "192.168.1.1/platform.cgi?page=vlanAvailable.htm". The page title is "AVAILABLE VLANS" and includes a "LOGOUT" link. A navigation menu on the left lists various settings, with "VLAN Settings" selected. The main content area features a table titled "List of available VLANs" with columns for Name and ID. Below the table are "Edit", "Delete", and "Add" buttons. A "Helpful Hints..." section on the right provides information about VLAN membership configuration.

Name	ID
Default	1
Staff	2
Guest	3

Helpful Hints...  
A VLAN membership must be configured in order to be assigned to a port. A VLAN membership entry consists of a VLAN identifier and the numerical VLAN ID which is assigned to the VLAN membership. The VLAN ID value can be any number from 2 to 4093.  
[More...](#)

#### 4. Assign IP Subnets to VLANs.

Go to VLAN Settings > Multiple VLAN subnets. Select the Guest VLAN and click Edit.

Change the Staff VLAN's IP address to the IP from the subnet you are going to use for Staff. In our example it is 192.168.2.0/24.

Change the Guest VLAN's IP address to the IP from the subnet you are going to use for Guests. In our example it is 192.168.3.0/24.

Set DHCP Mode to DHCP SERVER. Specify the IP settings of DHCP server. Note that Default Gateway should be the IP address of the corresponding VLAN interface (192.168.2.1 for Staff and 192.168.3.1 for Guest).

The screenshot shows the D-Link Wireless Controller web interface in a browser window. The address bar shows the URL 192.168.1.1/platform.cgi. The page title is "D-Link: Wireless Controller". The interface includes a navigation menu with tabs for SETUP, ADVANCED, TOOLS, STATUS, and HELP. The left sidebar lists various settings categories, with "VLAN Settings" selected. The main content area is titled "MULTI VLAN SUBNET CONFIG" and contains a "LOGOUT" link. Below this, there is a section for "MULTI VLAN SUBNET" with fields for "Vlan ID" (set to 2), "IP Address" (192.168.2.1), and "Subnet Mask" (255.255.255.0). There are "Save Settings" and "Don't Save Settings" buttons. Below this is the "DHCP" section with fields for "DHCP Mode" (set to DHCP Server), "Domain Name" (DLink), "Starting IP Address" (192.168.2.100), "Ending IP Address" (192.168.2.254), "Default Gateway (Optional)" (192.168.2.1), "Primary DNS Server (Optional)" (61.88.88.88), "Secondary DNS Server (Optional)" (4.2.2.2), "Lease Time" (24 Hours), and "Relay Gateway" (0.0.0.0). A "Helpful Hints..." section is visible on the right side of the page.

## 5. Configure the controller ports with VLANs.

Go to VLAN Settings > Port VLAN. Select the port which connects the controller to your LAN switch and click on Edit (in our example it is Port 1). Set mode to “General” and click Apply.

Then re-configure the port and add VLAN 2 and VLAN 3 membership:

The screenshot shows the D-Link Wireless Controller web interface in a browser window. The address bar shows the URL 192.168.1.1/platform.cgi. The page title is "D-Link : Wireless Controller". The interface includes a navigation menu on the left with options like Wizard, WLAN Global Settings, AP Management, Option Port Settings, Network Settings, QoS, GVRP, VLAN Settings, and USB Settings. The main content area is titled "VLAN CONFIGURATION" and includes a "LOGOUT" link. Below this, there is a section for "VLAN Configuration" with fields for "Port Name" (set to "Port 1"), "Mode" (set to "General"), and "PVID" (set to "1"). There are "Apply" and "Cancel" buttons. Below that is a section for "VLAN Membership Configuration" with checkboxes for "VLAN Membership" 1, 2, and 3, all of which are checked. There are also "Apply" and "Cancel" buttons. On the right side, there is a "Helpful Hints..." section with text explaining VLAN modes and a "More..." link. The footer of the page includes the D-Link logo and the text "WIRELESS CONTROLLER" and "Copyright © 2012 D-Link Corporation."

## 6. Create Configuration Profiles for your Access Points.

Go to Advanced > AP Profile. Select the default profile or click on Add to create a new Access Point configuration profile. In our example we are editing the existing profile “Default”.

Select the required profile and click on Configure SSID.

Edit the first SSID and specify the settings for Staff WLAN (VLAN 2). Save Settings.



The screenshot shows the D-Link Wireless Controller web interface. The browser address bar displays "192.168.1.1/network\_cfg\_rw.html". The page header includes "Product Page: DWC-1000" and "Hardware Version: A1 Firmware Version: 4.1.0.2\_10234W". The main navigation menu is divided into "SETUP", "ADVANCED", "TOOLS", "STATUS", and "HELP". The "ADVANCED" tab is selected, and the "NETWORKS" section is active. The "SSIDs" menu item is highlighted in the left sidebar. The main content area shows the configuration for a network profile with the SSID "Staff". The configuration includes fields for SSID, Hide SSID, Ignore Broadcast, VLAN (set to 2), MAC Authentication (set to Disable), Redirect (set to None), Redirect URL, Security (set to WPA/WPA2), WPA Versions (WPA and WPA2 checked), WPA Ciphers (TKIP and CCMP(AES) checked), WPA Key Type (ASCII), WPA Key (masked with dots), and Bcast Key Refresh Rate (set to 300 seconds). A "LOGOUT" link is visible in the top right of the configuration area. A "Helpful Hints..." section on the right provides information about SSIDs and Hide SSID.

Now select and modify the second SSID name for Guest WLAN (VLAN 3). Save Settings.

*Note: If you want Guest users to authenticate using Internet browser (i.e. like in Wi-Fi Hotspot), set Security to “None”. Enable Captive Portal authentication for Guest WLAN. See the Captive Portal Setup Guide on D-Link web site.*

Repeat for other SSID's if required.

The screenshot shows the D-Link Wireless Controller web interface. The browser address bar displays the URL: 192.168.1.1/profile\_vap\_summ.html?advanced=1&profile=1. The page header includes the D-Link logo and navigation tabs: SETUP, ADVANCED, TOOLS, STATUS, and HELP. The left sidebar contains a menu with items like Global, Peer Controllers, AP Profile, SSIDs, WIDS Security, Captive Portal, Client, IPv6, Routing, Certificates, Users, IP/MAC Binding, Radius Settings, and Switch Settings. The main content area is titled 'AP PROFILES SUMMARY' and includes a 'LOGOUT' link. Below this is a section for 'AP Profile VAP Configuration' showing 'AP Profile: AP Profile 1-Default' and 'Radio Mode: 1-802.11a/n' (selected) and '2-802.11b/g/n'. At the bottom is a 'List of SSID' table.

	Network	VLAN	Hide SSID	Security	Redirect
<input checked="" type="checkbox"/>	1 - Staff	2-Staff	Disabled	WPA Personal	None
<input checked="" type="checkbox"/>	2 - Guest	3-Guest	Disabled	WPA Personal	None
<input type="checkbox"/>	3 - dlink3	1-default	Disabled	None	None
<input type="checkbox"/>	4 - dlink4	1-default	Disabled	None	None
<input type="checkbox"/>	5 - dlink5	1-default	Disabled	None	None
<input type="checkbox"/>	6 - dlink6	1-default	Disabled	None	None
<input type="checkbox"/>	7 - dlink7	1-default	Disabled	None	None
<input type="checkbox"/>	8 - dlink8	1-default	Disabled	None	None
<input type="checkbox"/>	9 - dlink9	1-default	Disabled	None	None

## 7. Set the DWC-1000 controller to push configuration profile to your Access Points.

Connect your Access Points to LAN. In your DWC-1000 Controller go to Status > Access Point > Authentication Failure Status. Your Access Points will be listed in the table.

Select an AP and click Manage. Select the desired profile for the Access Point (in our example we used the "Default" profile). Save Settings. Repeat for the remaining AP's.

Product Page: DWC-1000 Hardware Version: A1 Firmware Version: 4.1.0.2\_10234W

**D-Link**

DWC-1000 // SETUP ADVANCED TOOLS STATUS HELP

Dashboard Global Info Device Info Access Point Info LAN Clients Info Wireless Client Info Logs Traffic Monitor Active Sessions

**AP AUTHENTICATION FAILURE STATUS** LOGOUT

The AP authentication failure list shows information about APs that failed to establish communication with the Unified Wireless Controller.

**List of Authentication Failure APs**

	MAC Address	IP Address	Last Failure Type	Age
<input checked="" type="checkbox"/>	fc:75:16:75:c9:00	192.168.1.242	No Database Entry	0d:00:00:24

Delete All Manage View Details Refresh

**Helpful Hints...**  
An AP might fail to associate to the controller due to errors such as invalid packet format or vendor ID, or because the AP is not configured as a valid AP with the correct local or RADIUS authentication information.  
More...

Product Page: DWC-1000 Hardware Version: A1 Firmware Version: 4.1.0.2\_10234W

**D-Link**

DWC-1000 // SETUP ADVANCED TOOLS STATUS HELP

Dashboard Global Info Device Info Access Point Info LAN Clients Info Wireless Client Info Logs Traffic Monitor Active Sessions

**VALID AP** LOGOUT

We can set the Valid Access Point Configuration here.

Save Settings Don't Save Settings

**Valid Access Point Configuration**

MAC address: fc:75:16:75:c9:00

AP Mode: Managed

Location: [Text Field]

Authentication Password: [Text Field] Edit

Profile: 1 - Default

Expected SSID: [Text Field]

Expected Channel: Any

Expected WDS Mode: Any

Expected Security Mode: Any

Expected Wired Network Mode: Allowed

**Helpful Hints...**  
We can configure Valid Access Point here. Several information is attached with AP, like MAC Address, AP Mode etc.  
More...

After successful configuration your Access Points will be listed under Access Point Info > Managed AP Status:

The screenshot shows the D-Link Wireless Controller web interface. The browser address bar shows the URL `192.168.1.1/managed_ap_status.html`. The page title is "D-Link" and the product page is "DWC-1000". The hardware version is "A1" and the firmware version is "4.1.0.2\_10234W".

The main navigation menu includes: SETUP, ADVANCED, TOOLS, STATUS, and HELP. The left sidebar menu includes: Dashboard, Global Info, Device Info, Access Point Info, LAN Clients Info, Wireless Client Info, Logs, Traffic Monitor, and Active Sessions.

The "MANAGED AP STATUS" page features a "LOGOUT" button and a "Show all the details of managed AP." link. Below this is a "List of Managed APs" table:

	MAC Address (*) Peer Managed	IP Address	Age	Status	Profile	Radio Interface
<input type="checkbox"/>	fc:75:16:75:c9:00	192.168.1.242	0d:00:00:04	Managed	1-Default	1-802.11a/n, 2-802.11b/g/n

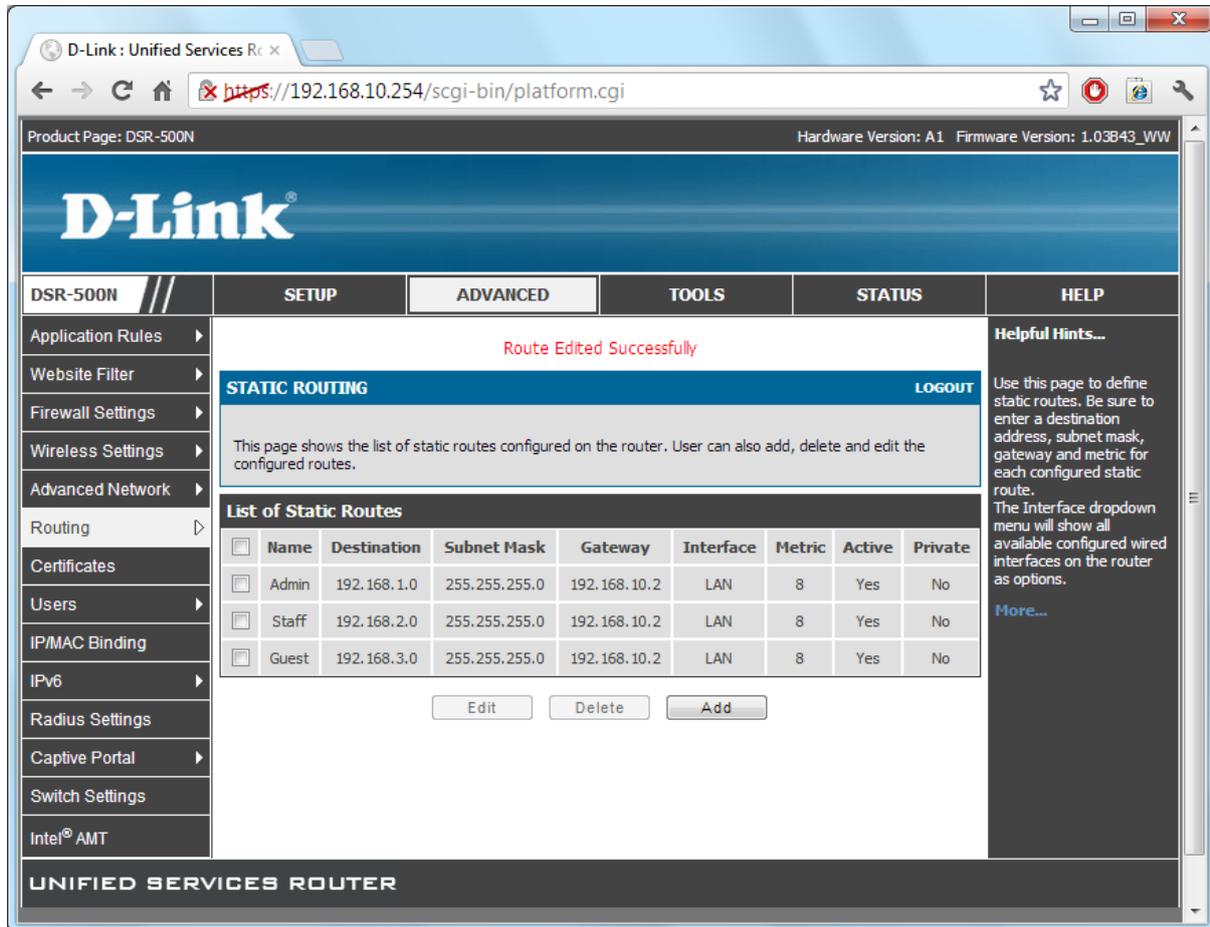
Below the table are several buttons: "View AP Details", "View Radio Details", "View Neighbor APs", "View Neighbor Clients", "View VAP Details", "View Distributed Tunneling Details", "Delete", "Delete All", "Refresh", and "Auto Refresh" (checked).

On the right side, there is a "Helpful Hints..." section with text: "We can see all the details related to a managed AP here. We can perform action like reset, disassociate clients connected with selected AP." and a "More..." link.

## Internet Router configuration.

Add static routes for the IP subnets used on your Wireless LAN. The gateway for these IP subnets should be the IP address of the "Option 1" port of the DWC-1000 controller.

In our example we are using DSR-500N Services Router:



The screenshot shows the D-Link Unified Services Router web interface. The browser address bar shows <https://192.168.10.254/scgi-bin/platform.cgi>. The page title is "D-Link: Unified Services Router". The hardware version is A1 and the firmware version is 1.03B43\_WW. The D-Link logo is prominently displayed at the top. Below the logo, there are navigation tabs: SETUP, ADVANCED, TOOLS, STATUS, and HELP. The "ADVANCED" tab is selected. On the left side, there is a sidebar menu with various configuration options, including "Routing" which is currently expanded. The main content area shows a "Route Edited Successfully" message in red. Below this, there is a "STATIC ROUTING" section with a "LOGOUT" link. A descriptive text states: "This page shows the list of static routes configured on the router. User can also add, delete and edit the configured routes." Below this text is a table titled "List of Static Routes".

<input type="checkbox"/>	Name	Destination	Subnet Mask	Gateway	Interface	Metric	Active	Private
<input type="checkbox"/>	Admin	192.168.1.0	255.255.255.0	192.168.10.2	LAN	8	Yes	No
<input type="checkbox"/>	Staff	192.168.2.0	255.255.255.0	192.168.10.2	LAN	8	Yes	No
<input type="checkbox"/>	Guest	192.168.3.0	255.255.255.0	192.168.10.2	LAN	8	Yes	No

Below the table, there are three buttons: "Edit", "Delete", and "Add". On the right side of the page, there is a "Helpful Hints..." section with text explaining the purpose of the static routing page and a "More..." link. The footer of the page reads "UNIFIED SERVICES ROUTER".

*Note: the DWC-1000 controller can be used as Internet Router instead. WAN/VPN/Firewall functionality can be enabled by purchasing the DWC-1000-VPN licence.*

## LAN Switch configuration.

Because in our example we are using multi-SSID scenario (“Staff” and “Guest” SSID’s) the Access Points need to be connected to a switch that supports VLANs.

In our example we are using DGS-1210-28P (Gigabit WebSmart PoE switch). Port 1 of the switch connects to the DWC-1000 controller. Ports 2-16 connect to other LAN resources (only available to “Staff” VLAN). Ports 17-24 are used to connect Access Points.

**802.1Q Asymmetric VLAN Settings** Safeguard

Asymmetric VLAN [Example]  Enabled  Disabled

Total static VLAN entries: 3   
 Maximum 256 entries.

VID	VLAN Name	Untagged	Tagged	Delete
1	default	01-28		<input type="button" value="Delete"/>
2	Staff	02-16	01 ,17-24	<input type="button" value="Delete"/>
3	Guest		01 ,17-24	<input type="button" value="Delete"/>

Staff VLAN configuration with VID 2:

**VID Settings** Safeguard

VID: 2  
 VLAN Name: Staff

Port	Select All	01	02	03	04	05	06	07	08	09	10	11	12	13	14
Untagged	<input type="button" value="All"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
Tagged	<input type="button" value="All"/>	<input checked="" type="radio"/>													
Not Member	<input type="button" value="All"/>	<input type="radio"/>													

Port	Select All	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Untagged	<input type="button" value="All"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tagged	<input type="button" value="All"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not Member	<input type="button" value="All"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>									

Guest VLAN configuration with VID 3:

**VID Settings** Safeguard

VID: 3  
 VLAN Name: Guest

Port	Select All	01	02	03	04	05	06	07	08	09	10	11	12	13	14
Untagged	<input type="button" value="All"/>	<input type="radio"/>													
Tagged	<input type="button" value="All"/>	<input checked="" type="radio"/>													
Not Member	<input type="button" value="All"/>	<input type="radio"/>													

Port	Select All	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Untagged	<input type="button" value="All"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tagged	<input type="button" value="All"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not Member	<input type="button" value="All"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>