

Configuration Guide

How to Configure a Captive Portal on the DWC-1000



Overview

This guide describes how to configure and customize a captive portal on the D-Link DWC-1000 Unified Controller for user authentication.

D-Link[®]

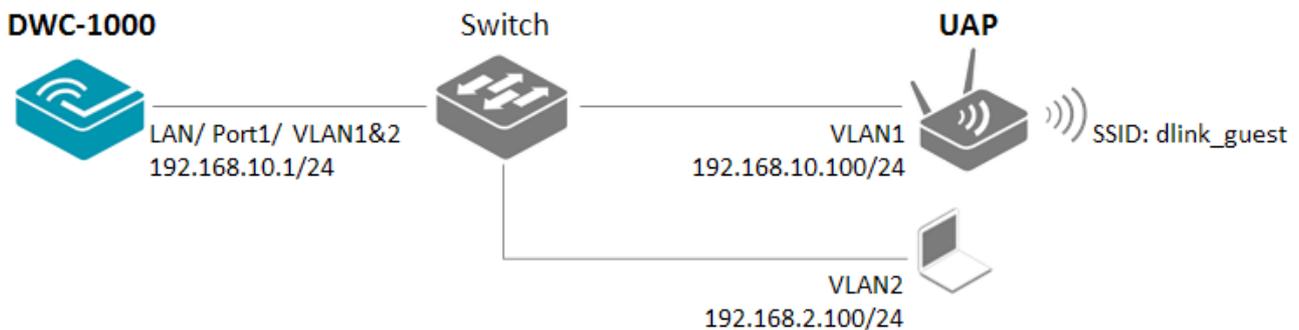
Users can enable the captive portal function on one or multiple SSIDs. When a user accesses an SSID for which captive portal has been enabled, the Unified Access Point (UAP) redirects the access page to an authentication page (captive portal page) if the user has not been authenticated. If the user enters the correct username and password, he will be granted Internet access. If not, the user's access request is blocked by the UAP. The authentication methods include local database and external RADIUS server. Users can also customize the captive portal page by changing the banner and background, and adding text.

Situation note

Many companies, businesses, and public facilities have enabled wired or wireless Internet connections in their public spaces such as meeting rooms, libraries, restaurants, and parks. Through user authentication, these places can easily control their Internet resources and manage user accounts. Most require users to input a valid username and password in order to access the Internet.

The scenario in this guide shows you how to configure a Captive Portal for the `dlink_guest` SSID.

All connections from VLAN 2 or the `dlink_guest` SSID require performing authentication before being granted Internet access.



Configuration steps

1. Set up the AP profile and VLANs based on the network architecture. Please refer to the "How to Configure an AP Profile" guide.
2. Discover and manage an AP from the network. Please refer to the "How to Configure Layer 2 Discovery on the DWC-1000" guide.
3. Choose an authentication method. Go to **ADVANCED > Captive Portal > Captive Portal Setup**. There are two authentication methods: (a) local database; and (b) external RADIUS.

NOTE: The screenshots in this guide are from the DWC-1000's firmware version 4.1.0.10_10260W. If you are using an earlier version of the firmware, the screenshots may not be identical to what you see on your browser.

To use the local database method:

a-1. Select "local" as the Authentication Mode.

D-Link

DWC-1000 // SETUP ADVANCED TOOLS STATUS HELP

Global
Peer Controllers
AP Profile
SSIDs
WIDS Security
Captive Portal
Client
WDS Configuration
Application Rules
Website Filter
Firewall Settings
IPv6
Advanced Network
Routing

Helpful Hints...
Enabling Captive Portal will result in the addition of firewall policies. This will help you to authenticate users trying to access internet. By default, Captive Portal is not enabled on any of the interfaces.
[More...](#)

CAPTIVE PORTAL SETUP LOGOUT

Captive Portal is a security mechanism to selectively provide authentication on certain interfaces. You can use this page to manage the Policies and Profiles of CaptivePortal.

Captive Portal Policies

Policy Name	Status	In Interface	Out Interface		
	<input type="button" value="Edit"/>	<input type="button" value="Enable"/>	<input type="button" value="Disable"/>	<input type="button" value="Delete"/>	<input type="button" value="Add"/>

Authentication Type

Authentication Mode: Radius Local

Authentication Type: PAP

a-2. Build up the user list in the User Database. Go to ADVANCED> Users> Groups. Click **Add** to add a new user group.

D-Link

DWC-1000 // SETUP ADVANCED TOOLS STATUS HELP

Global
Peer Controllers
AP Profile
SSIDs
WIDS Security
Client
WDS Configuration
Application Rules
Website Filter
Firewall Settings
IPv6
Advanced Network
Routing
Certificates
Users
IP/MAC Binding
Switch Settings
Intel® AMT

Helpful Hints...
Login policies, Policies by Browser and Policies by IP can only be configured for groups having sslvpn privileges.
[More...](#)

GROUPS LOGOUT

This page shows the list of added groups to the router. The user can add, delete and edit the groups also.

List of Groups

Group	Description
ADMIN	Admin Group
GUEST	Guest Group

a-3. Fill in the necessary information under Group Configuration, enter a Group Name such as "Auth" in the below screenshot, and select "Captive Portal User" under User Type. Click **Save Settings**.

DWC-1000 // SETUP ADVANCED TOOLS STATUS HELP

Global Peer Controllers AP Profile SSIDs WIDS Security Captive Portal Client WIDS Configuration Application Rules Website Filter Firewall Settings IPv6 Advanced Network Routing Certificates Users IP/MAC Binding

GROUP CONFIGURATION LOGOUT

This page allows user to add a new user group. Once this group is added, a user can then add system users to it.

Save Settings Don't Save Settings

Group Configuration

Group Name: Auth

Description: Captive Portal

User Type

PPTP User:

L2TP User:

Xauth User:

SSLVPN User:

Admin:

Guest User (readonly):

Captive Portal User:

Idle Timeout: 10 (Seconds)

Helpful Hints... Do you know that you can associate multiple users to a single group. More...

DWC-1000 // SETUP ADVANCED TOOLS STATUS HELP

Global Peer Controllers AP Profile SSIDs WIDS Security Captive Portal Client WIDS Configuration Application Rules Website Filter Firewall Settings IPv6

Operation succeeded

GROUPS LOGOUT

This page shows the list of added groups to the router. The user can add, delete and edit the groups also.

List of Groups

<input type="checkbox"/>	Group	Description
<input type="checkbox"/>	ADMIN	Admin Group
<input type="checkbox"/>	GUEST	Guest Group
<input type="checkbox"/>	Auth	Captive Portal

Edit Delete Add

Login Policies Policies By Browsers Policies By IP

Helpful Hints... Login policies, Policies by Browser and Policies by IP can only be configured for groups having sslvpn privileges. More...

a-4. Go to **ADVANCED**> Users> Users. Click **Add** to add a new user account.

D-Link

DWC-1000 // SETUP **ADVANCED** TOOLS STATUS HELP

Global
Peer Controllers
AP Profile
SSIDs
WIDS Security
Client
WDS Configuration
Application Rules
Website Filter
Firewall Settings
IPv6
Advanced Network
Routing
Certificates
Users
IP/MAC Binding

USERS LOGOUT

This page shows a list of available users in the system. A user can add, delete and edit the users also. This page can also be used for setting policies on users.

List of Users

<input type="checkbox"/>	User Name	Group	Login Status
<input type="checkbox"/>	admin	ADMIN	Enabled (LAN) Enabled (OPTION)
<input type="checkbox"/>	guest	GUEST	Disabled (LAN) Disabled (OPTION)

Edit Delete Add

Helpful Hints...
Authentication of the users (IPsec, SSL VPN, or GUI) is done by the router using either a local database on the router or external authentication servers (i.e. LDAP or RADIUS). User level policies can be specified by browser, IP address of the host, and whether the user can login to the router's GUI in addition to the SSL VPN portal
[More...](#)

a-5. Fill in the necessary information under Users Configuration. For Select Group, choose "AUTH" which was created in the previous step. Click **Save Settings**.

D-Link

DWC-1000 // SETUP **ADVANCED** TOOLS STATUS HELP

Global
Peer Controllers
AP Profile
SSIDs
WIDS Security
Captive Portal
Client
WDS Configuration
Application Rules
Website Filter
Firewall Settings
IPv6

USERS CONFIGURATION LOGOUT

This page allows a user to add new system users.

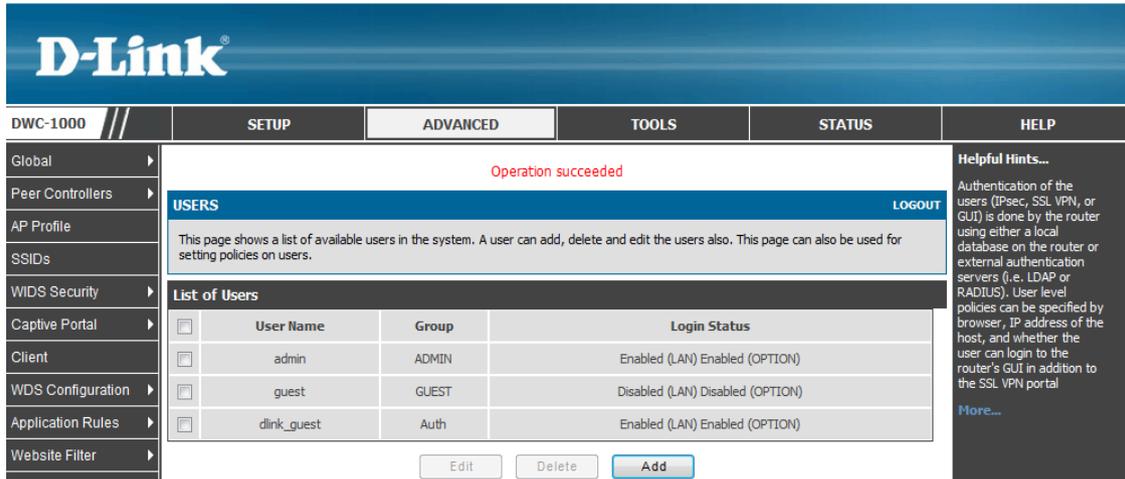
Save Settings Don't Save Settings

Users Configuration

User Name: dlink_guest
First Name: guest
Last Name: guest
Select Group: Auth
Password:

Helpful Hints...
If an user is added to a group that has more than one privilege, one requiring authentication from the local database and the other from some remote database like RADIUS, a valid password needs to be provided. However the local password will only be used for the group requiring authentication from the local database. For the group that has chosen remote authentication, the remote credentials will be used and not the local ones.
[More...](#)

The new record will then be displayed in the user database list.



D-Link

DWC-1000 // SETUP ADVANCED TOOLS STATUS HELP

Global Peer Controllers AP Profile SSIDs WIDS Security Captive Portal Client WDS Configuration Application Rules Website Filter

Operation succeeded

USERS LOGOUT

This page shows a list of available users in the system. A user can add, delete and edit the users also. This page can also be used for setting policies on users.

List of Users

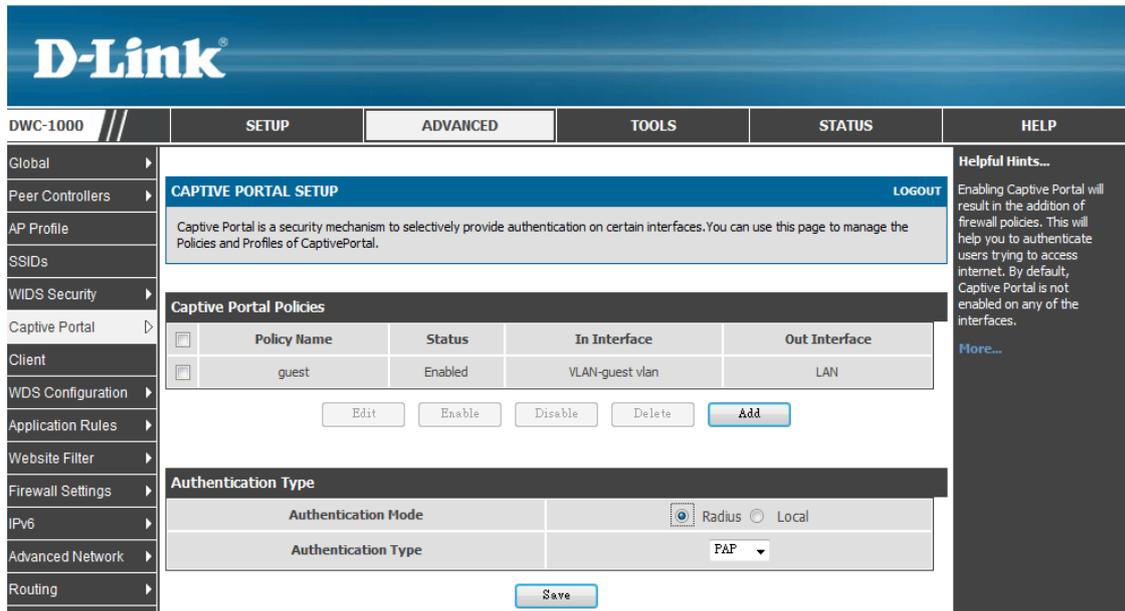
<input type="checkbox"/>	User Name	Group	Login Status
<input type="checkbox"/>	admin	ADMIN	Enabled (LAN) Enabled (OPTION)
<input type="checkbox"/>	guest	GUEST	Disabled (LAN) Disabled (OPTION)
<input type="checkbox"/>	dlink_guest	Auth	Enabled (LAN) Enabled (OPTION)

Edit Delete Add

Helpful Hints...
Authentication of the users (IPsec, SSL VPN, or GUI) is done by the router using either a local database on the router or external authentication servers (i.e. LDAP or RADIUS). User level policies can be specified by browser, IP address of the host, and whether the user can login to the router's GUI in addition to the SSL VPN portal.
More...

To use the RADIUS server method:

b-1. Select "RADIUS" for the Authentication Mode.



D-Link

DWC-1000 // SETUP ADVANCED TOOLS STATUS HELP

Global Peer Controllers AP Profile SSIDs WIDS Security Captive Portal Client WDS Configuration Application Rules Website Filter Firewall Settings IPv6 Advanced Network Routing

CAPTIVE PORTAL SETUP LOGOUT

Captive Portal is a security mechanism to selectively provide authentication on certain interfaces. You can use this page to manage the Policies and Profiles of CaptivePortal.

Captive Portal Policies

<input type="checkbox"/>	Policy Name	Status	In Interface	Out Interface
<input type="checkbox"/>	guest	Enabled	VLAN-guest vlan	LAN

Edit Enable Disable Delete Add

Authentication Type

Authentication Mode RADIUS Local

Authentication Type FAP

Save

Helpful Hints...
Enabling Captive Portal will result in the addition of firewall policies. This will help you to authenticate users trying to access internet. By default, Captive Portal is not enabled on any of the interfaces.
More...

b-2. Go to **ADVANCED**> Radius Settings. Fill in the external RADIUS info for the primary RADIUS server. Click **Save Settings**.

The screenshot shows the D-Link DWC-1000 web interface. The top navigation bar includes 'D-Link', 'DWC-1000', and tabs for 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'HELP'. The left sidebar lists various configuration options, with 'Captive Portal' selected. The main content area is titled 'RADIUS SERVER' and includes a 'LOGOUT' link. Below the title is a descriptive paragraph about RADIUS servers and two buttons: 'Save Settings' and 'Don't Save Settings'. The 'Radius Server Configuration' section contains the following fields:

- Authentication Server IP Address (Primary):** 192.168.1.2
- Authentication Port:** 1812
- Secret:** [Masked with dots]
- Timeout:** 1 (Seconds)
- Retries:** 2

On the right side, there is a 'Helpful Hints...' section with text explaining the RADIUS server's role and a 'More...' link.

4. Enable Wireless Captive Portal. Captive Portal can be applied to both wired and wireless users.

For wireless users, select the SSID you want to enable user authentication on. Navigate to **ADVANCED**> Captive Portal> WLAN CP Interface Association. Select an SSID/interface from the Interface List, for example, "dlink_guest," and click **Add**.

The screenshot shows the D-Link DWC-1000 web interface. The top navigation bar includes 'D-Link', 'DWC-1000', and tabs for 'SETUP', 'ADVANCED', 'TOOLS', 'STATUS', and 'HELP'. The left sidebar lists various configuration options, with 'Captive Portal' selected. The main content area is titled 'CAPTIVE PORTAL' and includes a 'LOGOUT' link. Below the title is a descriptive paragraph about captive portals and two buttons: 'Add' and 'Delete'. The 'Captive Portal Interface association' section contains the following fields:

- Interface List:** A list of wireless networks: 6/1-Wireless Network 1 - dlink1, 6/2-Wireless Network 2 - dlink2, 6/3-Wireless Network 3 - dlink3, 6/4-Wireless Network 4 - dlink4, 6/5-Wireless Network 5 - dlink5, 6/6-Wireless Network 6 - dlink6, 6/7-Wireless Network 7 - dlink7, 6/8-Wireless Network 8 - dlink8.
- Associated Interfaces:** A list containing 6/17-Wireless Network 17 - dlink_guest.

On the right side, there is a 'Helpful Hints...' section with text explaining captive portals and a 'More...' link.

For wired users, you must define the traffic you want to enable user authentication for. Go to Captive Portal> Captive Portal Setup. Click **Add** to add a new captive portal policy.

D-Link

DWC-1000 // SETUP ADVANCED TOOLS STATUS HELP

Global
Peer Controllers
AP Profile
SSIDs
WIDS Security
Captive Portal
Client
WDS Configuration

Helpful Hints...
Enabling Captive Portal will result in the addition of firewall policies. This will help you to authenticate users trying to access internet. By default, Captive Portal is not enabled on any of the interfaces.
[More...](#)

LOGOUT

Captive Portal is a security mechanism to selectively provide authentication on certain interfaces. You can use this page to manage the Policies and Profiles of CaptivePortal.

Captive Portal Policies

<input type="checkbox"/>	Policy Name	Status	In Interface	Out Interface
--------------------------	-------------	--------	--------------	---------------

Set the access from one VLAN, in this case, vlan2 (guest vlan), to another network interface, in this case, LAN, to require authentication. Give the captive portal configuration a policy name. Select "VLAN-guest vlan" in From Interface Name, and select "LAN" in To Interface Name. Click **Enable**, then click **Save Settings**.

D-Link

DWC-1000 // SETUP ADVANCED TOOLS STATUS HELP

Global
Peer Controllers
AP Profile
SSIDs
WIDS Security
Captive Portal
Client
WDS Configuration
Application Rules
Website Filter
Firewall Settings

Helpful Hints...
Enabling Captive Portal will result in the addition of firewall policies. This will help you to authenticate users trying to access internet. By default, Captive Portal is not enabled on any of the interfaces.
[More...](#)

LOGOUT

This page allows you to add a new captive Portal Policy or edit the configuration of an existing Policy. The details will then be displayed in the List of Captive Portal Policies table on the Captive Portal Setup page.

Captive Portal Configuration

Policy Name:

From InterfaceName:

To InterfaceName:

Enable:

D-Link

DWC-1000 // SETUP ADVANCED TOOLS STATUS HELP

Global
Peer Controllers
AP Profile
SSIDs
WIDS Security
Captive Portal
Client
WDS Configuration
Application Rules

Helpful Hints...
Enabling Captive Portal will result in the addition of firewall policies. This will help you to authenticate users trying to access internet. By default, Captive Portal is not enabled on any of the interfaces.
[More...](#)

LOGOUT

CaptivePortal Policy Added Successfully

Captive Portal is a security mechanism to selectively provide authentication on certain interfaces. You can use this page to manage the Policies and Profiles of CaptivePortal.

Captive Portal Policies

<input type="checkbox"/>	Policy Name	Status	In Interface	Out Interface
<input type="checkbox"/>	guest	Enabled	VLAN-guest vlan	LAN

5. The DWC-1000 provides one default profile for Captive Portal. You can customize the appearance of the Captive Portal page. Go to **ADVANCED**> Captive Portal> Captive Portal Setup. Select the default2 profile in the List of Available Profiles table and click **Edit**, or click **Add** to add a new captive portal profile.



You can then change the settings for General Details, Header Details, Login Details, Advertisement Details and Footer details. Click **Save Settings** when finished.

CUSTOMIZED CAPTIVE PORTAL SETUP [LOGOUT](#)

Captive Portal Login page is used for authentication on Captive Portal enabled interfaces.

[Save Settings](#) [Don't Save Settings](#)

General Details

Profile Name: default2

Browser Title: D-link Wireless Control...

Page Background Color: Custom

Custom Color: (#) 040D18 (CF00CF)

Header Details

Background: Image

Default Add Add Add Add Add

Header Background Color: White

Custom Color: (#) (CF00CF)

Header Caption: 2011 ENTERPRISE WIRELESS SUBI

Caption Font: Times New Roman

Font Size: Big

Regarding color customization, you can find more information about color hex codes from the Internet. These recommended websites may provide useful information:

Color-Hex.Com <http://www.color-hex.com/>

HTML Color code info <http://html-color-codes.info/>

For the background image, please notice that the maximum size of the image you can upload is 100 KB.

The screenshot shows the D-Link DWC-1000 web interface. The top navigation bar includes tabs for SETUP, ADVANCED, TOOLS, STATUS, and HELP. A left sidebar lists various configuration categories: Global, Peer Controllers, AP Profile, SSIDs, WIDS Security, Captive Portal, and Client. The main content area is titled 'CAPTIVE PORTAL HEADER IMAGE' and includes a 'LOGOUT' link. Below the title, there is a text box stating 'Here Header Images can be uploaded for Captive Portal Login Page.' A section titled 'Header Image to Upload' contains a file selection field with the path 'D:\07269\Desktop\ID photo\IMG_79' and a 'Browse...' button. Below this is an 'Upload' button. On the right side, there is a 'Helpful Hints...' section with text explaining that uploaded images can be used as header images in the Captive Portal Login Page, and a 'More...' link.

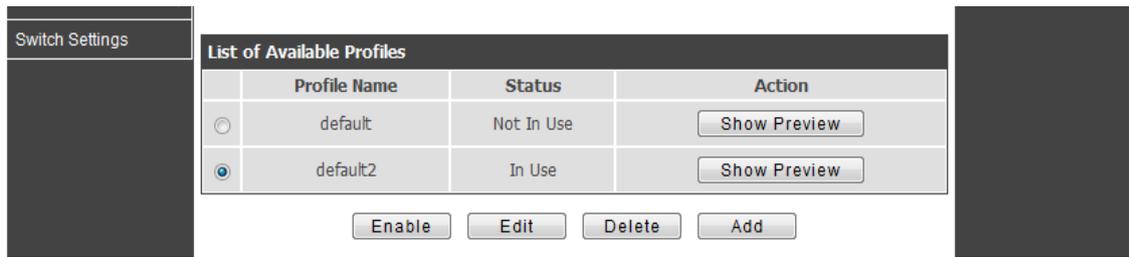
Click **Show Preview** to review your customized authentication page.

The screenshot shows the 'List of Available Profiles' section in the D-Link DWC-1000 web interface. The left sidebar shows 'WLAN Radius' and 'Switch Settings'. The main content area displays a table with the following data:

	Profile Name	Status	Action
<input type="radio"/>	default	In Use	<input type="button" value="Show Preview"/>
<input checked="" type="radio"/>	default2	Not In Use	<input type="button" value="Show Preview"/>

Below the table are buttons for 'Enable', 'Edit', 'Delete', and 'Add'. To the right of the table is a large dark grey area. Below this, a preview of the user authentication page is shown. The preview has a blue header with the text '2011 ENTERPRISE WIRELESS SUMMIT'. The main content area is titled 'USER AUTHENTICATION' and contains the following text: 'Welcome to Information Security Group'. Below this are two input fields: 'Username:' and 'Password:'. A 'Login' button is positioned below the password field. At the bottom of the page, there is a footer with the text 'Copyright 2011 D-Link Corporation / DWC-1000'.

Select the default2 profile and click **Enable** to activate this authentication page. Click **Save Settings** when finished.



The screenshot displays a configuration interface for captive portal profiles. On the left, a sidebar contains a 'Switch Settings' button. The main area features a table titled 'List of Available Profiles' with the following data:

	Profile Name	Status	Action
<input type="radio"/>	default	Not In Use	Show Preview
<input checked="" type="radio"/>	default2	In Use	Show Preview

Below the table, there are four buttons: 'Enable', 'Edit', 'Delete', and 'Add'.

D-Link[®]

www.dlink.com

D-Link, D-Link logo, D-Link sub brand logos and D-Link product trademarks are trademarks or registered trademarks of D-Link Corporation and its subsidiaries.
All other third party marks mentioned herein are trademarks of the respective owners.

Copyright © 2013 D-Link Corporation. All Rights Reserved.