

# Wireless Aware Smart Switching System



## Configuration Guide

Business Class Networking

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## Introduction

This document serves as a quick guide to familiarize users with the essential operation of Smart Wireless System (DES-1228P, DWL-3140AP, and Smart Wireless Manager). For detailed functions, please refer to the User Manual of each particular device.

## System Requirement

Suggested Specifications for Smart WLAN Manager installation:

- A PC or Notebook with an installed network adapter
- Supported OS: Windows® 2000 or XP
- DHCP server is required

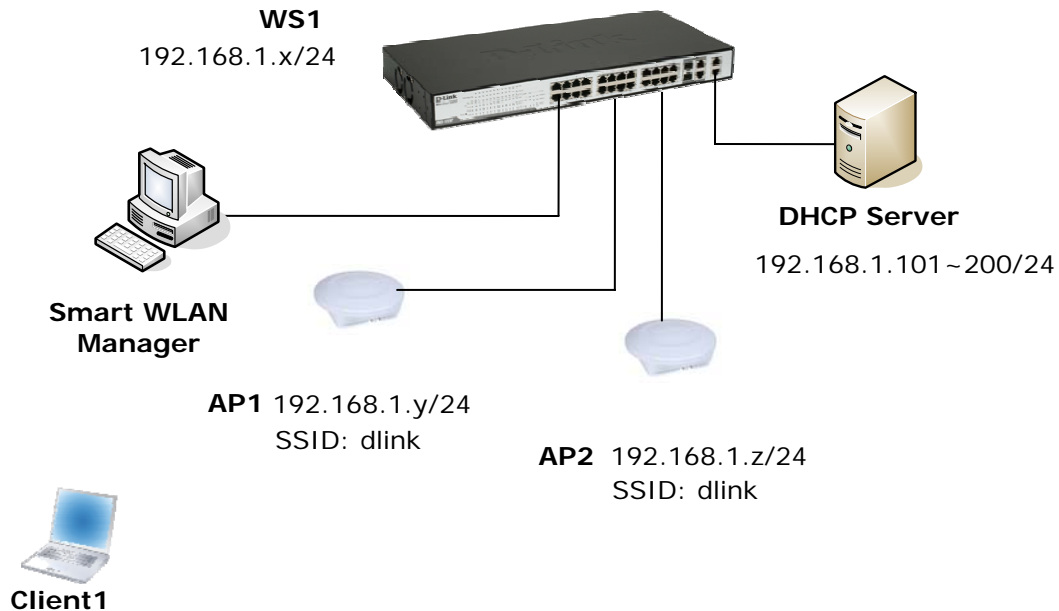
**Note:** The performance of a wired connection is better than a wireless connection for each computer running WLAN Manager. It is recommended to use the wired connection to manage the Access Point.

## Scenario 1 - Basic Setup

The diagram below shows a very basic L2 edge network configuration with one DES-1228P smart switch and two DWL-3140AP access points. All devices are in the same L2 domain, and a DHCP server needs to be in the network.

The objectives in the setup procedure are as follows:

- Understand the minimum configuration for operation
- Discover the switch and APs
- Understand the essential D-LINK Unified Access Point features.



An overview of the configuration steps needed for Smart Wireless System is as follows:

1. Enable the wireless awareness function on DES-1228P
2. Discover the switch and APs.
3. Save the configuration.
4. Perform tests.

The table below provides IP addresses used in this scenario. The following steps will guide you through the configuration of the Wireless Switch and the Access Point.

Device	Subnet
Wireless Switch	192.168.1.x/24
AP1	192.168.1.y/24
AP2	192.168.1.z/24
DHCP Pool	192.168.1.100~199/24

To begin the Wireless Switch configuration, connect APs to port 9 and 17 (or any other unused ports). Continue to connect from a PC that has the Smart Wireless Manager installed and on the same subnet (192.168.1.0/24) to port 1 (or any other unused port).

### **1.1 Enable the Wireless Awareness Function**

1. Launch the Smart WLAN Manager (no default password). Choose Tools>Switch Discover Utility or directly press the icon, and the Discovery List window will appear:

MAC Address	IP Address	Protocol Version	Product Name	System Name	DHCP	Lo
00179a523836	192.168.1.100	2.001.003	DES-1228P	... SW_1	enable	

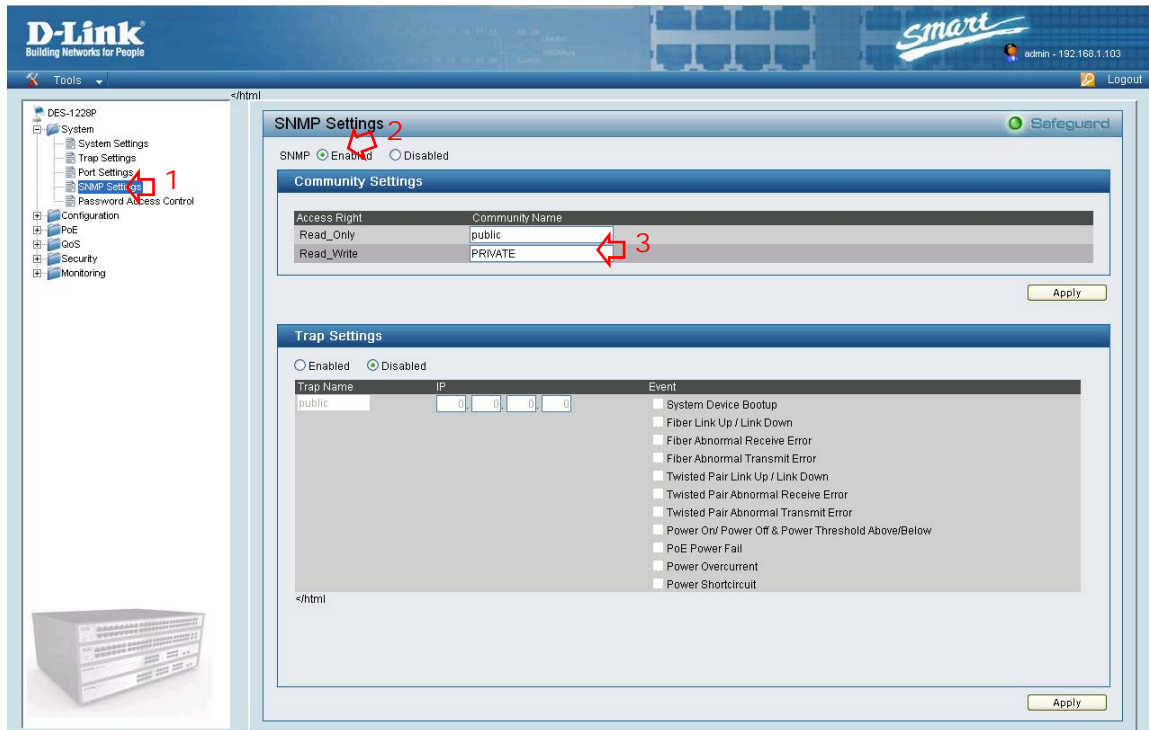
2. Launch your web browser and connect to DES-1228P by the IP address found (default password: **admin**). Make sure the firmware version of DES-1228P is at least 1.20.03.

<b>Device Information</b>	
Device Type	DES-1228P
Firmware Version	1.20.03
Protocol Version	2.001.003
MAC Address	00-17-9a-52-38-36
DHCP Client	Enabled <a href="#">Settings</a>
IP Address	192.168.1.101
Subnet Mask	255.255.255.0
Default Gateway	192.168.1.1
Safeguard Engine	Enabled <a href="#">Settings</a>

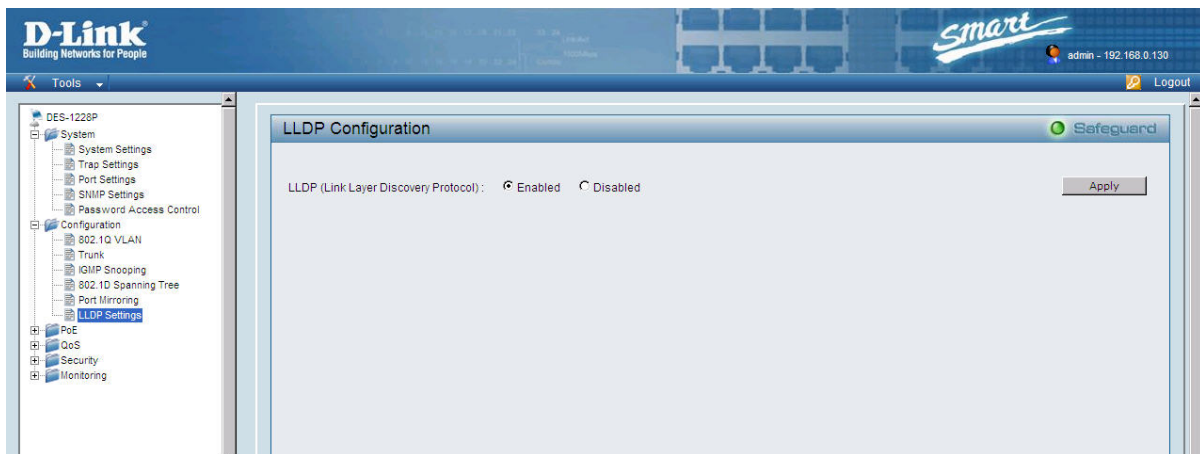
3. To enable SNMP, click the hyperlink on the homepage (or choose System>SNMP Settings), make sure the read\_write community name is set to “private”, and then enable the function.

System Name	
System Location	
Login Timeout (minutes)	5
System Up Time	0 days 0 hours 21 mins 21 seconds
802.1D Spanning Tree	Disabled <a href="#">Settings</a>
Port Mirroring	Disabled <a href="#">Settings</a>
Broadcast Storm Control	Disabled <a href="#">Settings</a>
IGMP Snooping	Disabled <a href="#">Settings</a>
SNMP Status	Disabled <a href="#">Settings</a>
802.1x Status	Disabled <a href="#">Settings</a>

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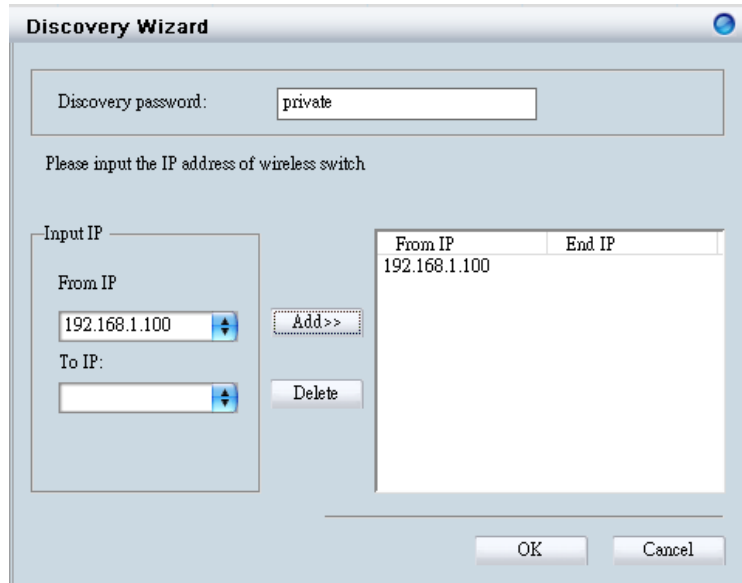


4. Enable LLDP on the DES-1228P switch. To do that in the menu on the left go to *Configuration > LLDP Settings*. Select “Enabled” and click Apply.

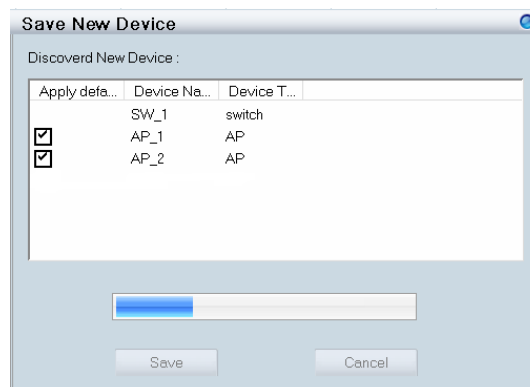


## 1.2 Discover the switch and APs

1. On the Smart WLAN Manager, choose Tools>Discovery Wizard, fill in the Discovery password with the SNMP Read\_Write Community Name “private”, and the IP of DES-1228P:

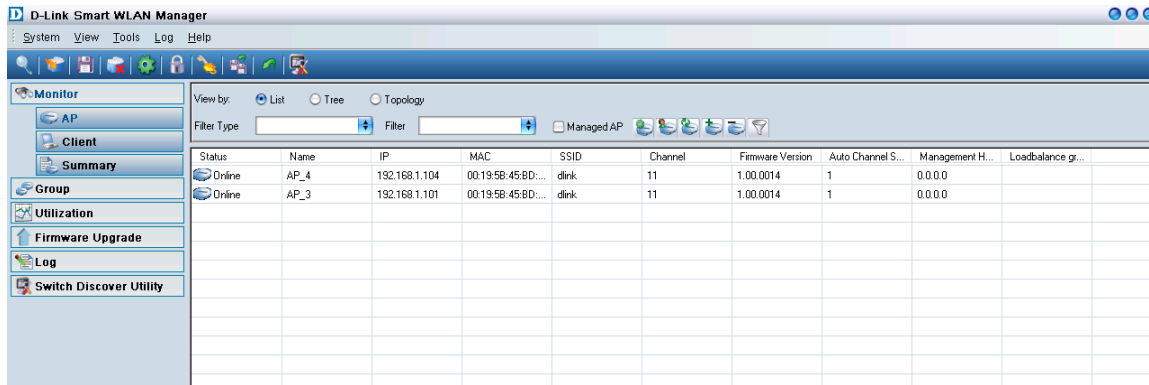


2. Press “OK” to scan the IP address range, and notice the scanned results when they appear as shown in the table below:



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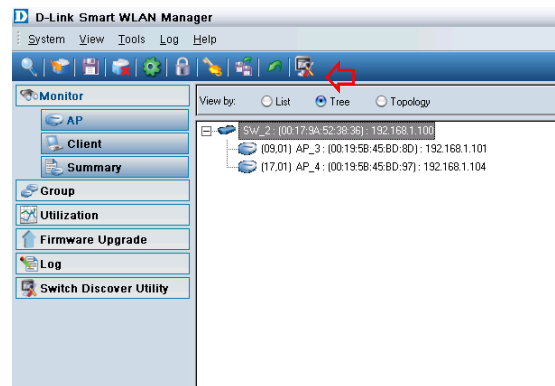
3. Click “Save” to add the devices found into the database. This will include the basic information of managed APs including *IP address*, *MAC address*, *SSID*, and *channel* as listed below:



The screenshot shows the D-Link Smart WLAN Manager interface with the 'Monitor' tab selected. The 'View by' dropdown is set to 'List'. A table displays the following data:

Status	Name	IP	MAC	SSID	Channel	Firmware Version	Auto Channel S...	Management H...	Loadbalance gr...
Online	AP_4	192.168.1.104	00:19:58:45:8D:...	dlink	11	1.00.0014	1	0.0.0.0	
Online	AP_3	192.168.1.101	00:19:58:45:8D:...	dlink	11	1.00.0014	1	0.0.0.0	

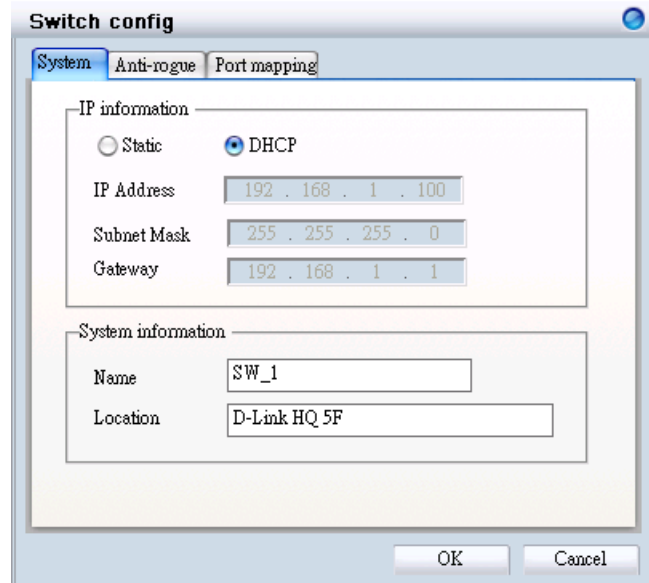
4. Change to view the tree structure to list the wireless switch and APs. This will also show which physical port the APs are connected to the wireless switch:



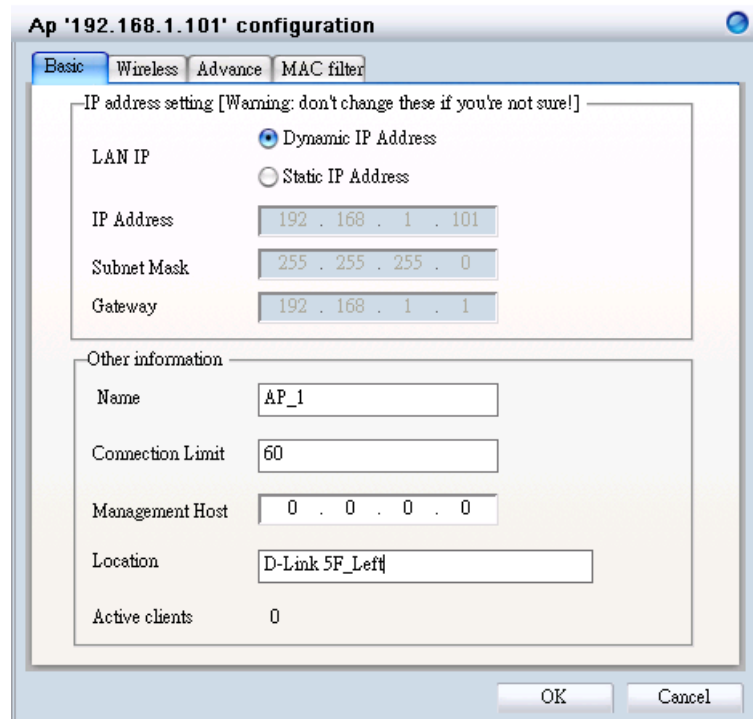


### 1.3 Basic Configuration

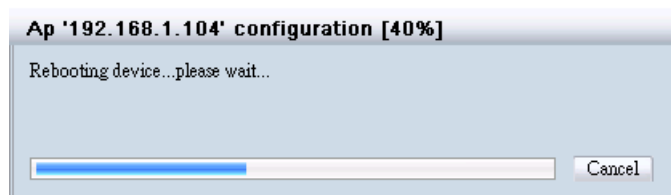
1. Double-click the switch entry, and the configuration window will appear. Click “OK” if any change is made.



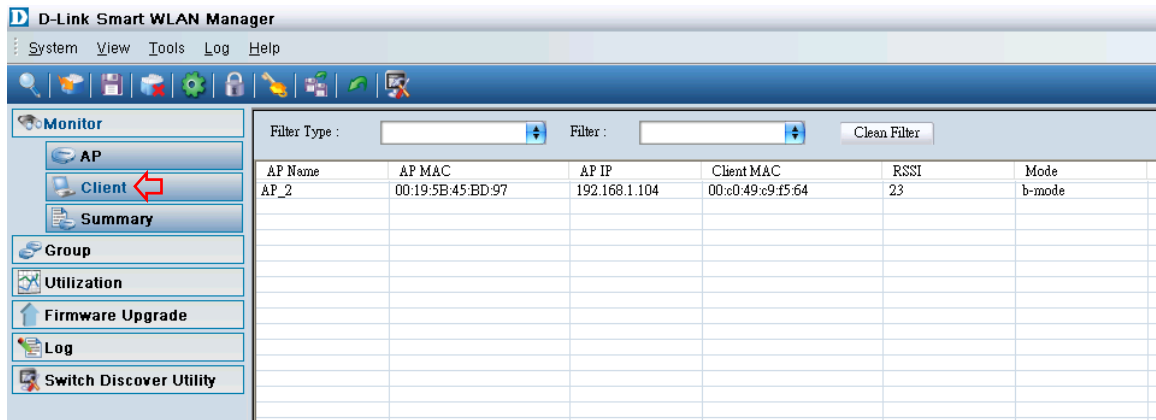
2. Double-click the AP entries, and the configuration window will appear. Click “OK” if any change is made.



The AP will reboot after the modification is made.



3. Use a wireless terminal (e.g. Laptop or PDA) to connect the SSID “dlink”; Select Monitor>Client and the client information will be shown as below:



The screenshot shows the D-Link Smart WLAN Manager interface. The title bar reads "D-Link Smart WLAN Manager". The menu bar includes "System", "View", "Tools", "Log", and "Help". Below the menu bar is a toolbar with various icons. On the left side, there is a "Monitor" section with a tree view containing "AP", "Client" (highlighted with a red arrow), "Summary", "Group", "Utilization", "Firmware Upgrade", "Log", and "Switch Discover Utility". The main area displays a table of client information with the following columns: AP Name, AP MAC, AP IP, Client MAC, RSSI, and Mode. The table contains one row of data for AP\_2.

AP Name	AP MAC	AP IP	Client MAC	RSSI	Mode
AP_2	00:19:5B:45:BD:97	192.168.1.104	00:c0:49:c9:f5:64	23	b-mode

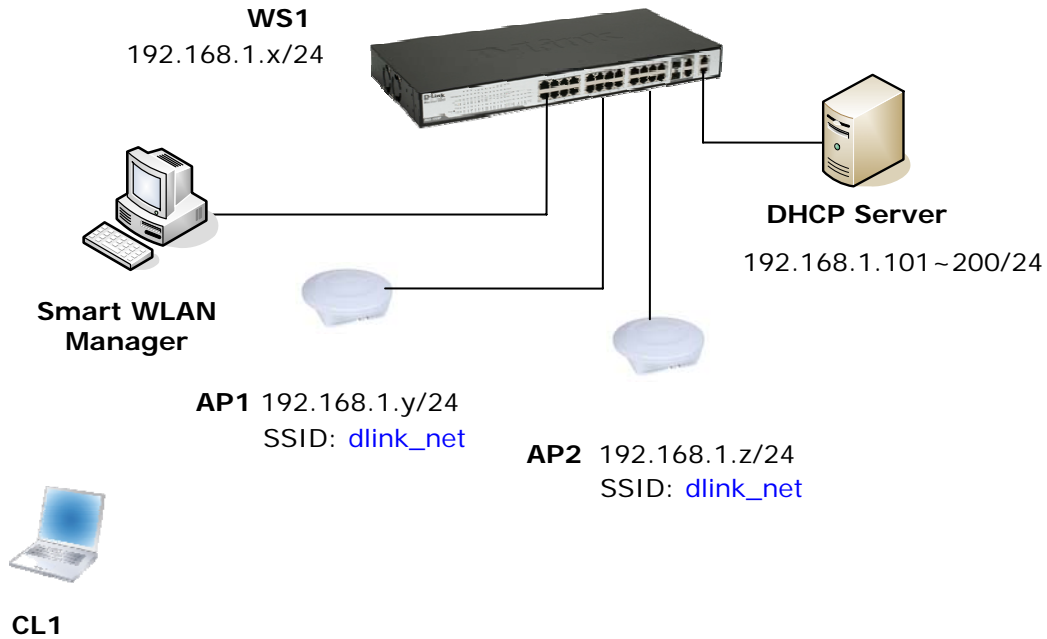
### 1.4 Performance Test

1. Ping AP, Wireless Switch, and the default gateway from the client to test the connectivity.

## Scenario 2 – Advanced Setup

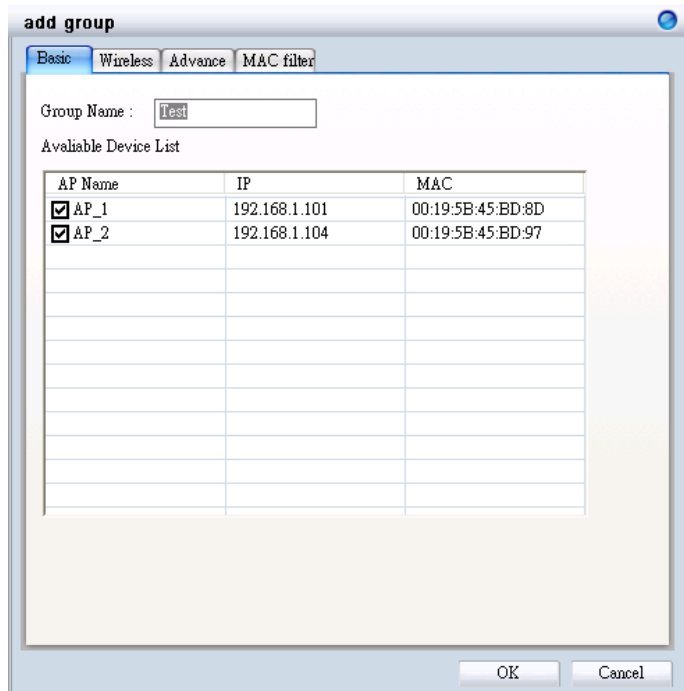
As continued from the previous scenario, this session has the following objectives:

- Understand how to perform the central management for APs by group.
- Understand how to use the topology view



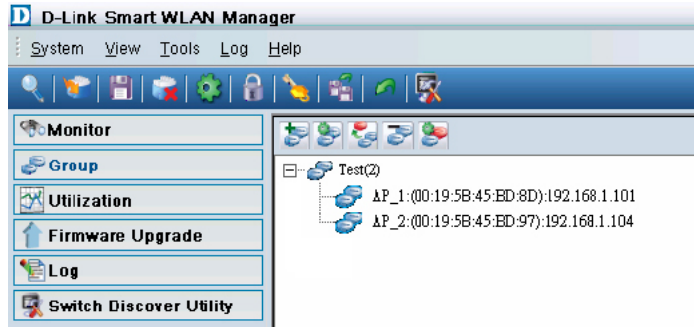
### 2.1 Group Management

1. Change to the “Group” menu, and click the “Add Group” icon, a window will appear. Fill in the group name “Test” and select both APs in the “Basic” tab:

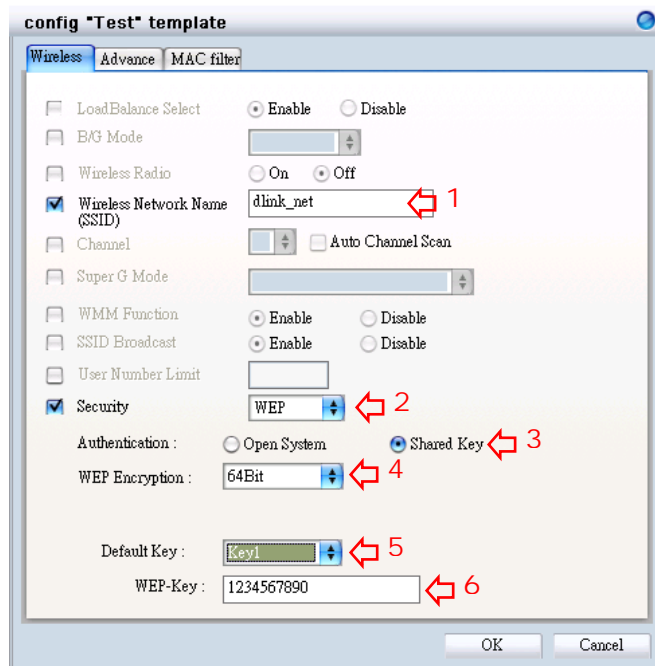


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Press “OK”, and a confirmation message will appear. Click “OK” to confirm the change, and the group view will be shown as below:

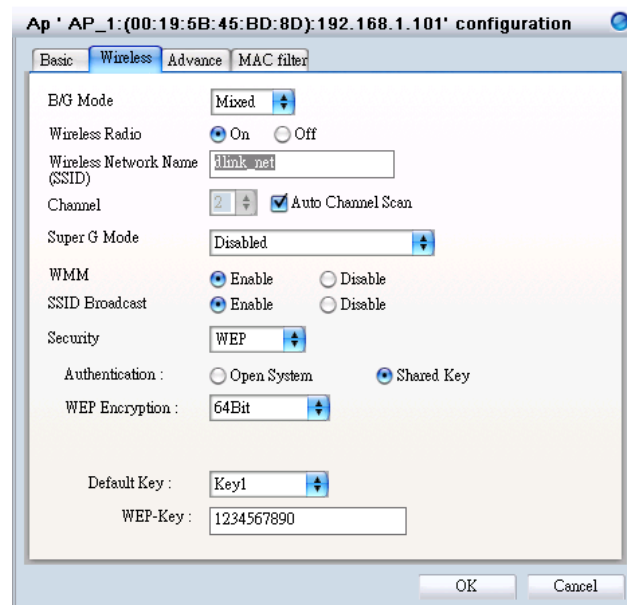


2. Select the “Test” group and click the “Config group template” icon. Check the Wireless Network Name and fill in the new SSID “*dlink\_net*”; change the security setting to *WEP/Shared Key Authentication/64 bit Encryption/Default Key 1: 1234567890*. Click “OK”.



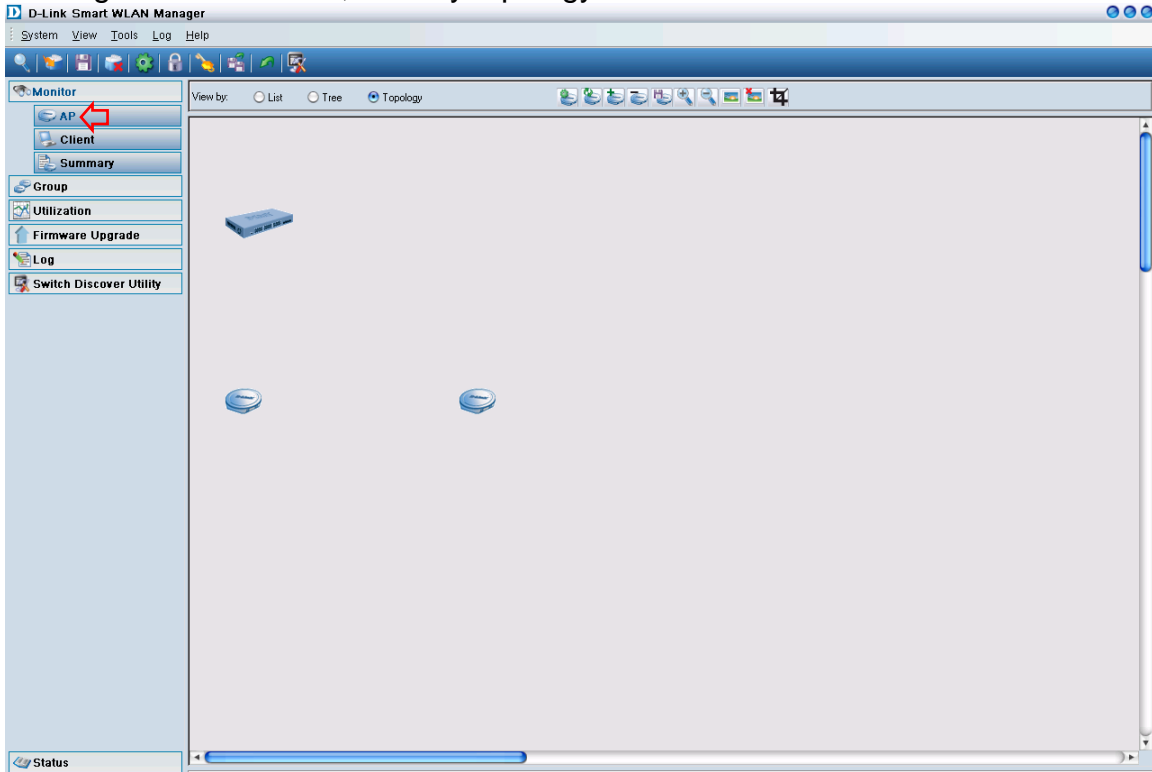
Confirm the change and both APs will reboot.

3. Right click on an AP and choose “configuration”. Select the “Wireless” tab and all changes from the template will have been applied to the AP.

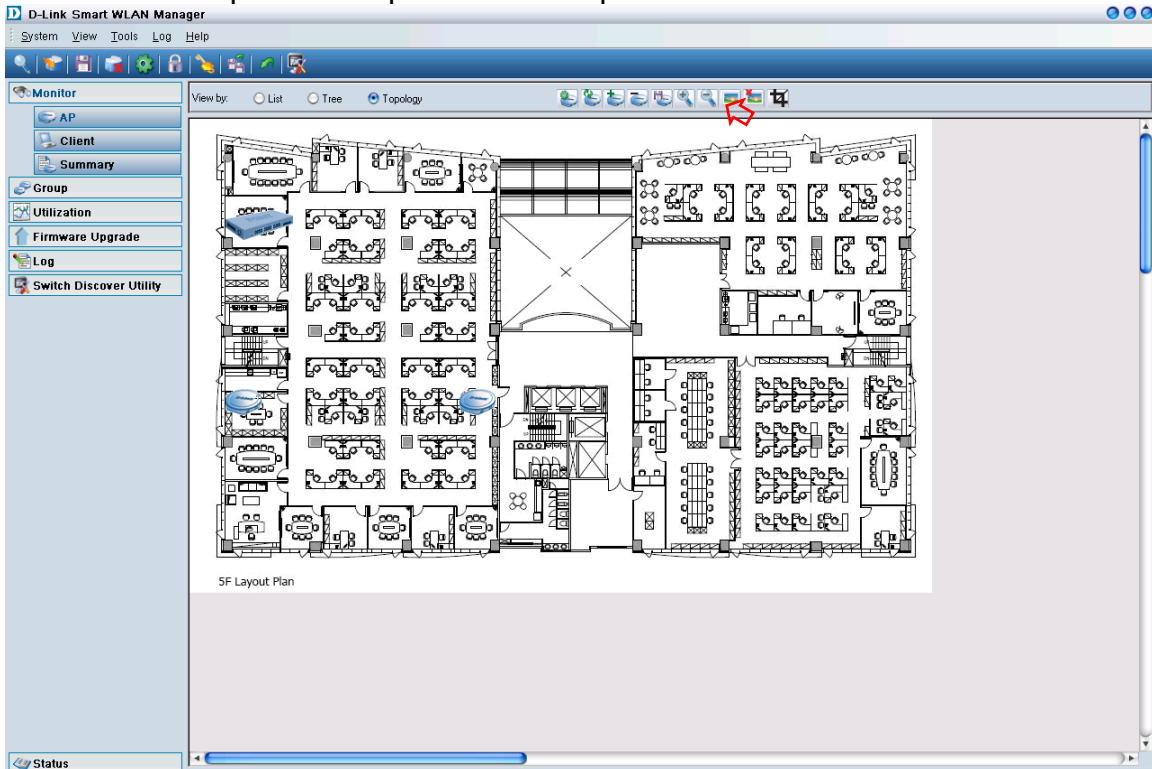


## 2.2 Topology View

### 1. Change to Monitor>AP, view by topology

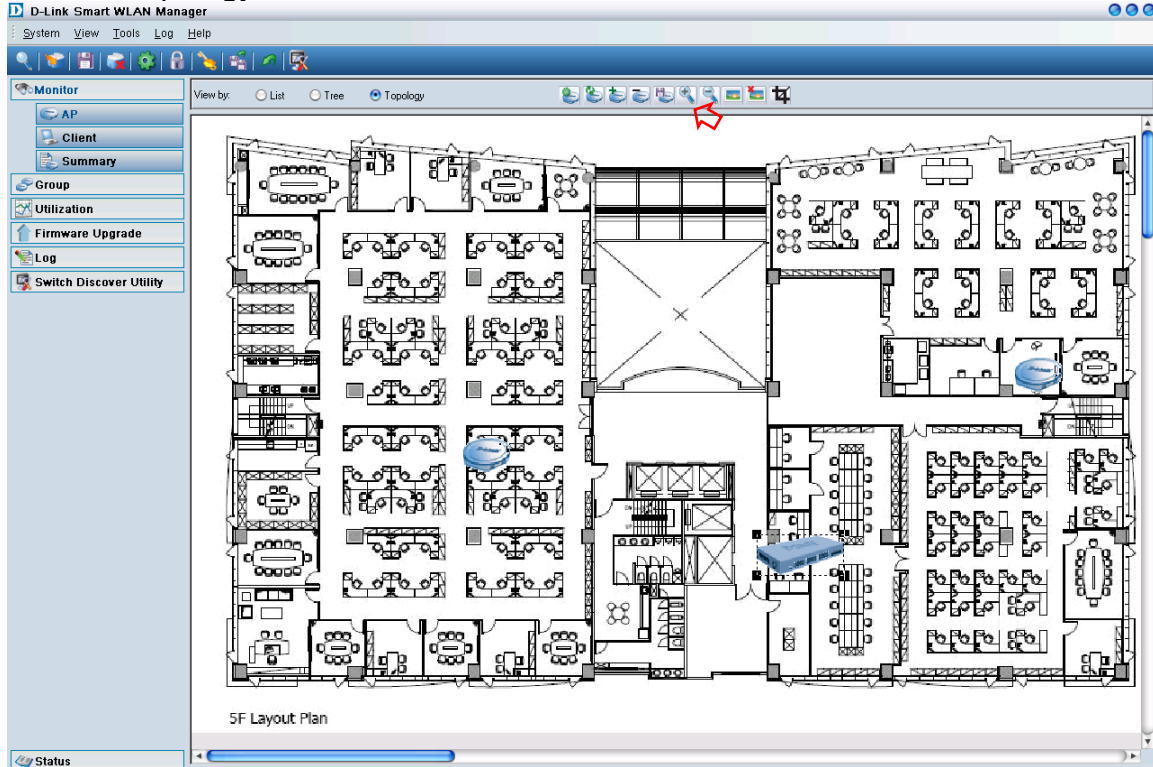


### 2. Click "Load Map" icon to upload the floor plan file.

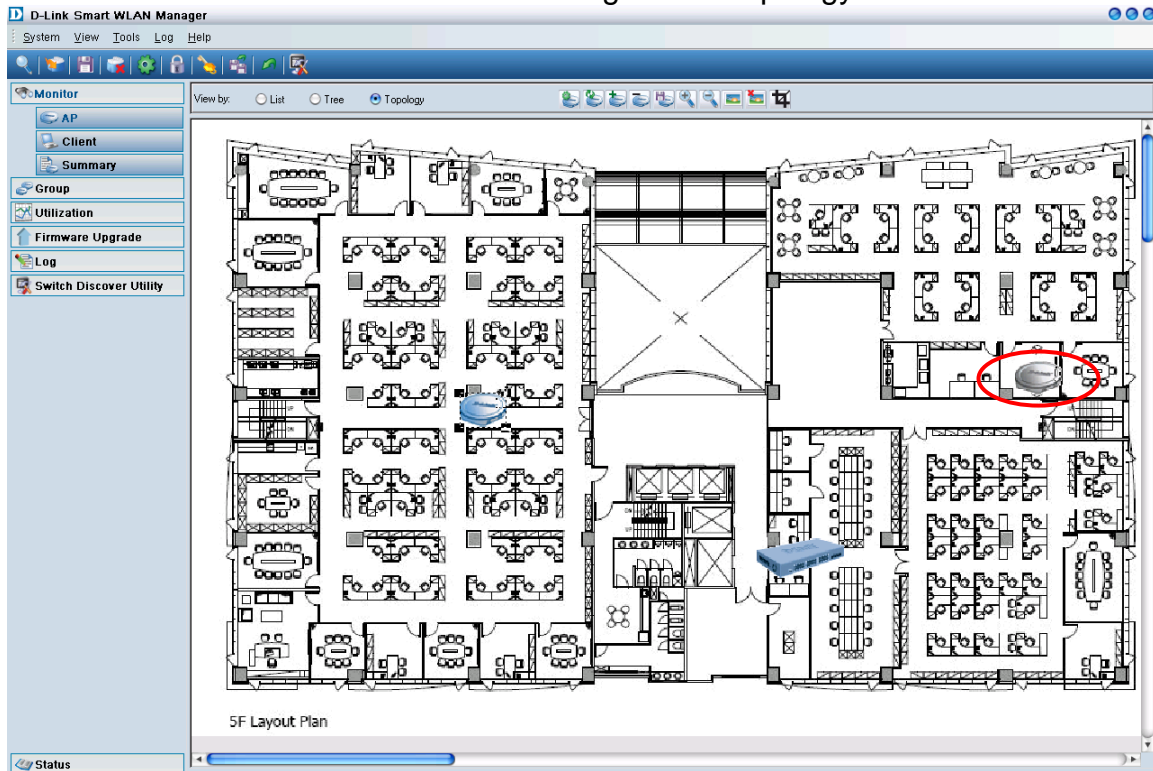


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3. Zoom-in on the floor plan and drag the icons to the proper position. Click the “Save Topology Position” icon.

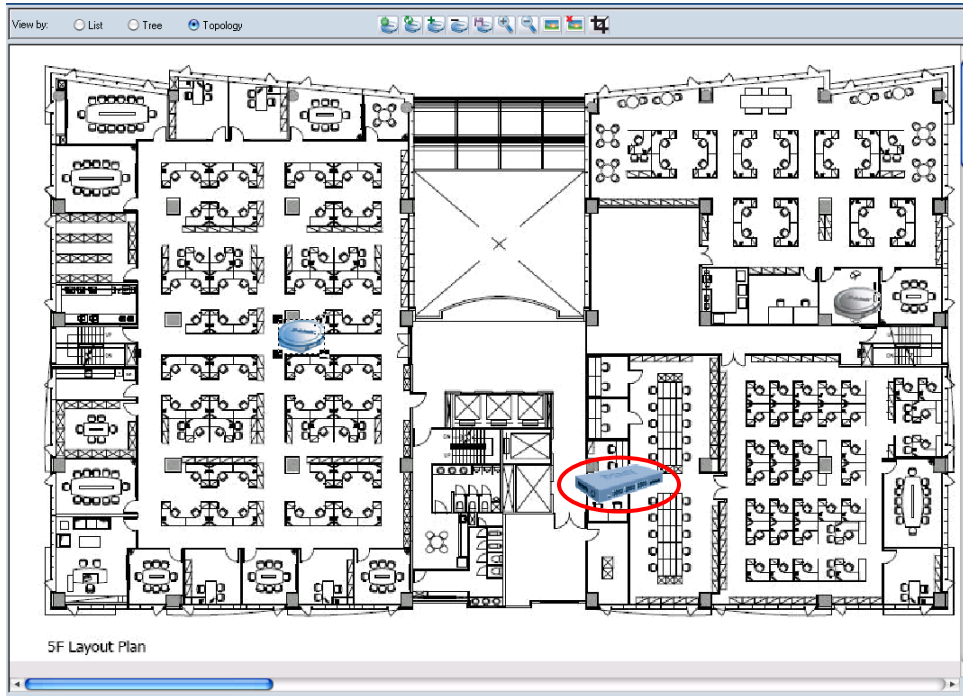


4. Disconnect an AP and observe the change in the topology view.

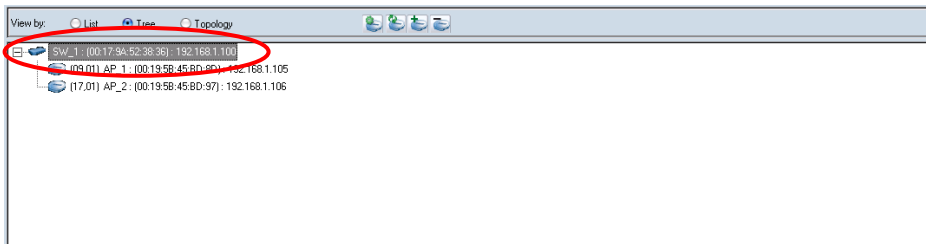


## 2.3 Configuring the Anti-Rogue AP

1. Before configuring the Anti-Rogue AP function, decide which switch and ports will become the wireless ports. Once this function is enabled on a port, the switch will check the AP with the system key to determine whether it will be authenticated or denied. Only the DWL-3140AP with the correct system key can connect to the switch.



2. Select the switch from tree or topology view



3. Configure the Anti Rogue function in the “Anti-Rogue” tab. Select the “From” port, “To” port, and “Enable” the control so that it is active. Press the “Apply” button.

