

# Managing Small Office WLAN

## An Ideal Solution from D-Link®

### Solution Brief

March, 2009

#### Abstract

The deployment of wireless local area network (WLAN) in a small office environment is often hindered by the lack of simplicity, stability and affordability. Multiple access points (APs) will require more effort in configuration and management, and the complexity of security settings adds to the burden. With limited resources in a small office, solutions provided for bigger organizations will be too complicated and not economical.

This solution brief introduces to you the D-Link® AP Array which is a purpose-built WLAN management tool for the small office. It is built in the firmware and its configuration is effortless. All AirPremier 11n APs support this tool, which can manage up to 8 fat APs. This will make effective WLAN deployment affordable and simple to achieve.

## > Simple WLAN Management for Your Small Office

In a small office where there are limited resources, to set up an efficient wireless local area network (WLAN) will require some considerations in terms of easy deployment and management, network stability and budget constraints.

There will be multiple APs to be configured and managed, and the complexity of security settings will have to be taken into account as well. Solutions provided for bigger organizations will not be ideal options, due to the costs and more complicated requirements.

You will thus need a WLAN management tool which is suitable for a small office environment.

## > The WLAN Management Tool for Small Office - D-Link® AP Array

D-Link® AP Array is a purpose-built WLAN management tool developed for the small office environment. It is a free software tool **built in** D-Link 11n business APs, so no extra software or PC is required.

AP configuration and management are made easy through **Web GUI**, and D-Link® AP Array also provides a single point of administration that lets you view the deployment of APs as a single wireless network rather than a series of separate wireless devices. Once settings are configured on a single AP, all other APs in the same array will sync up and automatically match the new configuration. This eliminates the need to manage each AP individually.

## > Easy Deployment and Management

With D-Link® AP Array, deployment and management of APs are made simple. The following steps show how straightforward it is to deploy the array of APs:

### Step 1 – Deployment of Master AP:

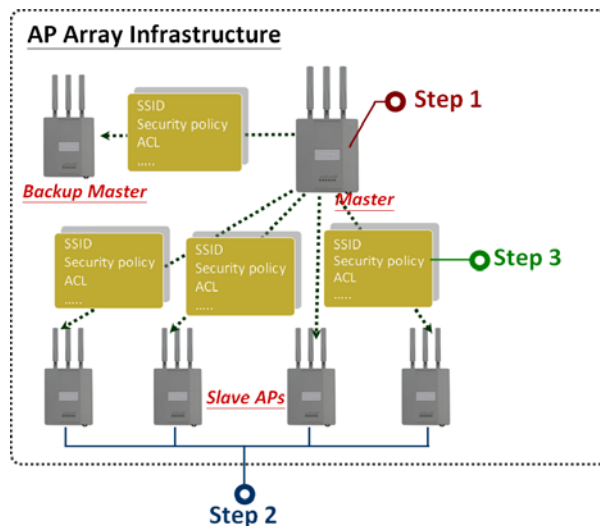
- Designate 1 AP as Master
- Set up Array ID & password
- Configure the AP

### Step 2 – Deployment of Slave APs:

- Specify Array ID & password of Master in Slave APs.

### Step 3 – Settings Are Synchronized:

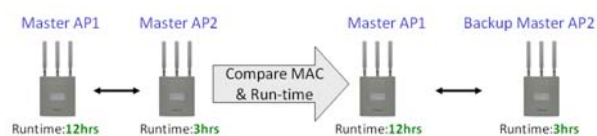
- Backup Master & all Slave APs will follow configuration from Master automatically.



Up to 8 fat APs can be managed in an array, and they have to be of the same model.

### Situations Encountered with the Different Implementations:

- **Multiple Master APs:** If there are 2 or more Master APs started in an array, the AP with the longest run-time will become the Master AP and others will be Backup Master APs.



- **Manually Configured Slave AP:** At intervals of 1 minute, the Master AP will send out a beacon to check the status of the Slave APs. If any of the APs is down or has any manual configuration done to it, the Master AP will automatically synchronize its configuration to that AP.
- **Master AP Crashed:** In a situation where the Master AP crashed, the Backup Master AP will take over the Master role and synchronize the configuration to the Slave APs.



- **No Backup Master AP Available:** If the Master AP crashed and there are only Slave APs in the array, the Slave APs will work as standalone APs until a new Master joins the array. (The administrator may want to configure 2 Master APs for the array, so that there will be a Backup Master AP available.)

## > Synchronization of Settings

The Master AP in an array will automatically synchronize its configuration to all Slave APs, whenever the user makes any changes in the Master AP and apply "Save & Activate".

Settings that can be synchronized are:

- Wireless Settings
- Multiple SSID & VLAN
- WiFi Schedule
- MAC Filter
- WLAN Partition
- DHCP Server
- Log Settings
- Time & Date
- QoS Settings
- Performance Settings
- All Administrator Settings

Settings that are not synchronized are:

- Operation Mode
- Radio Channel
- LAN Settings

Settings that are not synchronized have to be configured individually for each AP, if required.

## > Different AP Roles in an Array

There are 3 modes for the administrator to define the role of each AP.

- **Master AP**  
The Master AP can do all the management settings for members in an array. Each array can only have one Master AP.
- **Backup Master AP**  
In an event when the Master AP crashed, the Backup Master AP will take over the Master AP function. Each array can have multiple Backup Master APs.

- **Slave AP**  
The Slave AP follows all the settings in the Master AP.

## > Easy Configuration of D-Link® AP Array

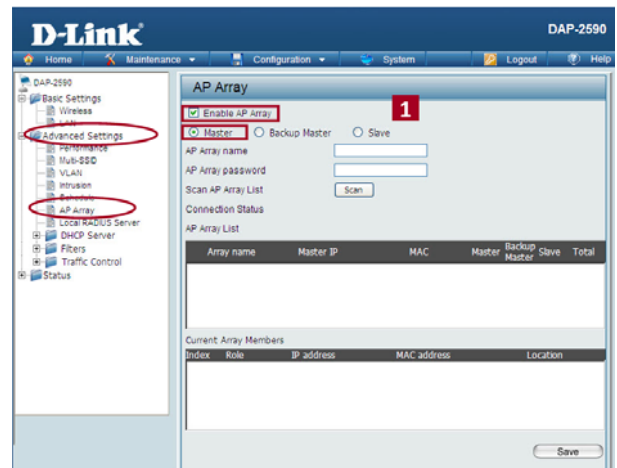
The following section shows how simple it is to configure D-Link® AP Array for the different AP roles:

### Master AP Role

Click **Advanced Settings > AP Array** to view and edit the information on the AP in an array.

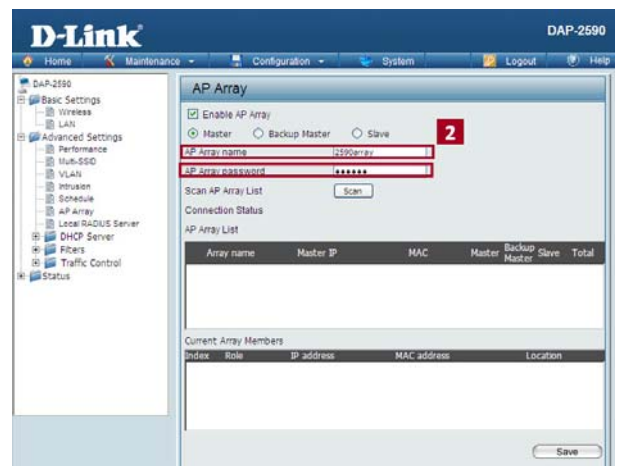
### Step 1:

Click **Enable AP Array** and select the **Master role**.



### Step 2:

Set up the AP Array **name** and **password**.

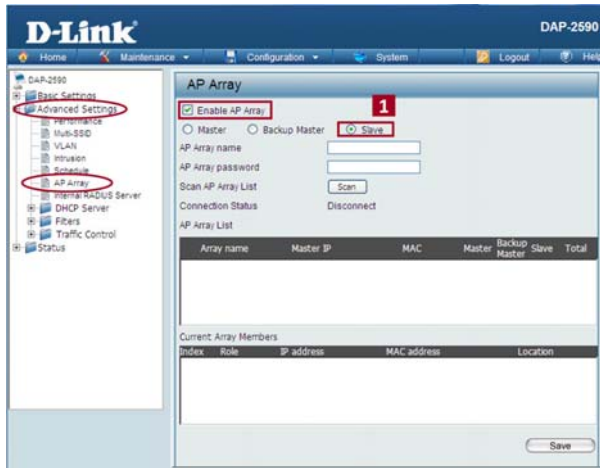


### Slave AP Role

Click **Advanced Settings > AP Array** to view and edit the information on the AP in an array.

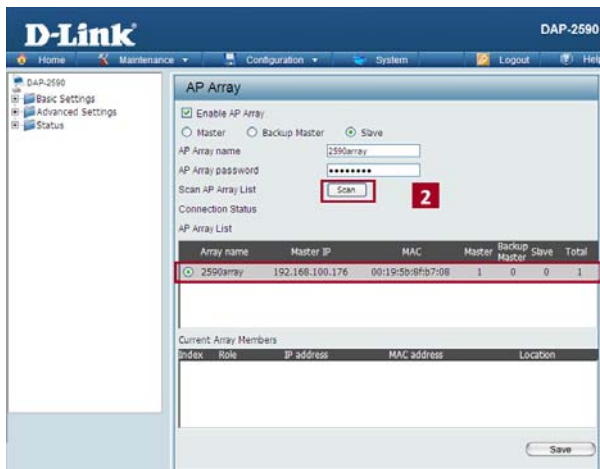
#### Step 1:

Click **Enable AP Array** and select the **Slave role**.



#### Step 2:

Click **Scan** button to search the existing array, and enter the array password to join it.



## > Supported in All D-Link 11n Business APs

D-Link® AP Array is supported in all D-Link 11n business APs:



DAP-2590



DAP-2553



DAP-3520



DAP-1353 (\*H/W B only)

\* Please refer to your local D-Link website for any new models of D-Link 11n business APs.

## > D-Link® AP Array - Your Office's Reliable WLAN Management Tool

When you need a reliable WLAN management tool for your small office, the D-Link® AP Array will be the ideal choice to provide you with the simplicity to configure and manage the array of APs. Being a free software module that is built in D-Link 11n business APs, it eliminates the need for an extra software or PC.

With auto-synchronization, it will mean that configuration will only need to be done on the Master AP, and it will automatically be synchronized to the Slave APs.

As AP configuration and management are done through Web GUI, you will be able to view the deployment of APs as a single wireless network rather than a series of separate wireless devices.