

User Manual

AP Manager II Lite Business Class Networking

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Product Overview

AP Manager II Lite is a convenient software tool used to manage the configuration of your wireless network from a central computer. With *AP Manager II Lite* there is no need to configure devices individually.

AP Manager II Lite allows you to configure AP settings, update the firmware, and organize and sort your APs into manageable groups.

Minimum System Requirements

For best results, the following minimum requirements are recommended on any system used to configure a router:

- Computer with: 1Ghz processor / 512MB RAM / 200MB available space / CD-ROM drive
- Windows® XP (with Service Pack 2), Windows Vista®, Windows® 7

Access Point Requirements

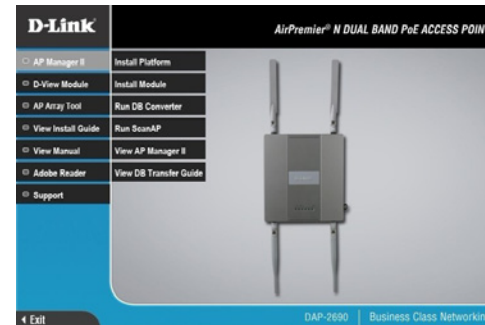
- SNMP must be enabled on access points used with *AP Manager II Lite*.

Installation

To install the *AP Manager II Lite*, insert the CD into your CD-ROM drive.

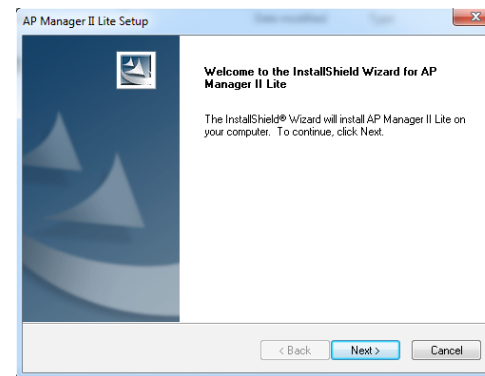
Step 1 - When the autorun screen appears, click **Install Platform**.

Note: *Windows Firewall* presents you with a warning message to unblock the device. Click **Unblock** to give your computer access to the installation process.



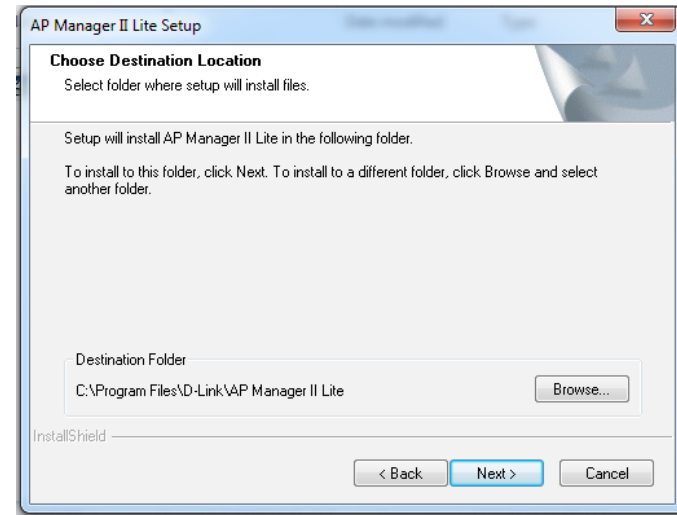
Step 2 - The *Installation* window appears.

Click **Next** to continue.



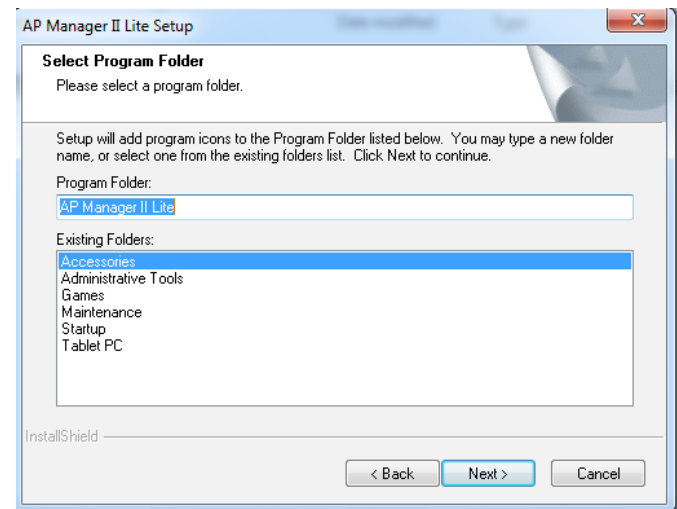
Step 3 - Select the installation location.

Click **Next** to continue.



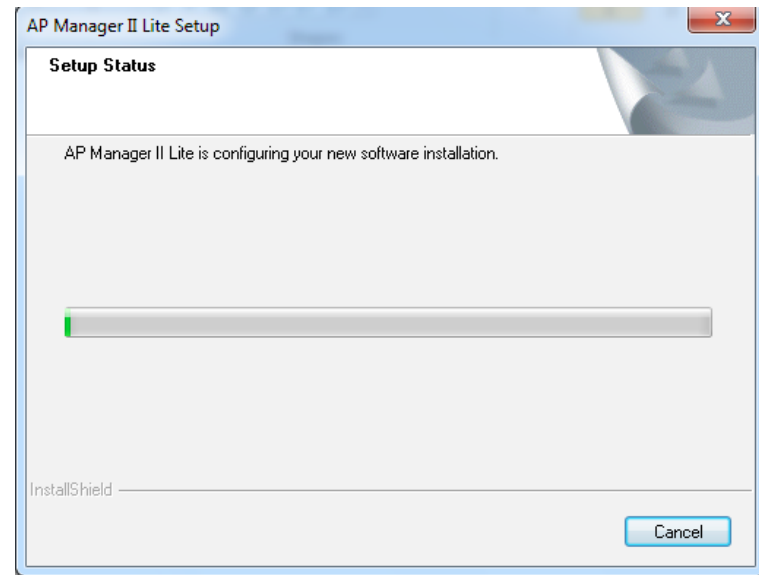
Step 4 - Select the Program Folder.

Click **Next** to continue.

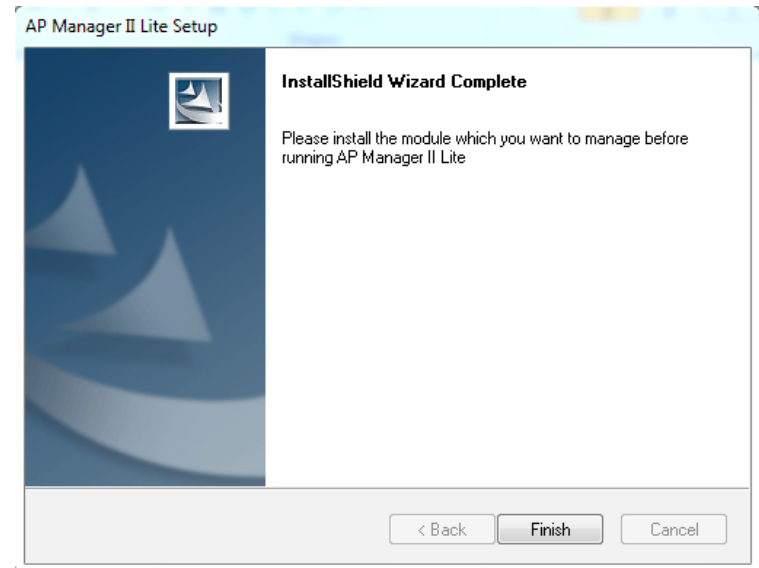


Step 5 - Installation begins.

Please be patient while the installation process takes place (a matter of seconds).



Step 6 - Click **Finish** to exit the Wizard.

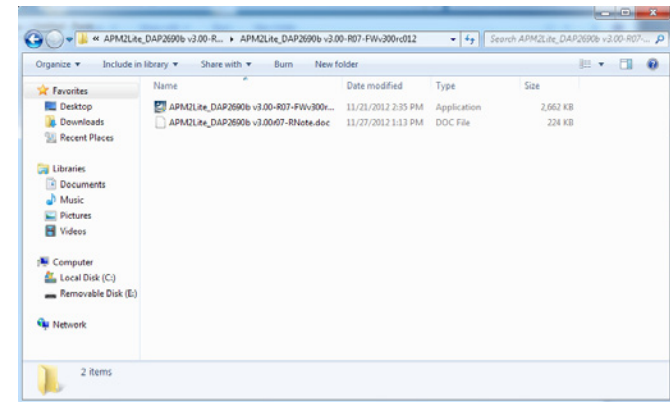


Section 3 - Installation

Step 7 - An *AP Manager II Lite* icon will appear automatically on your desktop. Before you click the icon to start the program, install the module.

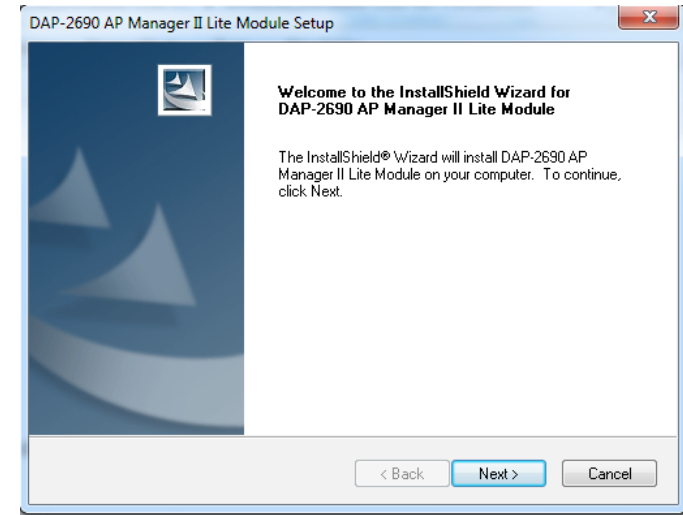


Step 8 - Browse the location where you have the module. Double-click the module to install it.



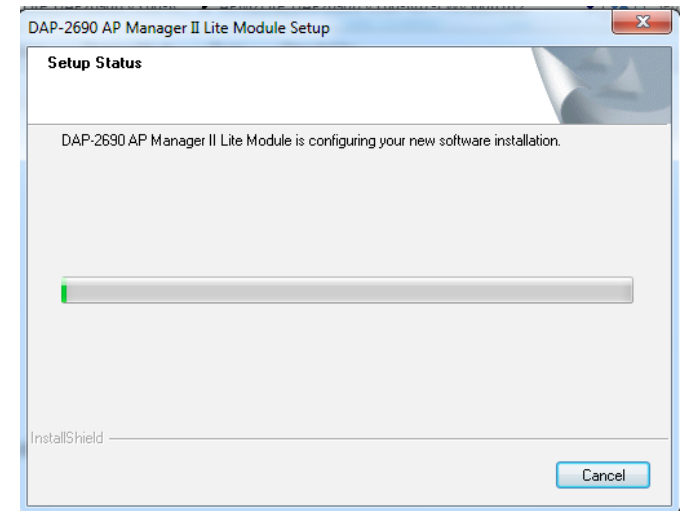
Step 9 - The module Wizard for the DAP-2690 AP Manager II Lite will begin.

Click **Next** to continue.

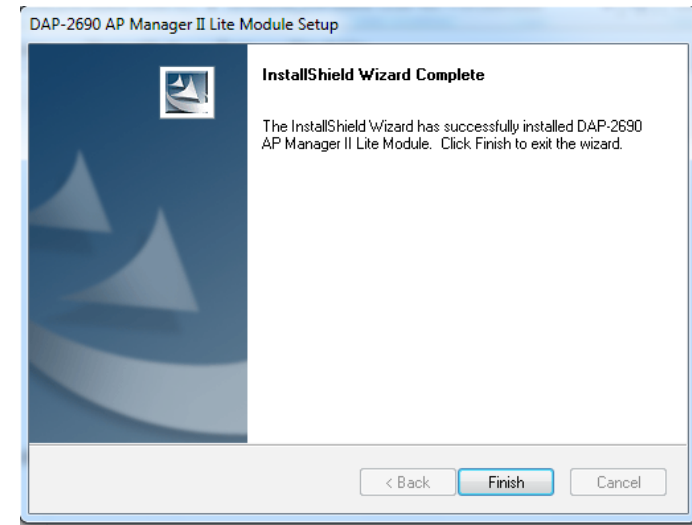


Step 10 - The wizard will install the module momentarily.

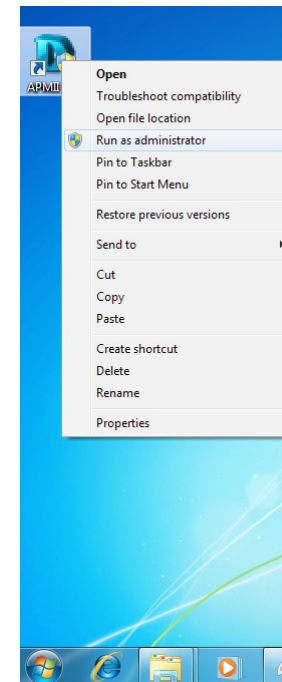
Click **Cancel** if you wish to exit, otherwise wait for the installation process to complete.



Step 11 - Click **Finish** to close the wizard.



Step 12 - Right-click the icon and click **Run as administrator**.



Step 13 - Enter the **User Name** and **Password** at the login screen.

Click **OK** to continue.



Step 14 - If you have entered the login details incorrectly, the software will warn you and prompt you to enter the correct information.

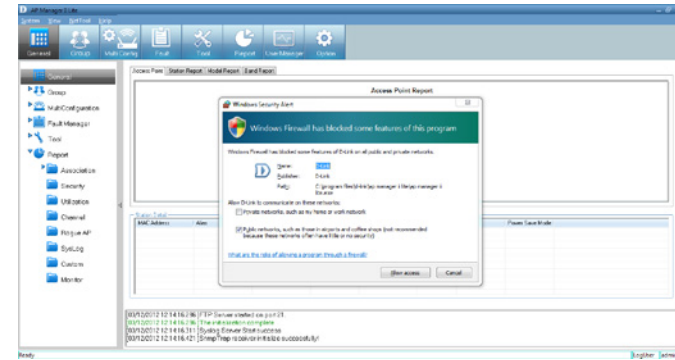
Click **OK** to continue and enter the correct details.



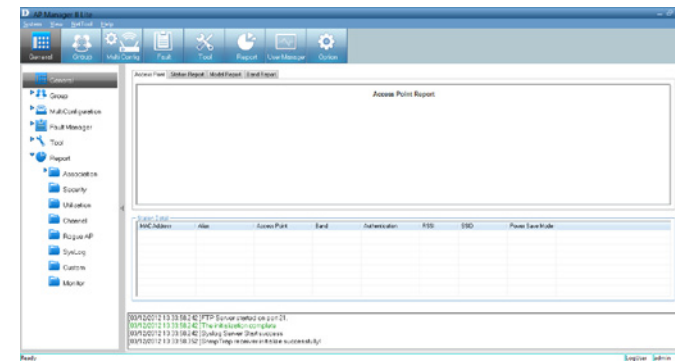
Section 3 - Installation

Step 15 - Windows Firewall will block the program if you do not provide it access.

Click the **Allow access** button to continue.



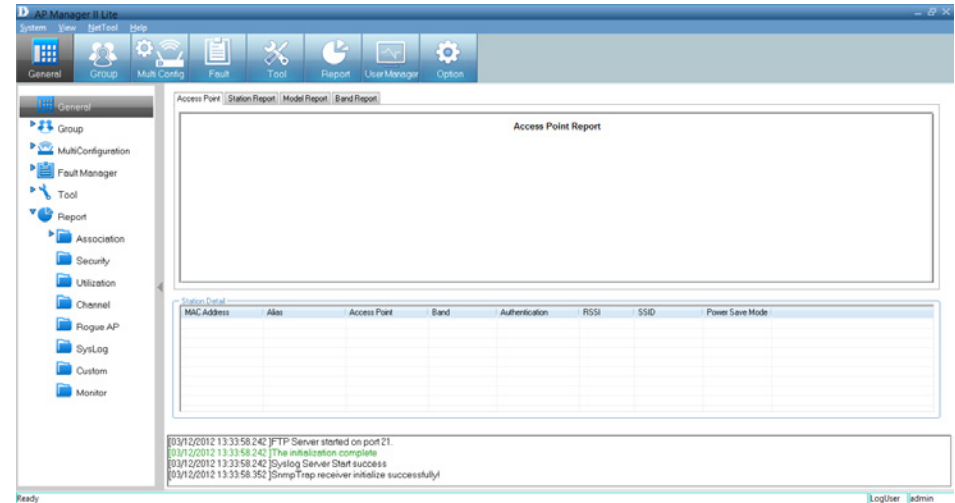
This completes the installation process for the main software. You are now presented with the *AP Manager II Lite* main control panel.



AP Manager II Lite

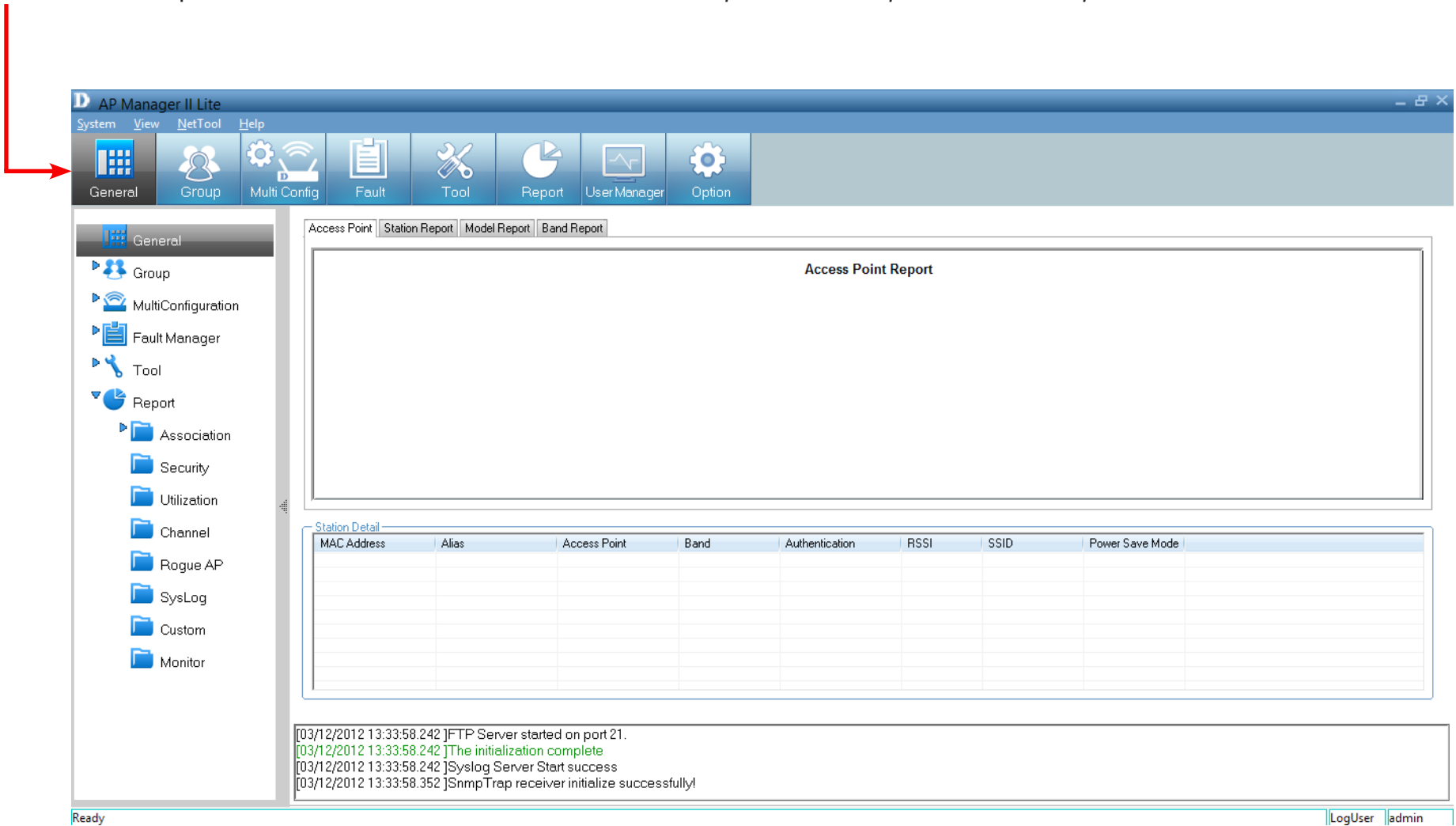
Launch the *AP Manager II Lite* by clicking:

1. Start Menu
2. Select Programs
3. Select D-Link *AP Manager II Lite*
4. Select *AP Manager II Lite*



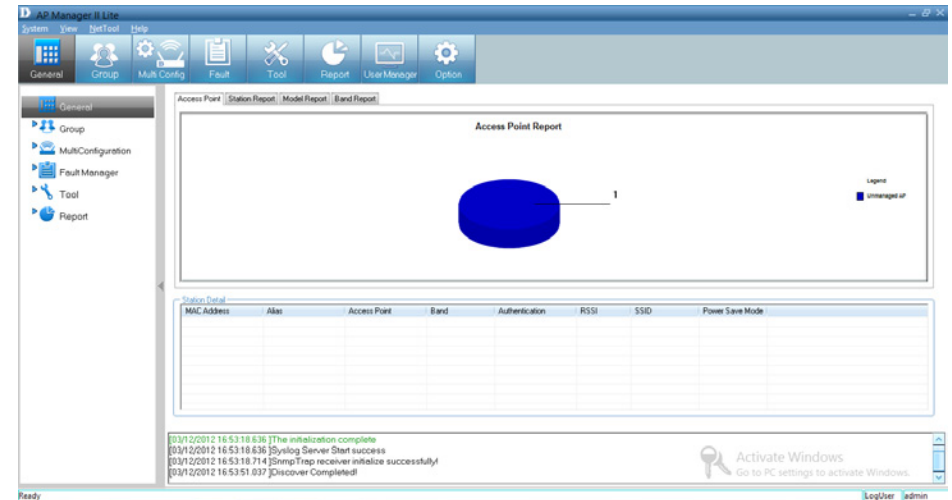
Control Panel

The *Main Control Panel* has eight key configuration Windows. *General*, *Group*, *Multi Config*, *Fault*, *Report*, *User Manager* and *Option*. The *General* window offers simple data information on the *Access Point*, a *Station Report*, a *Model Report* and a *Band Report*.



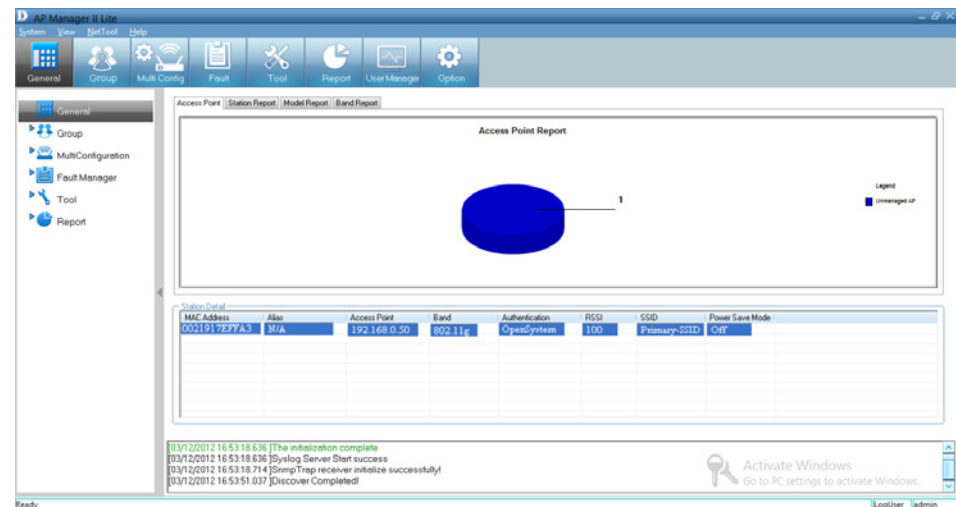
Access Point Report

The *Access Point Report* shows the discovered AP's. Access points are divided into *Managed Access Points* and *Unmanaged Access Points*. The *Managed APs* are listed in the *Station Detail* table below the *Access Point Report*.

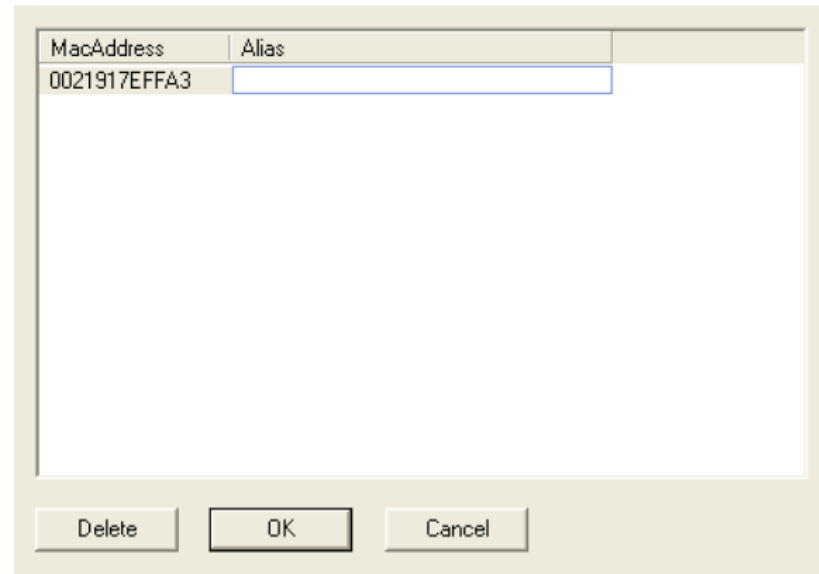


The *Station Detail* table lists the *MAC Address*, *Alias*, *Access Point*, *IP Address*, *Band*, *Authentication type*, *RSSI*, *SSID* and *Power Save Mode* of all stations connected to the *Managed APs*.

Remove an access point from the list by right-clicking it and selecting **Kick Off**.



Create an *Alias* by right-clicking the access point and selecting **Alias**. In the *Alias* management window, type the new name. Click **OK** to continue.

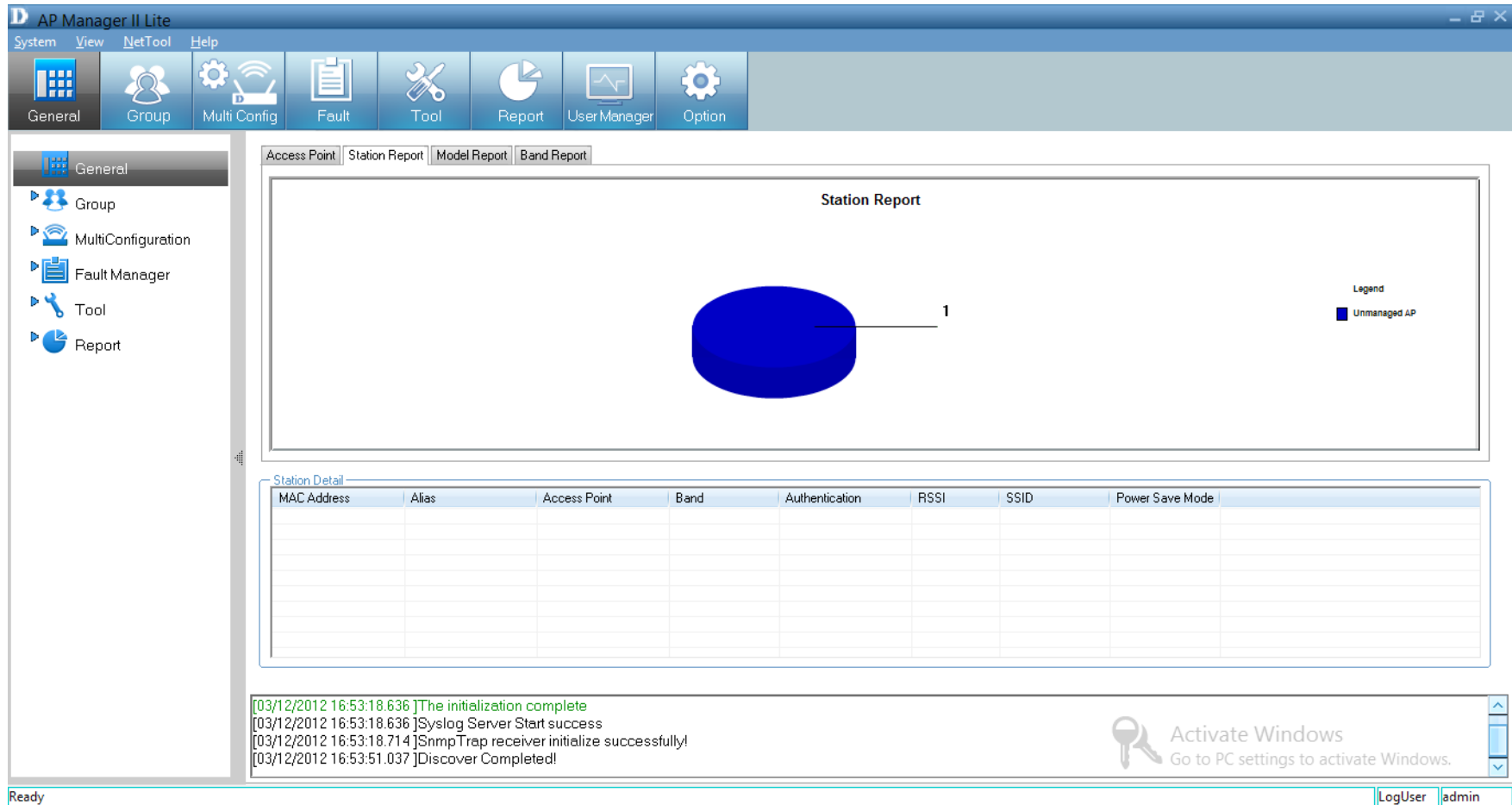


MacAddress	Alias
0021917EFFA3	

Buttons: Delete, OK, Cancel

Station Report

The *Station Report* displays a graphical representation of the associated wireless stations. It classifies the stations by bands and shows the station numbers of every band.



Model Report

The *Model Report* displays a graphical representation of the numerical distribution of models the *AP Manager II Lite* has discovered and is currently managing.

The screenshot shows the 'AP Manager II Lite' software interface. The main window title is 'AP Manager II Lite'. The menu bar includes 'System', 'View', 'NetTool', and 'Help'. The toolbar contains icons for 'General', 'Group', 'Multi Config', 'Fault', 'Tool', 'Report', 'User Manager', and 'Option'. The left-hand navigation pane shows a tree view with 'General' selected, and sub-items: 'Group', 'MultiConfiguration', 'Fault Manager', 'Tool', 'Report', 'Association', 'Security', 'Utilization', 'Channel', 'Rogue AP', 'SysLog', 'Custom', and 'Monitor'. The main content area has tabs for 'Access Point', 'Station Report', 'Model Report', and 'Band Report'. The 'Model Report' tab is active, displaying a 3D pie chart with a single slice labeled '1'. A legend on the right indicates 'DAP-2650'. Below the chart is a 'Station Detail' table with the following columns: MAC Address, Alias, Access Point, Band, Authentication, RSSI, SSID, and Power Save Mode. The table is currently empty. At the bottom, a log window shows the following messages:

```
[04/12/2012 07:59:12.939 ]The initialization complete
[04/12/2012 07:59:12.939 ]Syslog Server Start success
[04/12/2012 07:59:13.017 ]SnmpTrap receiver initialize successfully!
[04/12/2012 07:59:34.962 ]Device: 192.168.0.50 SNMP Ping TimeOut
```

The status bar at the bottom shows 'Ready' on the left and 'LogUser admin' on the right.

Band Report

The *Band Report* displays a graphical representation of the WLAN bands (802.11a, 802.11b/802.11g and 802.11b/g/n) currently being used by the access point. It shows the number access points on every band.

The screenshot shows the AP Manager II Lite software interface. The main window is titled "Band Report" and displays a 3D pie chart. The chart shows a single blue slice representing 2.4GHz/5GHz, with the number "1" next to it. A legend on the right indicates that the blue color corresponds to 2.4GHz/5GHz. Below the chart is a "Station Detail" table with the following columns: MAC Address, Alias, Access Point, Band, Authentication, RSSI, SSID, and Power Save Mode. The table is currently empty. At the bottom, a log window shows system messages, including a red error message: "[04/12/2012 07:59:34.962]Device: 192.168.0.50 SNMP Ping TimeOut!".

MAC Address	Alias	Access Point	Band	Authentication	RSSI	SSID	Power Save Mode

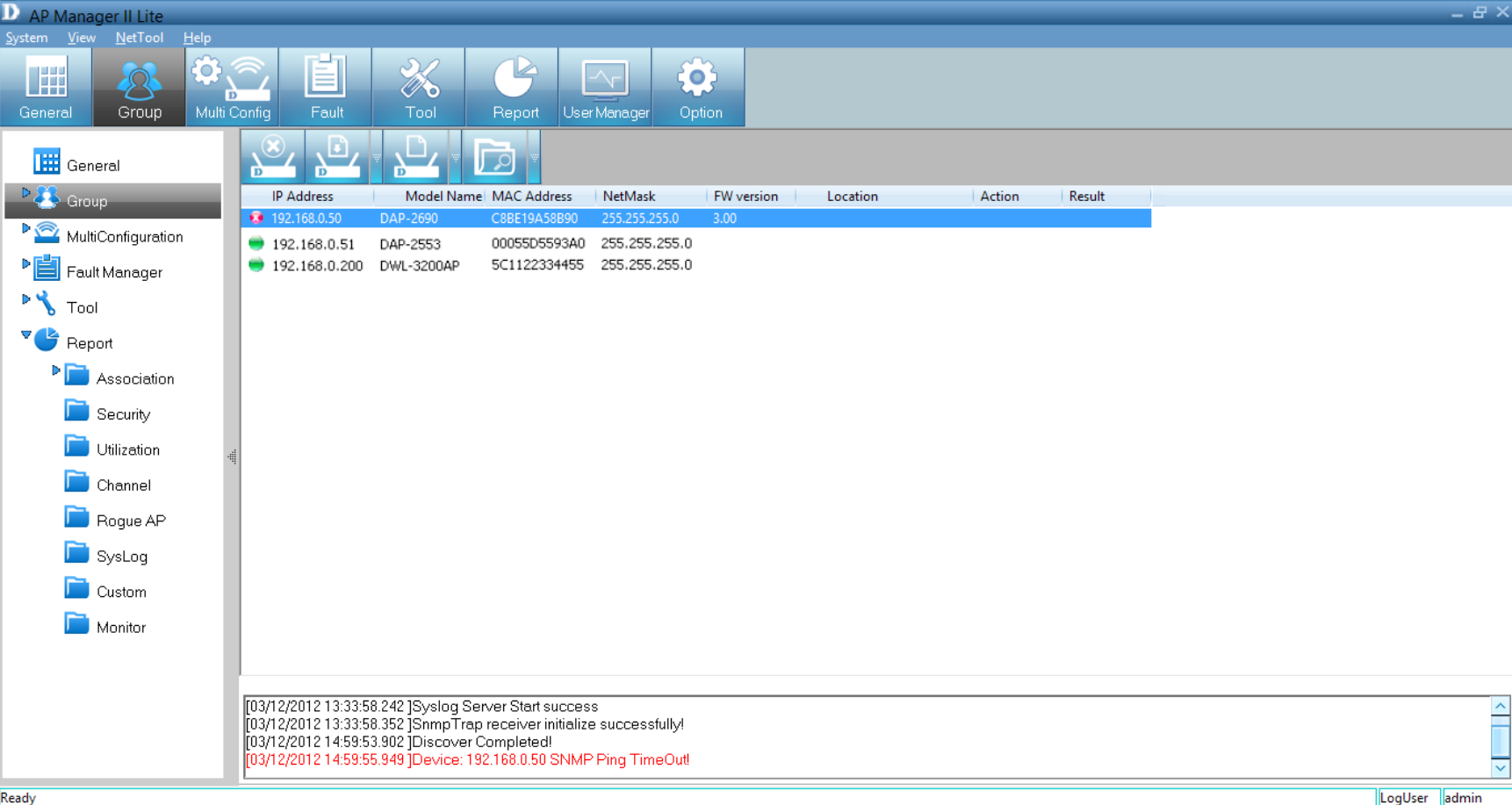
Log messages:

```
[04/12/2012 07:59:12.939]The initialization complete
[04/12/2012 07:59:12.939]Syslog Server Start success
[04/12/2012 07:59:13.017]SnmpTrap receiver initialize successfully!
[04/12/2012 07:59:34.962]Device: 192.168.0.50 SNMP Ping TimeOut!
```

Group View

The *Group View Panel* displays the access points the *AP Manager II Lite* discovers and currently manages. You can group these access points by model or into categories that can make their distribution easier to visualize.

The *AP Manager II Lite* can actively monitor and manage several D-Link Access Points. They are installed as plug-ins under the installation directory. Once access points are detected during the discovery process, they are listed in the main *Group View Panel*, and you can add or remove supported models freely.



The screenshot displays the AP Manager II Lite software interface. The main window is titled "AP Manager II Lite" and features a menu bar with "System", "View", "NetTool", and "Help". Below the menu bar is a toolbar with icons for "General", "Group", "Multi Config", "Fault", "Tool", "Report", "User Manager", and "Option". The "Group" menu item is selected, and its sub-menu is visible on the left side of the window. The sub-menu includes "General", "Group", "MultiConfiguration", "Fault Manager", "Tool", "Report", "Association", "Security", "Utilization", "Channel", "Rogue AP", "SysLog", "Custom", and "Monitor". The "Group" sub-menu is currently open, showing a list of discovered access points in a table format. The table has the following columns: IP Address, Model Name, MAC Address, NetMask, FW version, Location, Action, and Result. The table contains three rows of data:

IP Address	Model Name	MAC Address	NetMask	FW version	Location	Action	Result
192.168.0.50	DAP-2690	C8BE19A58B90	255.255.255.0	3.00			
192.168.0.51	DAP-2553	00055D5593A0	255.255.255.0				
192.168.0.200	DWL-3200AP	5C1122334455	255.255.255.0				

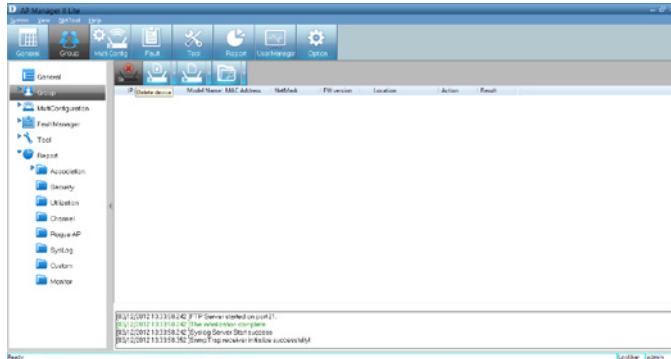
At the bottom of the window, there is a log window showing the following messages:

```
[03/12/2012 13:33:58.242]Syslog Server Start success  
[03/12/2012 13:33:58.352]SnmpTrap receiver initialize successfully!  
[03/12/2012 14:59:53.902]Discover Completed!  
[03/12/2012 14:59:55.949]Device: 192.168.0.50 SNMP Ping TimeOut!
```

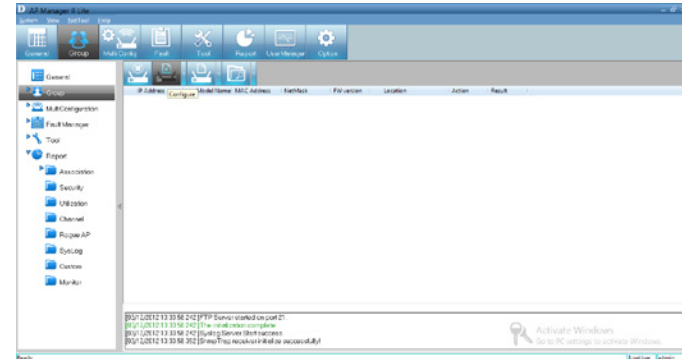
The status bar at the bottom of the window shows "Ready" on the left and "LogUser admin" on the right.

Discovering Devices

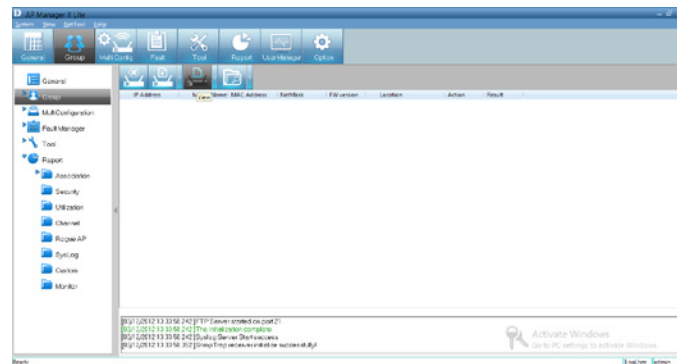
Before you can manage and monitor the access point you must discover the device. Click **Groups** on the main menu bar. *Groups* has four main icons: *Delete*, *Configure*, *View* and *Discover*.



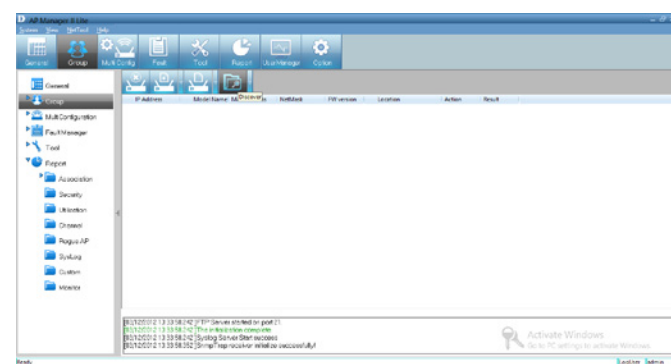
Delete



Configure

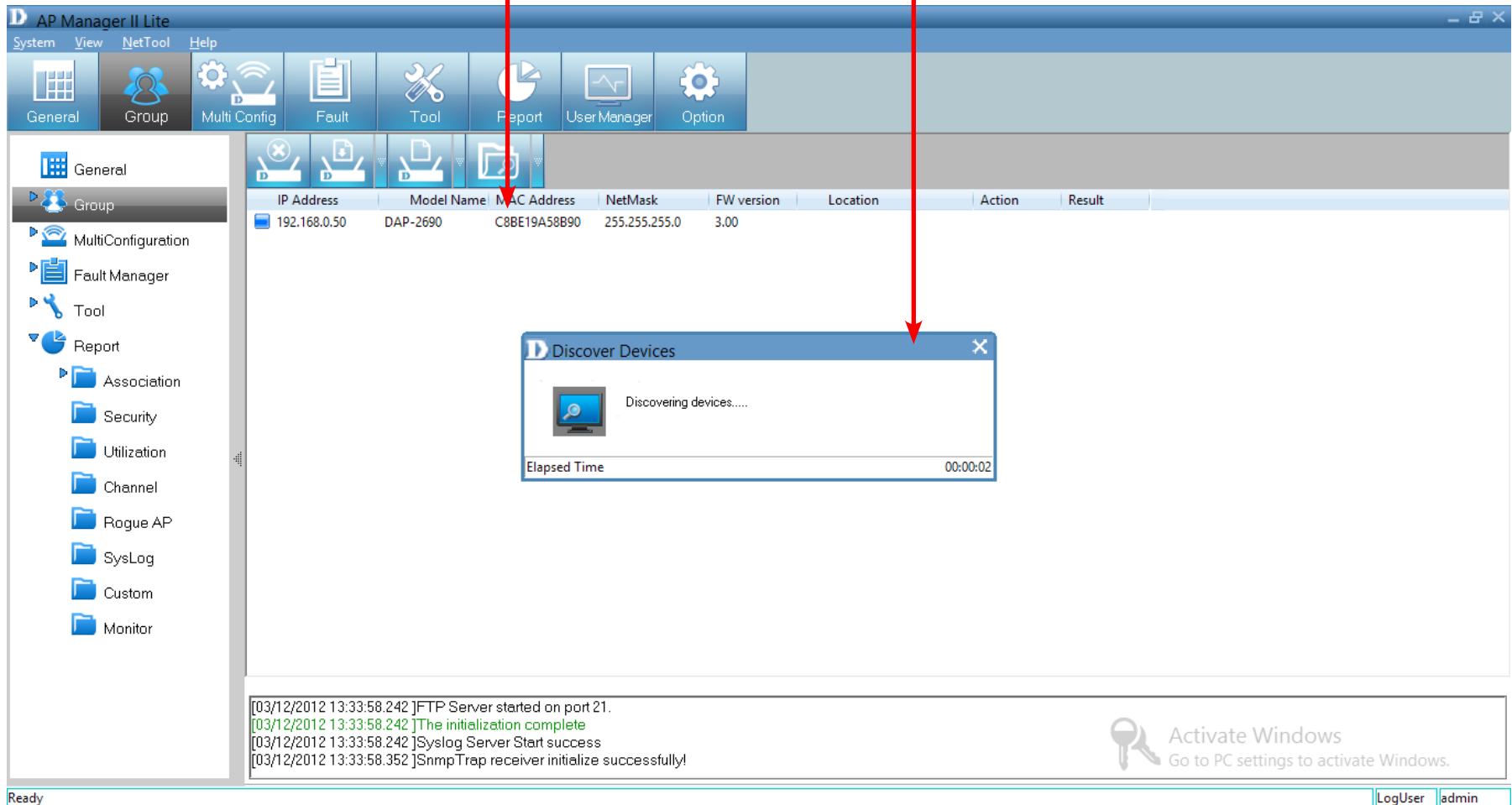


View



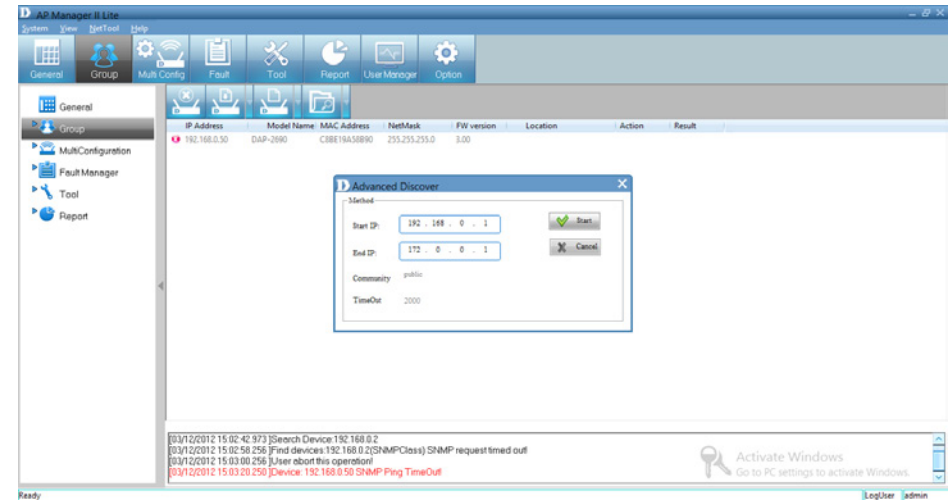
Discover

Click **Discover** to find the access point. The following dialogue window will appear during the Discovery process. If your AP is connected, it will be detected and shown on the screen.



Advanced Discovery

The standard discovery can only discover the access points in the same subnetwork. To discover the access points in the other network segments, click the **arrow** next to the *Discover* icon and click **Advanced Discover** from the drop-down list.



Under *Advanced Discover*, enter the *Start IP* and the *End IP* and click the **Start** button to search for access points within the specified IP range. Once other access points are discovered their status will be updated by the icons associated to it.



New Access Point



Managed Access Point



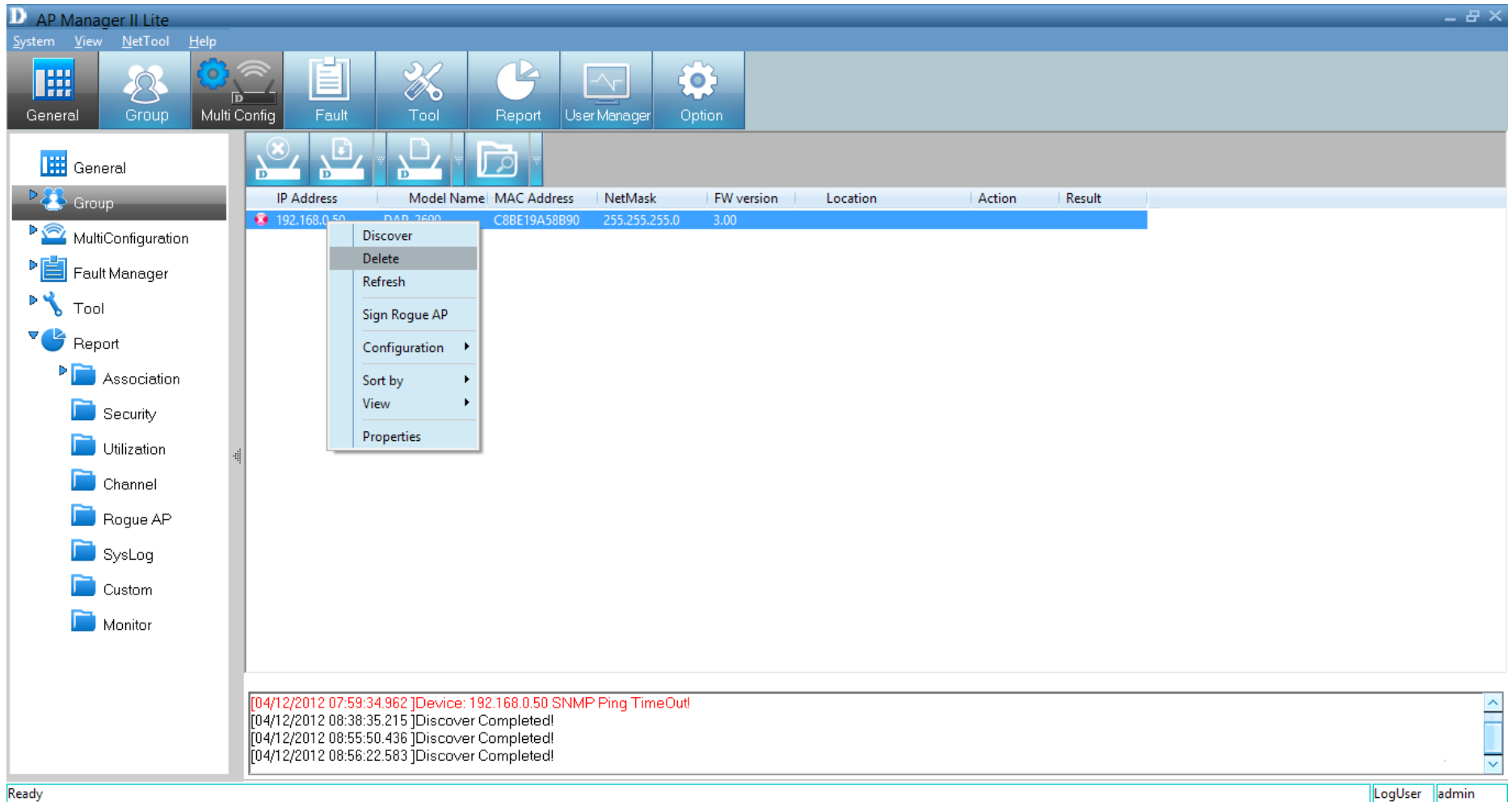
The Access Point cannot be pinged but can be modified.



The Access Point is offline and/or the SNMP engine is disabled.

The Access Point is specified as a Rogue AP

To delete an access point highlight it in *Group View* mode, right-click and select **Delete**.

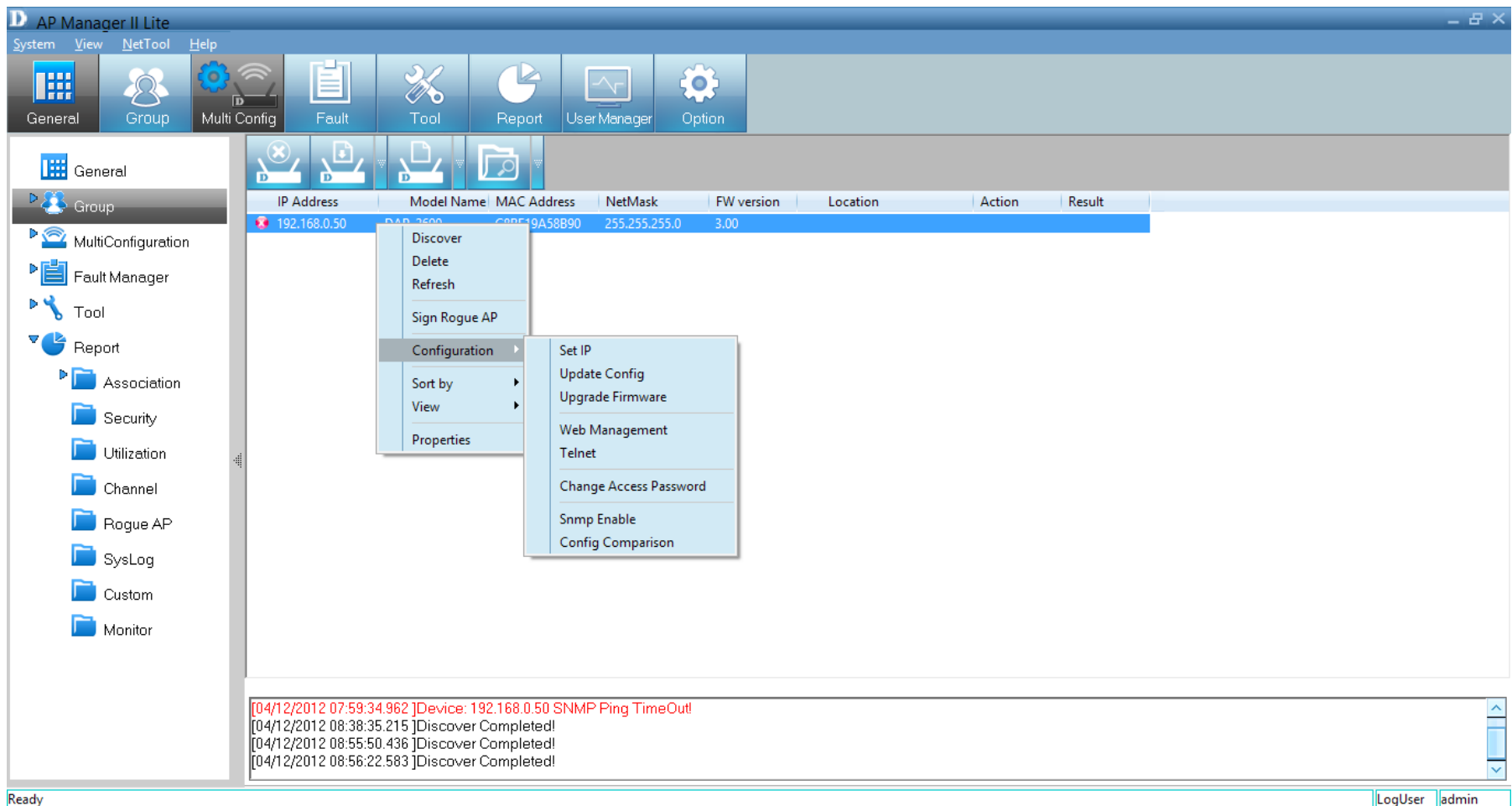


Note: To view a list of supported access points please go to the Frequently Asked Questions page at <http://support.dlink.com>.

Configuration

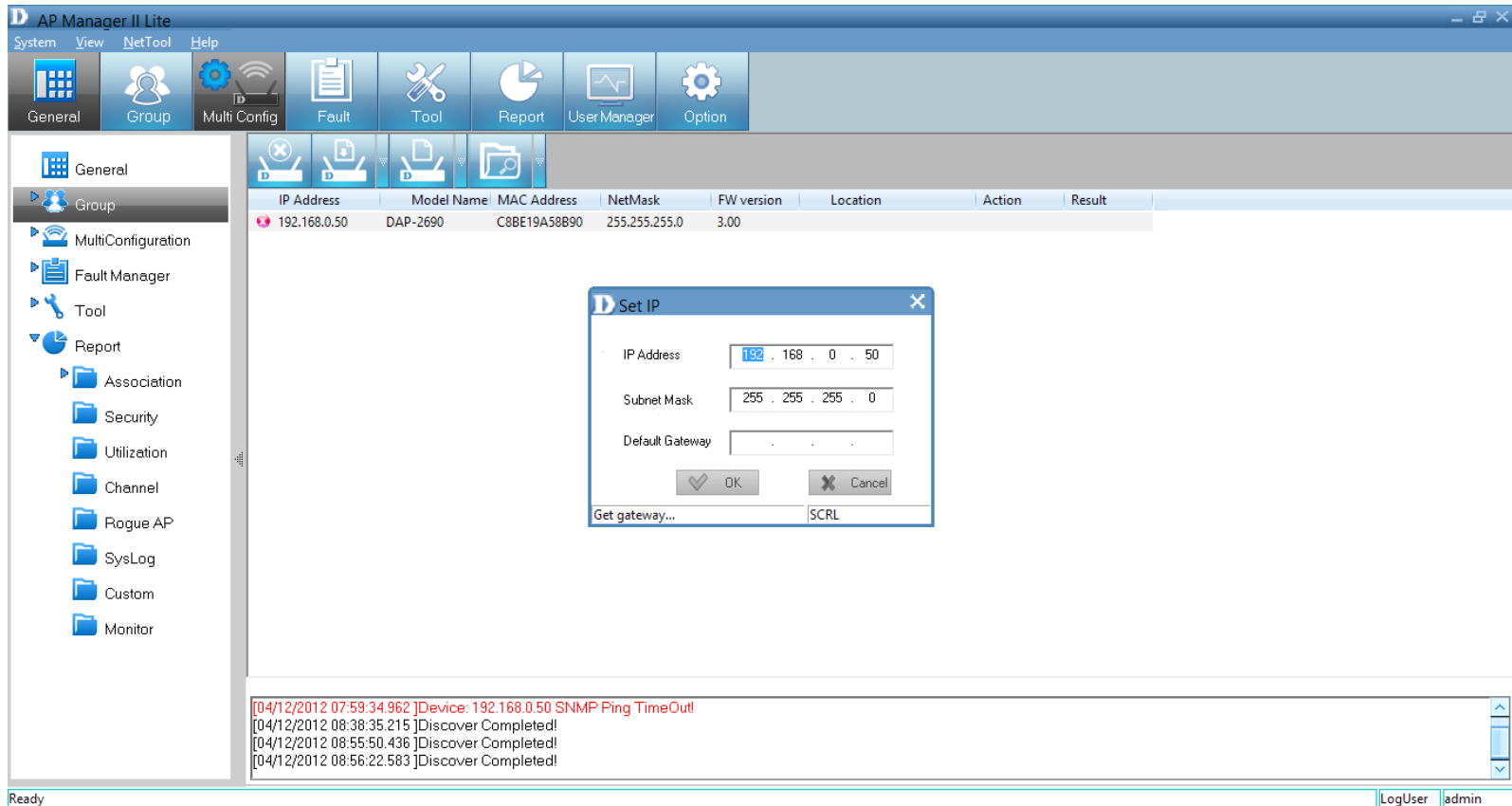
There are two main ways to configure an access point. First, you can right-click the **access point** and click **Configuration**. A list of configurational options will appear in a drop-down menu. The second configuration method is to click the **arrow** next to the *Configure* button. The options available from the drop-down menu are:

Set IP (Page 24), **Update Config** (Page 26), **Upgrade Firmware** (Page 27), **Web Management** (Page 30), **Telnet** (Page 31), **Change Access Password** (Page 32), **SNMP Enable** (Page 33), and **Config Comparison** (Page 35).



Set IP

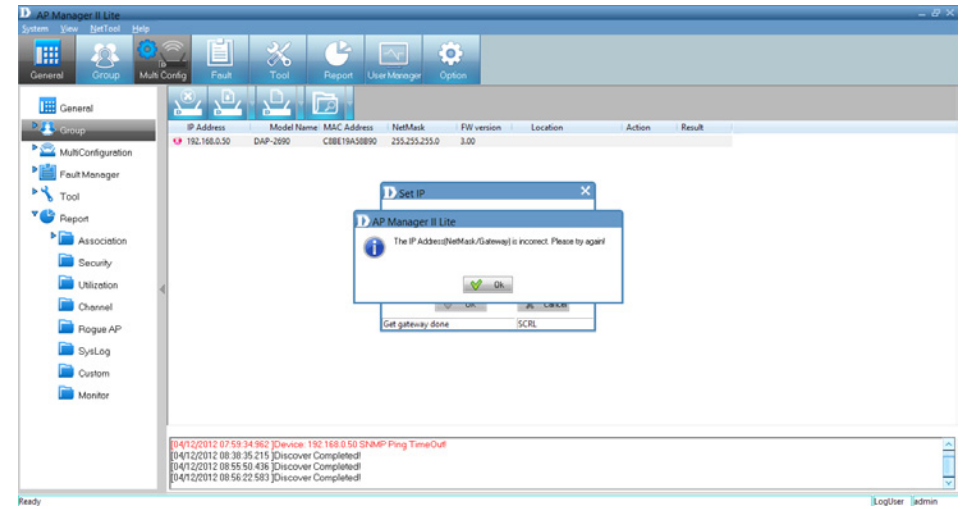
You can manually set the IP address of a selected access point. To quickly access IP configuration tools, double-click the **access point**. Set the **IP address**, **Subnet Mask**, and **Default Gateway**. Click **OK** to continue. When a new access point is discovered, you can use this function to assign a new IP address, Subnet Mask and Default Gateway to the device.



The *Action* column shows the executing operation, while the *Results* column shows the progress by percentage. You can set the IP addresses of multiple devices this way. If the operation fails, please check the physical connections and the user name and password settings. (Refer to the *Set Password* section for details).

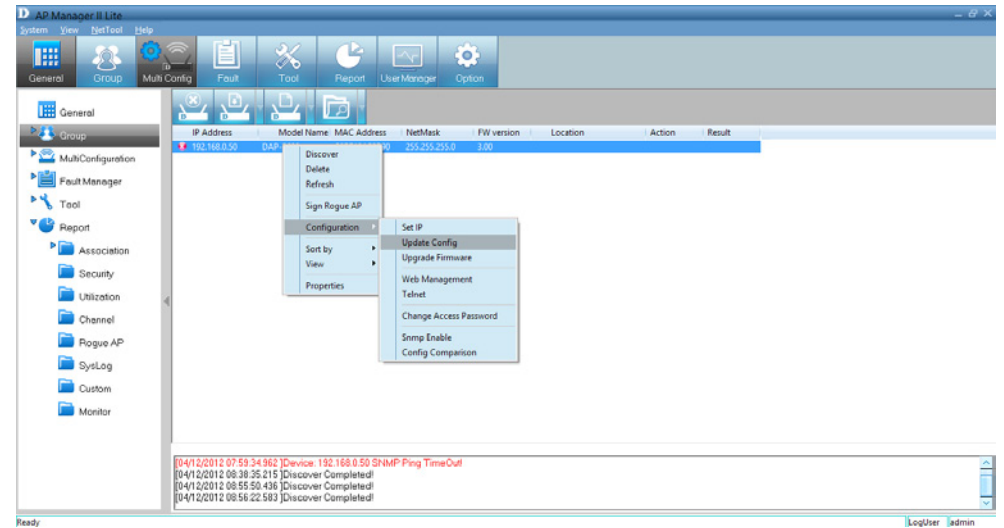
Section 3 - Installation

If you enter the wrong IP information, you will be prompted to re-enter the correct IP information. Click **OK** to try again.

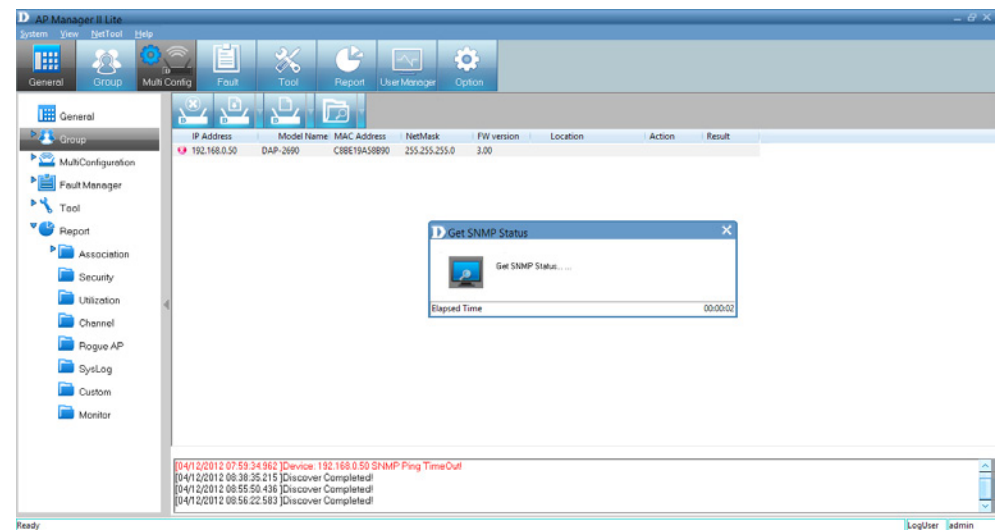


Configuration Update

Right-click the **device**. Go to *Configuration* and click **Update Config**.

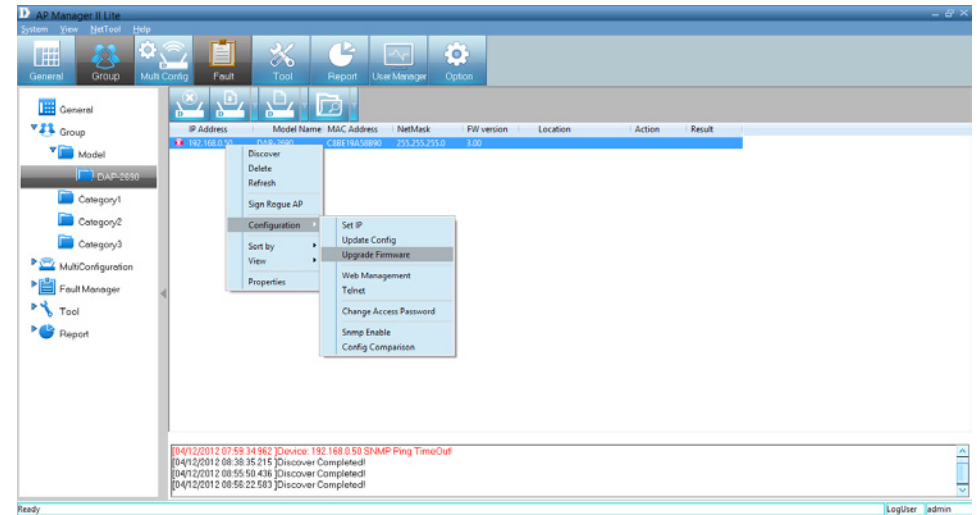


The device will search for the SNMP status.

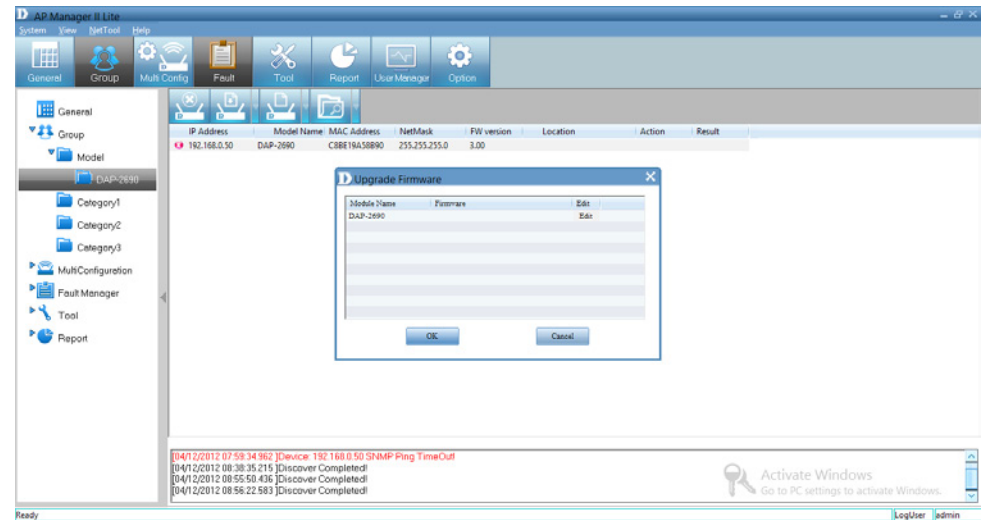


Firmware Upgrade

Right-click the **device**. Go to *Configuration* and click **Update Firmware**.

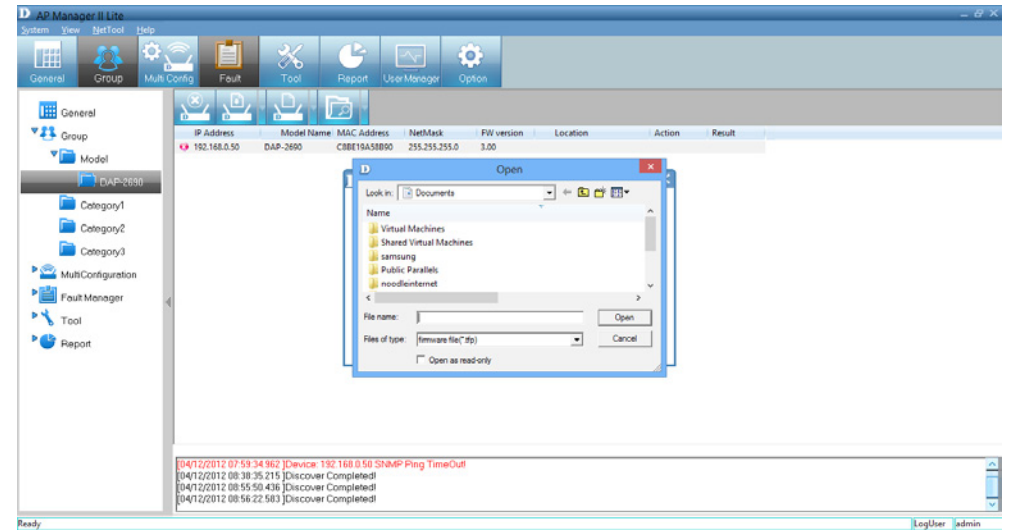


The *Upgrade Firmware* configuration window will open.

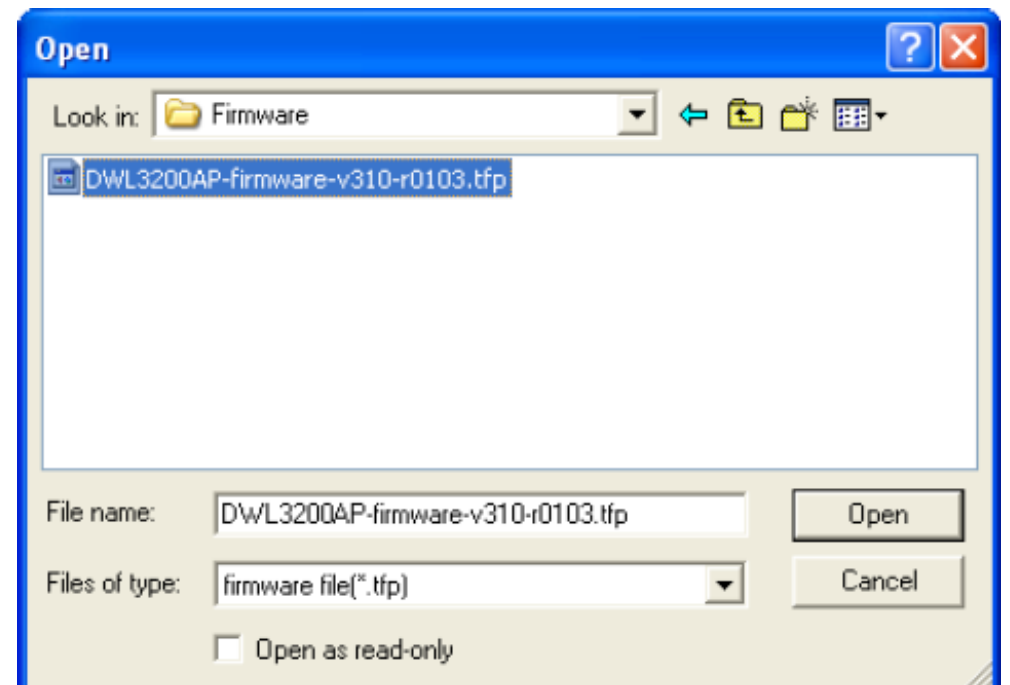


Section 3 - Installation

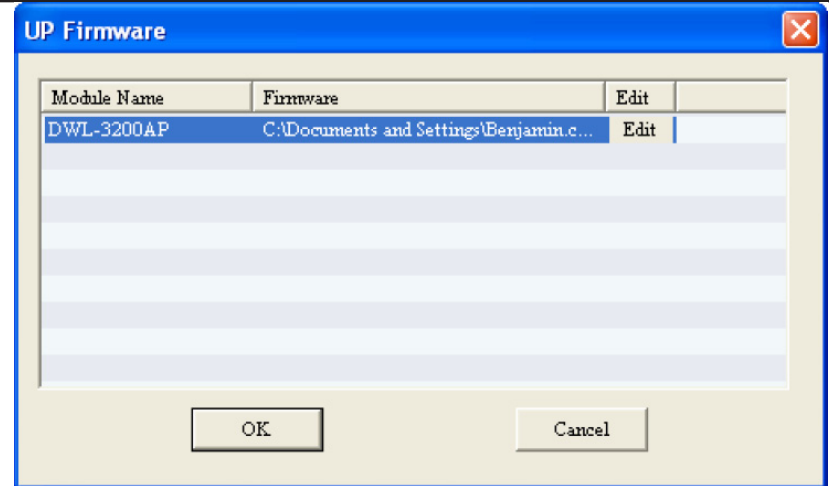
Click the **Edit** field. A new window will open prompting you to search for the new firmware on your PC.



Once you have located your firmware, select it and click **Open**.

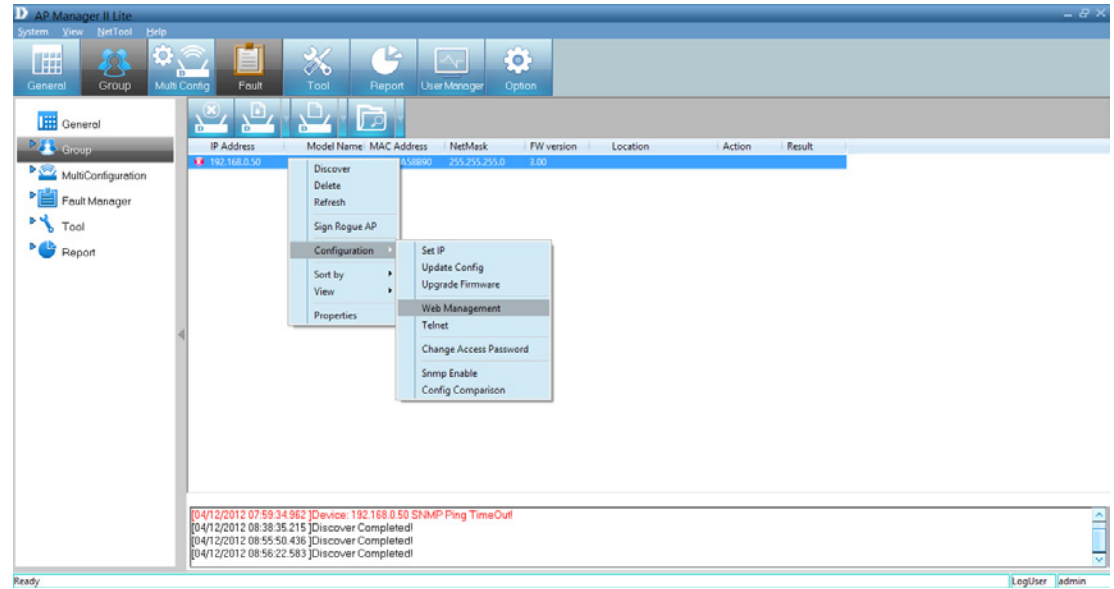


Upload the firmware to the access point. Click **OK** to continue.

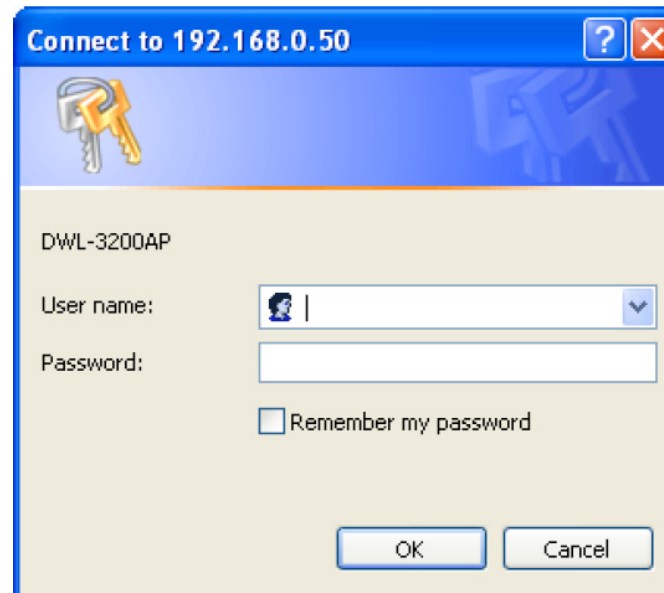


Web Management

Right-click the **device**. Go to *Configuration* and click **Web Management**.

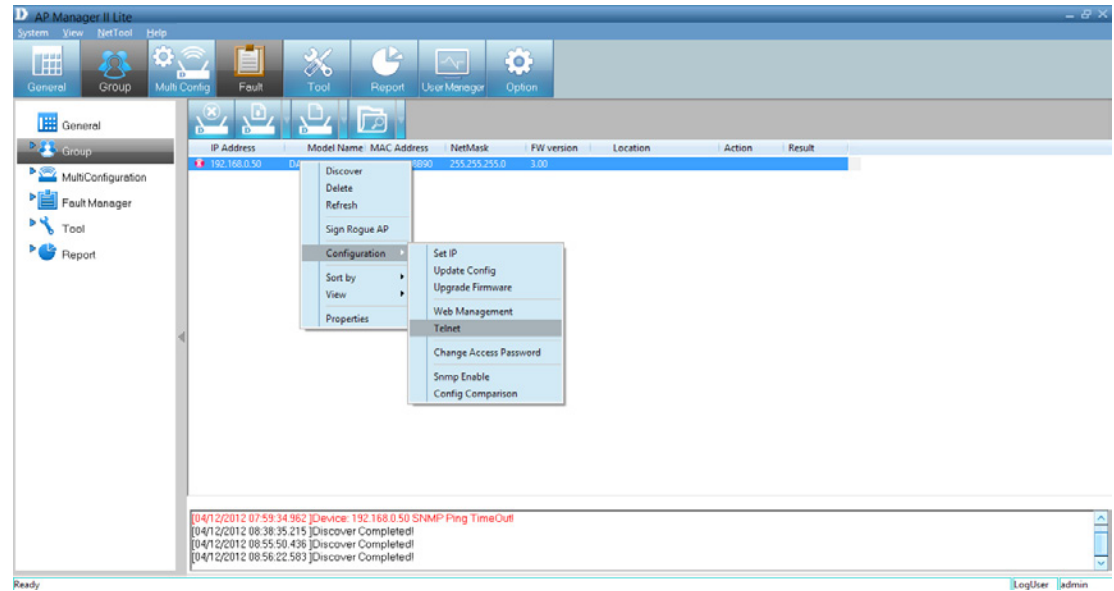


Enter a *User name* and *Password* into the fields provided and click **OK**. Your PC's web browser will open and the access point's IP address will be entered into the address field. You can configure the access point using its built-in web-based manager as you would normally.

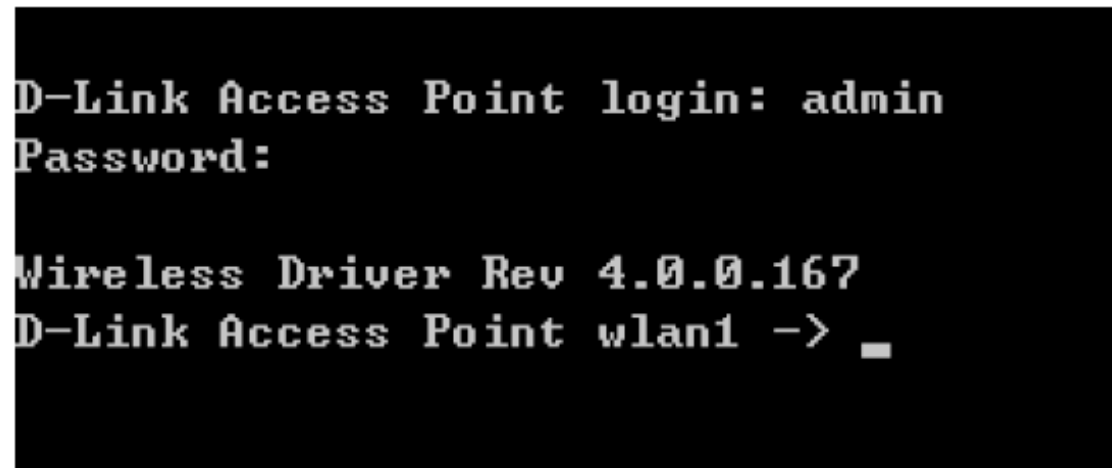


Telnet

Right-click the **device**. Go to *Configuration* and click **Telnet**.

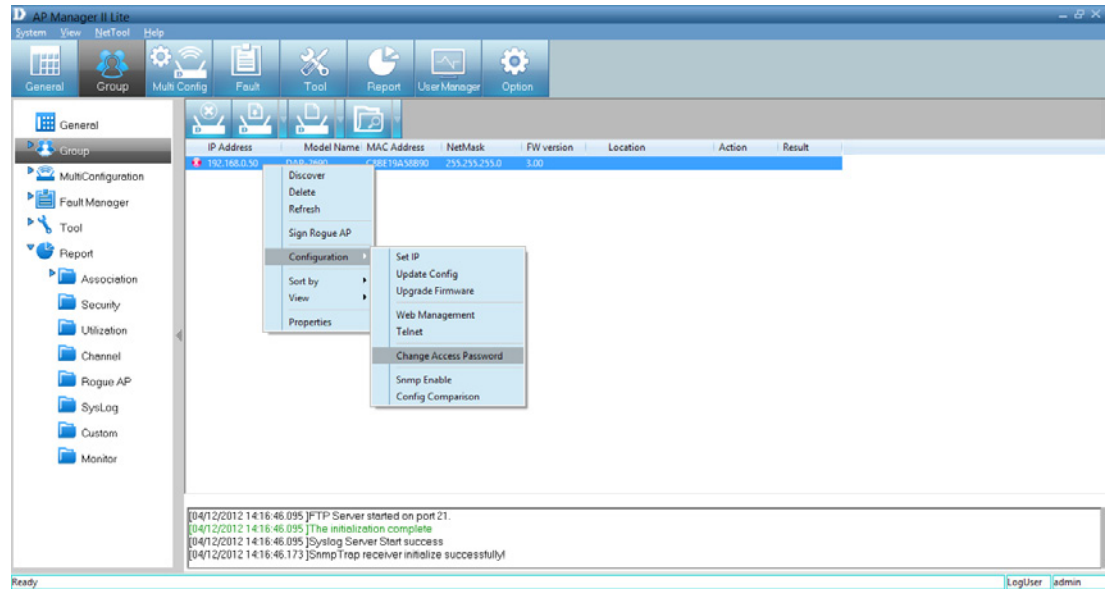


Next, the *Command Prompt* will open. This gives you access to the built-in *Telnet CLI Manager*. Type in the *User Name* and *Password* in the console manager.

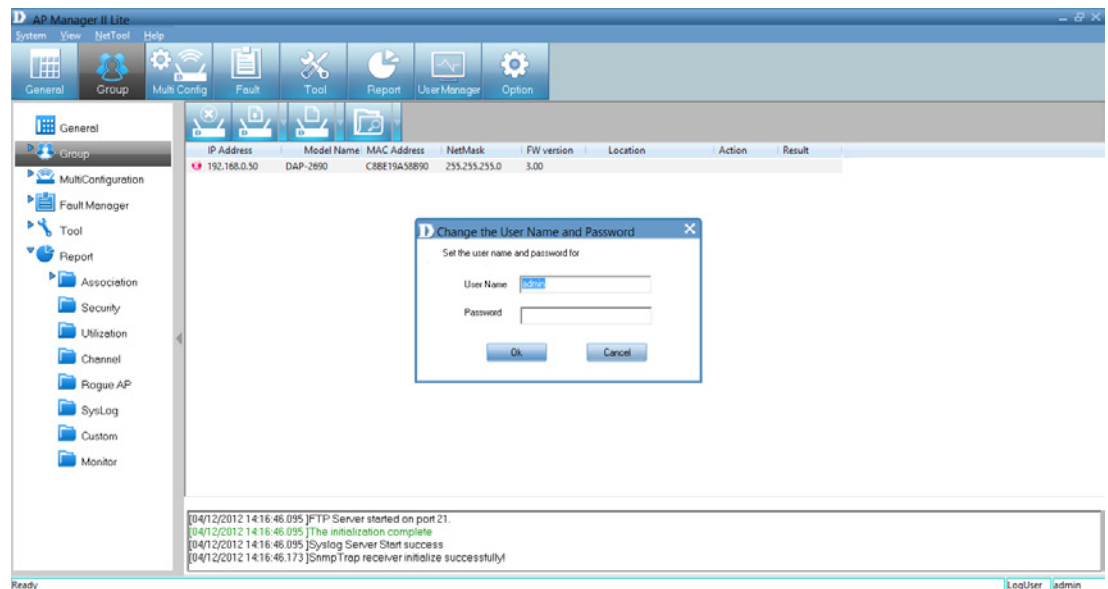


Change Access Password

Right-click the **device**. Go to *Configuration* and click **Change Access Password**.

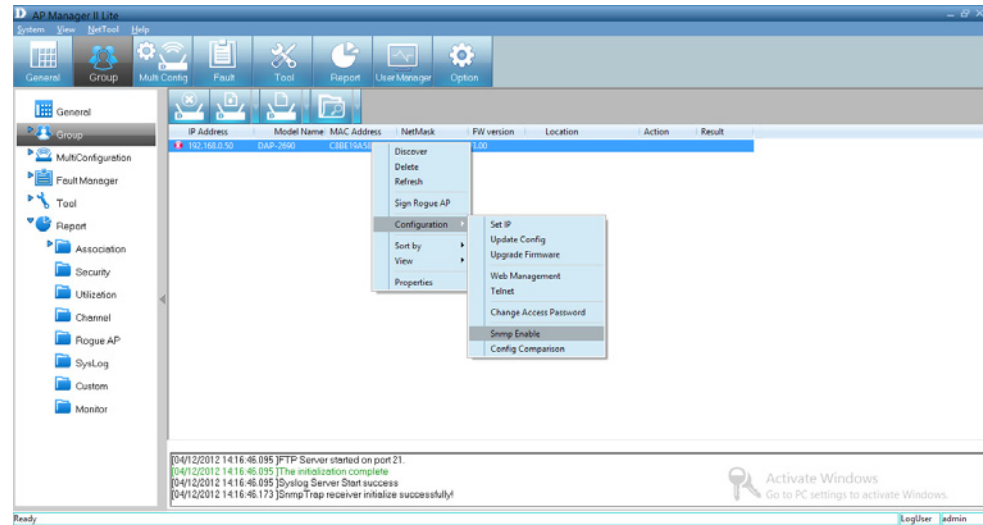


The *Change Username and Password* window will ask you to enter the new *User Name* and *Password* details. Click **OK** when complete to continue.

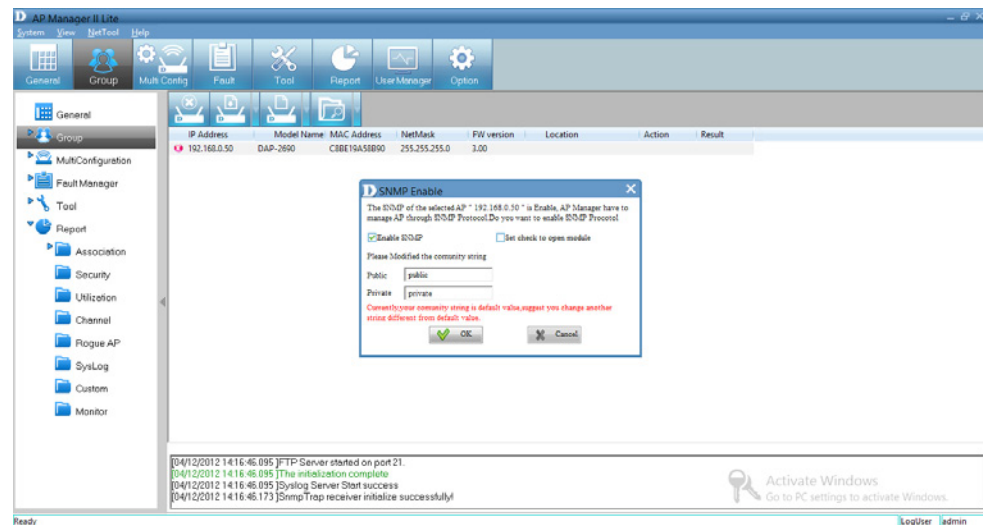


Enable SNMP

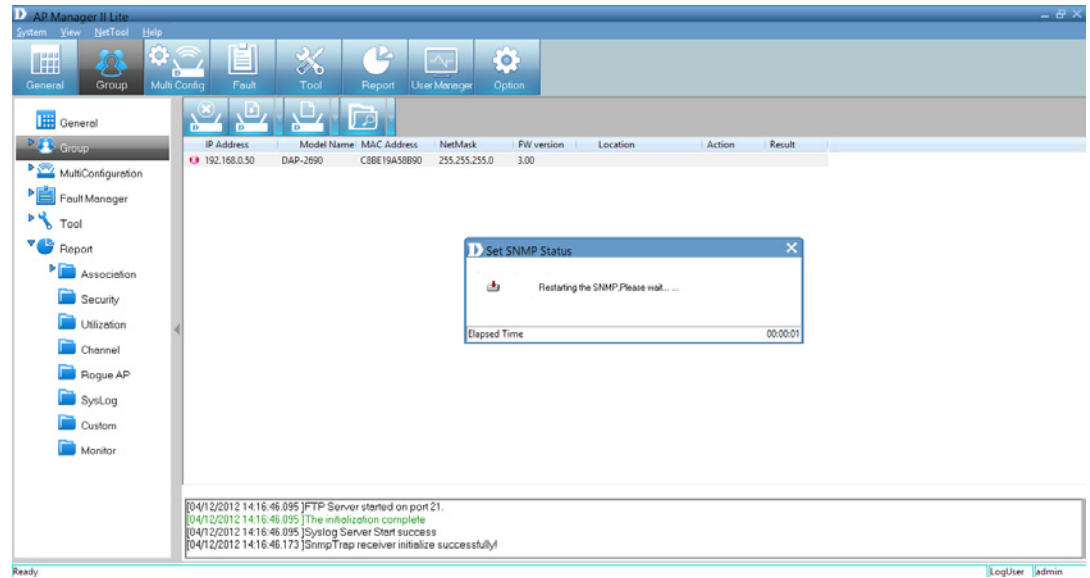
Right-click the **device**. Go to *Configuration* and click **SNMP Enable**.



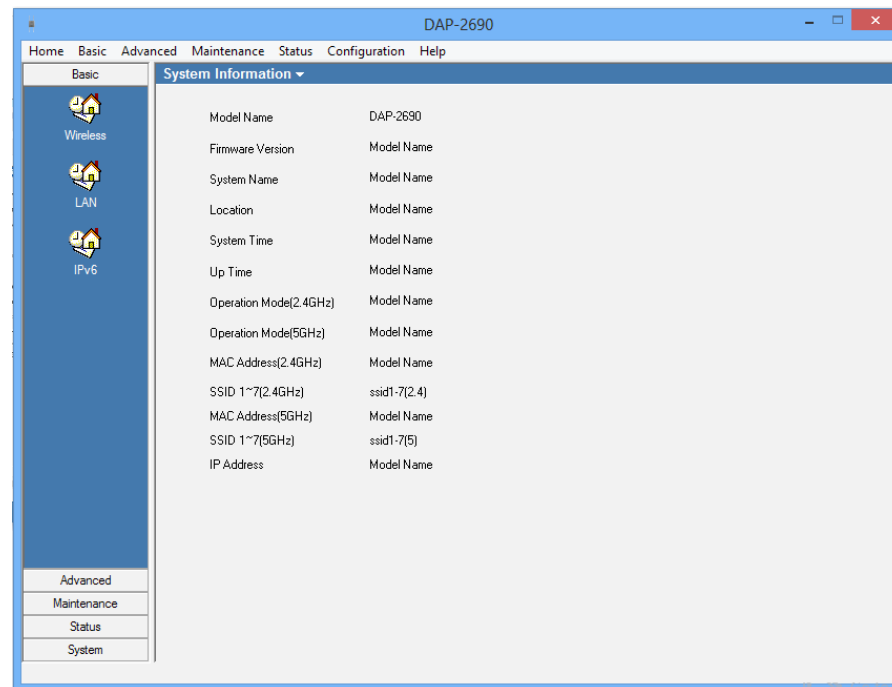
Under the *SNMP Enable Manager*, click the **Enable SNMP** checkbox. Click the **Set check to open module** checkbox if you need this application. Enter the *Public* and *Private* data in the fields provided and click **OK** to complete.



SNMP will restart.



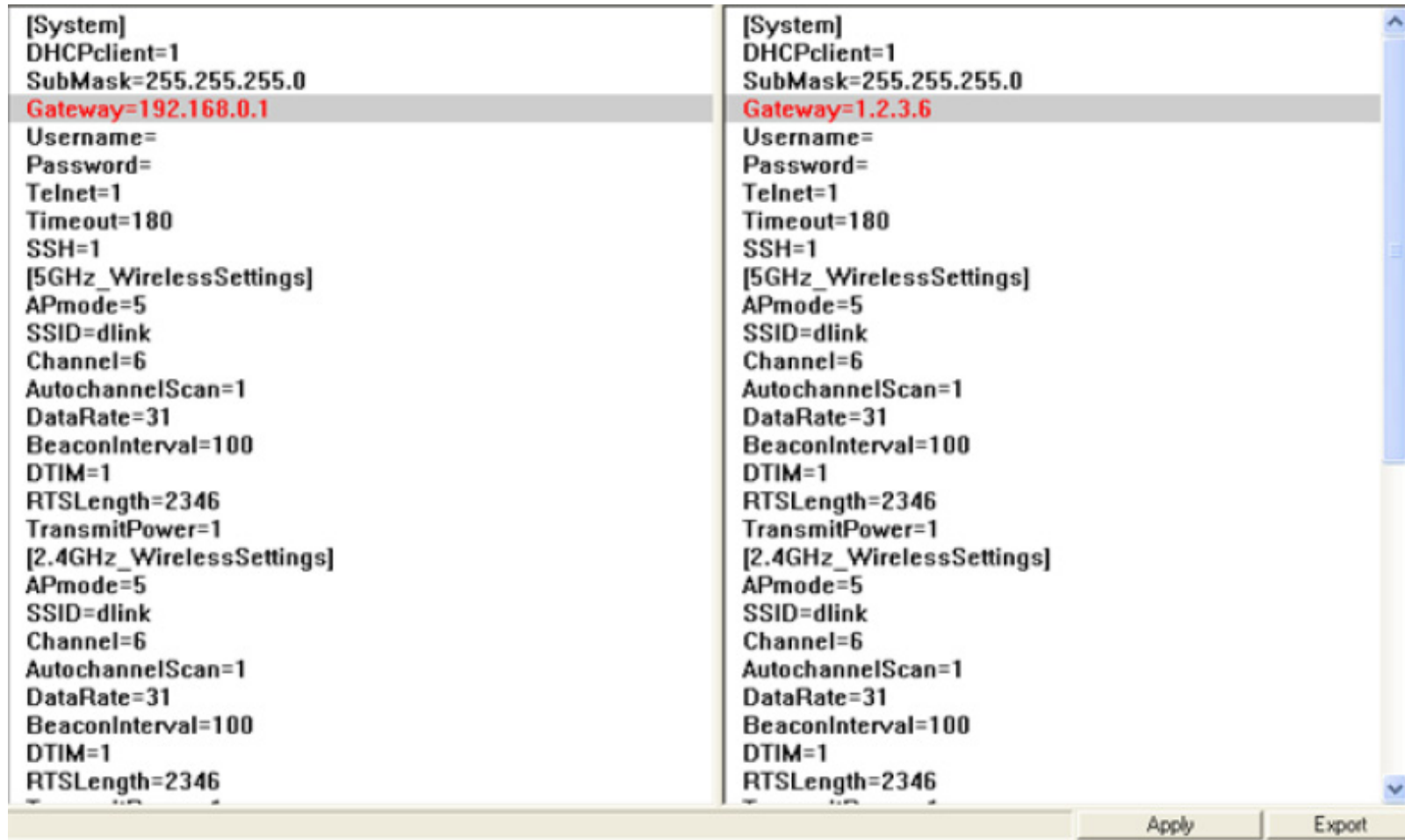
The *D-Link Manager* software will open and you can configure it using this tool.



Configuration Comparison

Right-click the **device**. Go to *Configuration* and click **Config Comparison**.

Config Comparison needs two access points to work. Compare each configuration option against the other access point. Click **Apply** to continue.



Sorting

Right-click the **device** and click **Sort By**.

You can change the order of the access points by *IP Address, Location, Type* and *Model Name*.

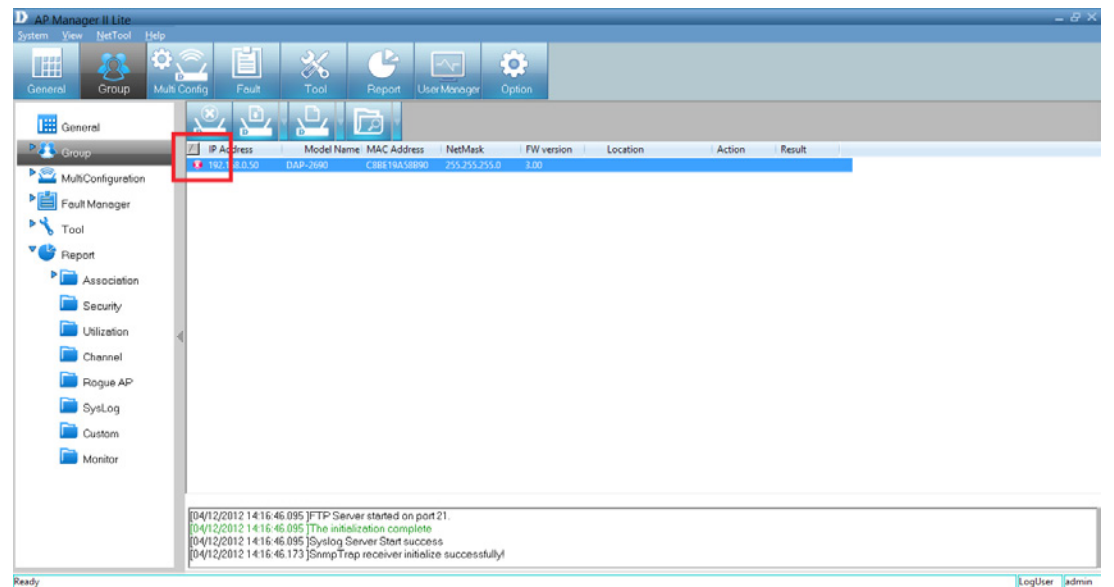
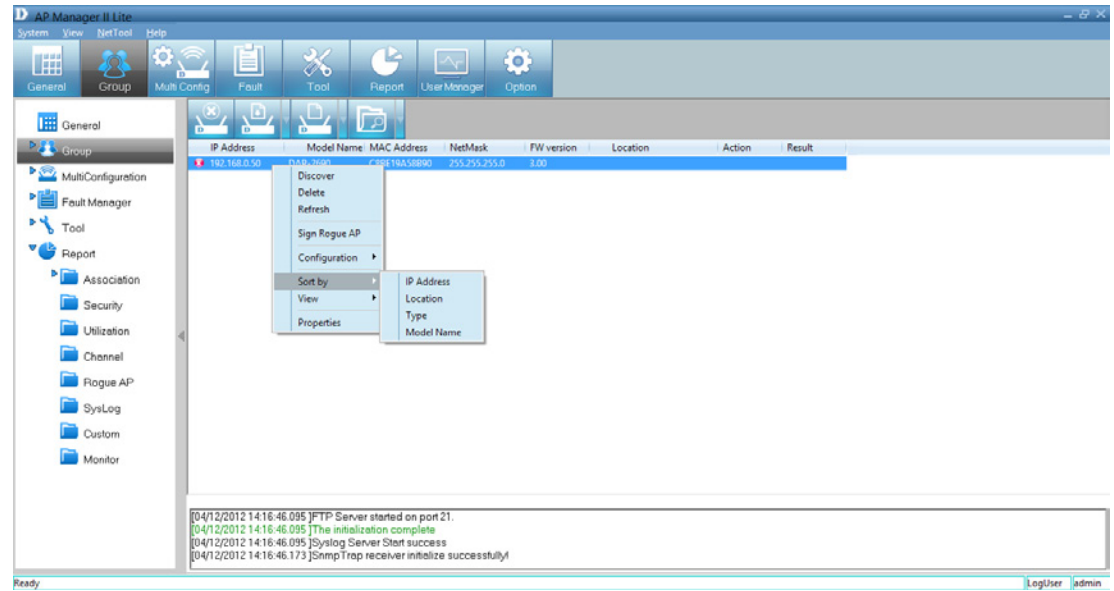
Once you have selected the sorting option, a gray arrow appear beside it to represent its designation.

IP Address: Sorts by IP Address column.

Location: Sorts by Location column.

Type: Sorts by either *Managed, Unmanaged* or *Rogue Access Point*.

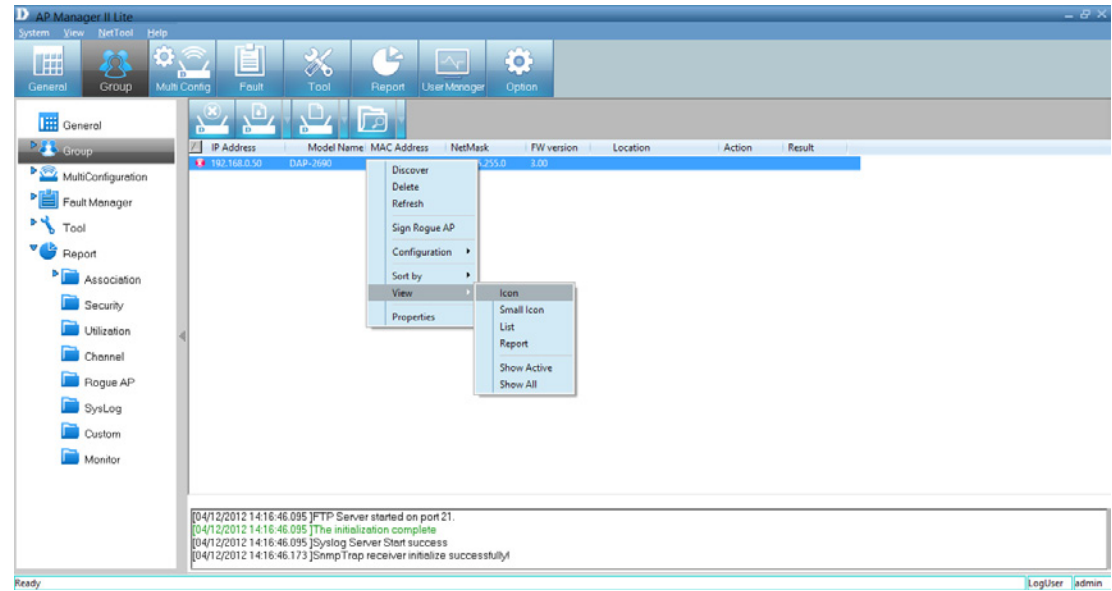
Model Name: Sorts by access point model name.



View Mode

Right-click the **device** and click **View**.

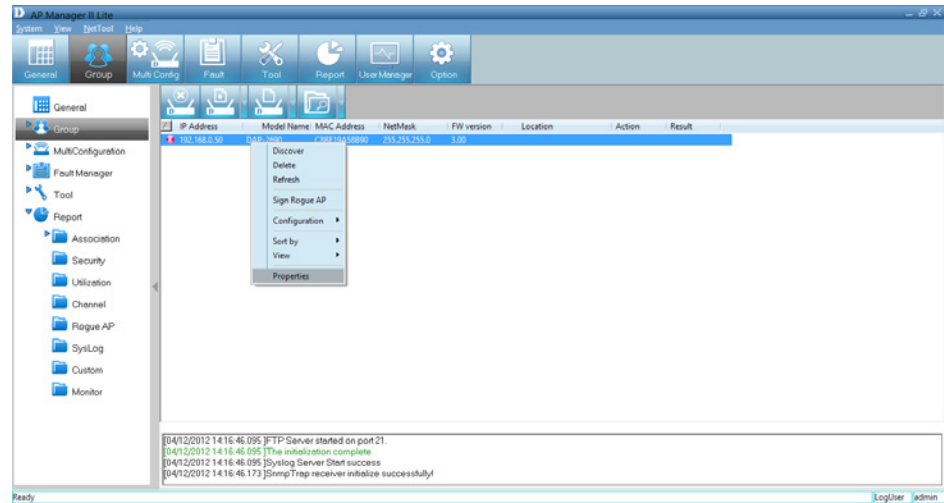
You can view the access points based on different parameters, such as: *Icon*, *Small Icon*, *List*, *Report*, *Show Active* and *Show All*.



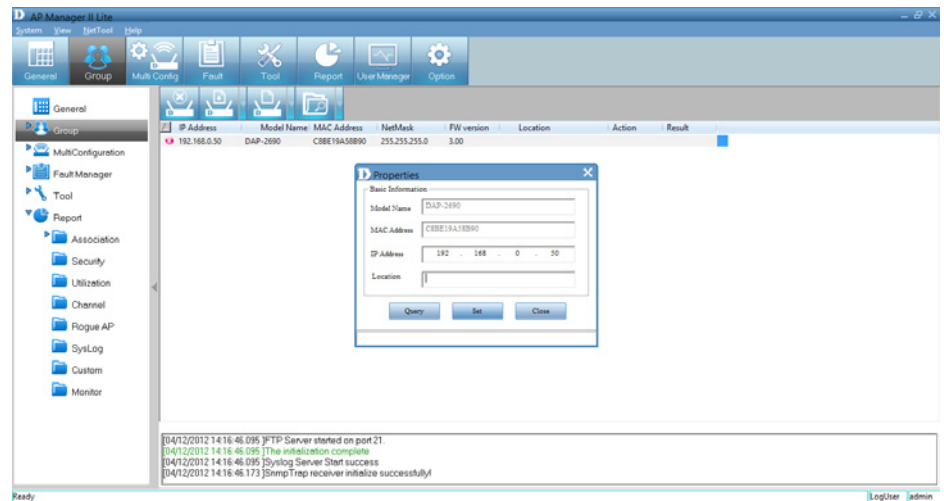
Properties

Right-click the **device** and click **Properties**.

The *Properties* parameter allows you to manage and view the properties of each access point on the network.

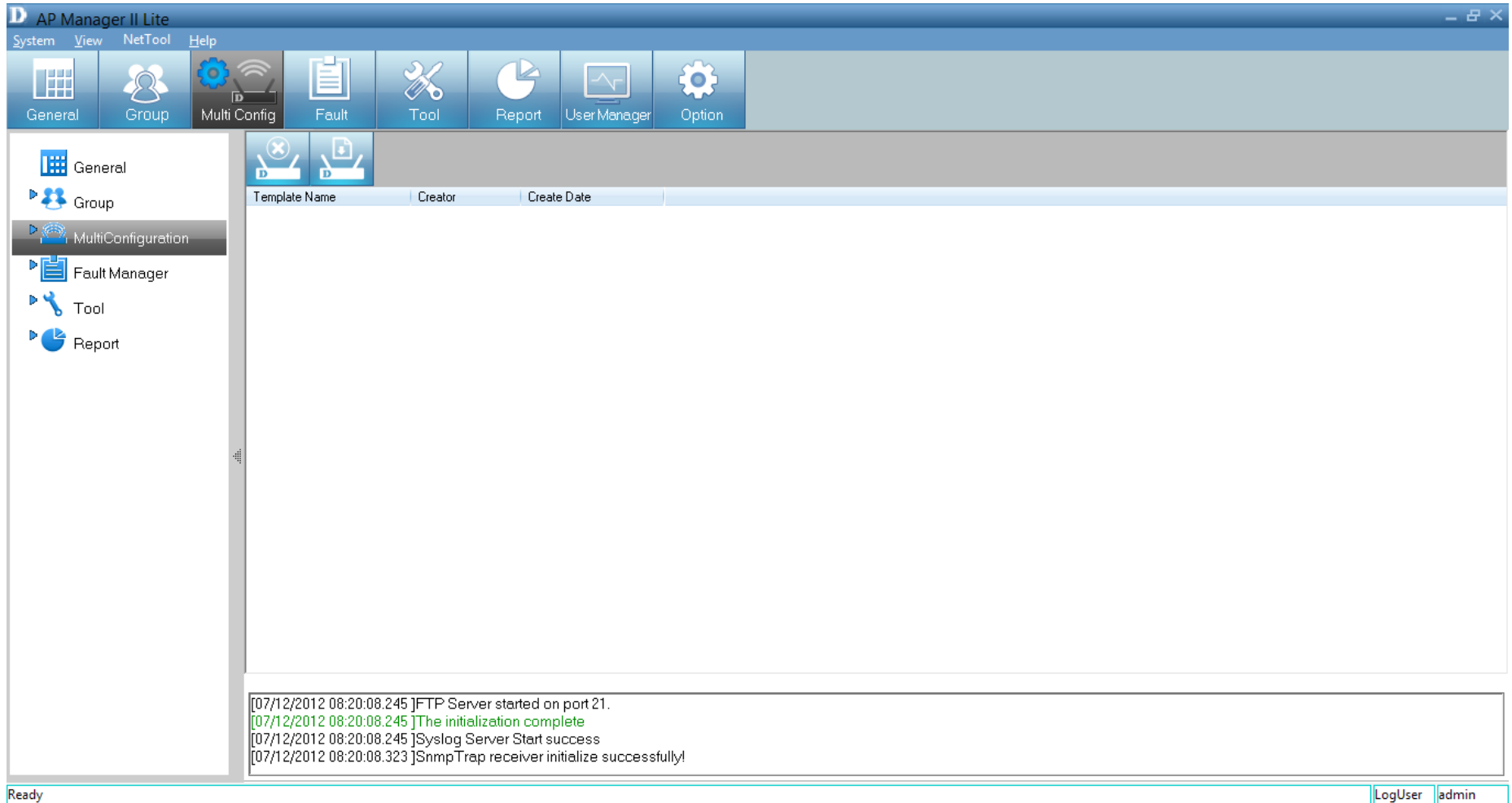


You can enter a description string in the *Location* textbox to describe the access point, and then click the **Set** button to apply the changes.



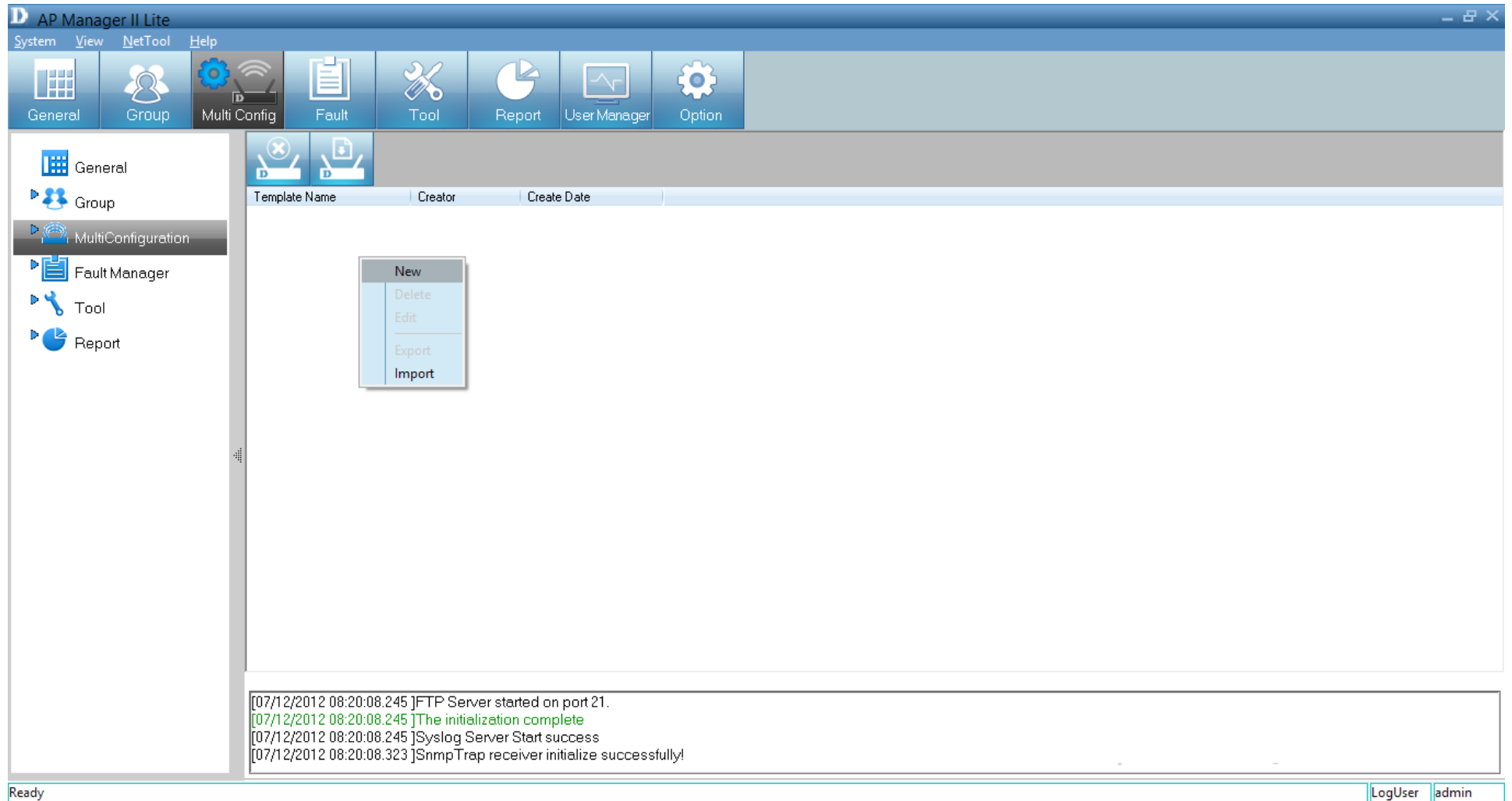
Multi Configuration

Administrators can manage the configuration of access points from the *Multi Configuration* section. *AP Manager II Lite* uses a template to manage this. The same profile can be used for multiple access points. Each profile has unique settings which include *System*, *Wireless*, *Security* and *Filter* settings.



Create a new template

To create a new template, right-click anywhere on the template view window and select **New Item**.



Under *Basic Info*, type in a name for the new configuration. *Creator* is pre-set as *Admin* and the time is already set.

Under *Content Selection*, click the checkbox to configure. There are *System*, *Wireless* (2.4GHz/5GHz), *Security* (2.4GHz/5GHz), *Filter* (2.4GHz/5GHz), and *Multi_SSID* (2.4GHz/5GHz) options.

Click **Next** to continue.

The 'General' configuration window is shown with the following fields and options:

- Basic Info:**
 - Name: [Text Input]
 - Creator: [Text Input, value: admin]
 - Time: [Dropdown, value: 12/ 7/2012]
- Content Selection:**
 - System
 - Wireless: 2.4GHz 5GHz
 - Security: 2.4GHz 5GHz
 - Filter: 2.4GHz 5GHz
 - Multi_SSID: 2.4GHz 5GHz

Navigation buttons: Back, Next, Cancel.

Under *System*, click the **LAN Settings** checkbox and configure the *IP* (*Static* or *Dynamic*), enter *Subnet* details, and *Default Gateway* options.

Click the **Admin** checkbox. Enter a **User Name** and **Password**.

Click the **Console Settings** checkbox to enable it. Select the *Console Protocol* and the *Timeout* period.

Click **Next** to continue.

The 'System' configuration window is shown with the following fields and options:

- LAN Settings:**
 - Get IP From: [Dropdown, value: Static (Manual)]
 - Subnet Mask: [Text Input]
 - Default Gateway: [Text Input]
- Admin:**
 - User Name: [Text Input, value: admin]
 - Password: [Text Input]
- Console settings:**
 - Status: Enable
 - Console Protocol: Telnet SSH
 - Timeout: [Dropdown, value: 5 Mins]

Buttons: Check All, Clear All.

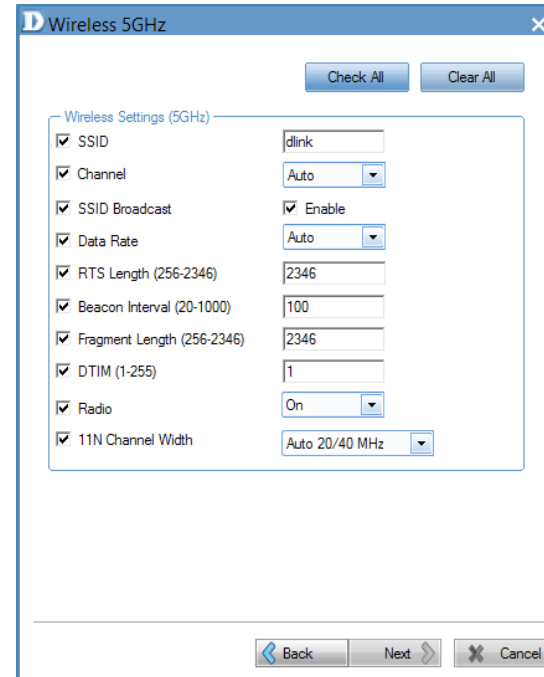
Navigation buttons: Back, Next, Cancel.

Under *Wireless 5GHz*, you can set the following options:

- SSID** - Enter a name for the SSID.
- Channel** - Select between **Auto** or a **configurable range**.
- SSID Broadcast** - Click to enable.
- Data Rate** - Select **Auto** or the **speed** option.
- RTS Length** - Enter a range.
- Beacon Interval** - Enter a range.
- Fragment Length** - Enter a value.
- DTIM** - Enter an appropriate value.
- Radio** - Select **On** or **Off**.
- 11n Channel Width** - Select the range.

If you are unsure of all the settings, there is also the option to **Check All**.

Click **Next** to continue.

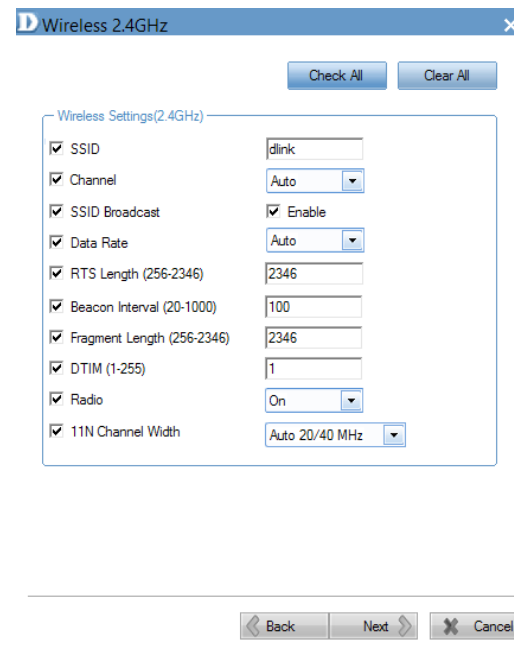


Under *Wireless 2.4GHz*, you can set the following options:

- SSID** - Enter a name for the SSID.
- Channel** - Select between **Auto** or a **configurable range**.
- SSID Broadcast** - Click to enable.
- Data Rate** - Select **Auto** or the **speed** option.
- RTS Length** - Enter a range.
- Beacon Interval** - Enter a range.
- Fragment Length** - Enter a value.
- DTIM** - Enter an appropriate value.
- Radio** - Select **On** or **Off**.
- 11n Channel Width** - Select the range.

If you are unsure of all the settings, there is also the option to **Check All**.

Click **Next** to continue.



Under *Security 5GHz*, you can set the following options:

Authentication - Select between an *Open System*, *Shared Key*, *Open System/Shared Key*, *WPA-Personal*, *WPA-Enterprise*, *WPA2-Personal*, *WPA2-Enterprise*, *WPA-Auto-Personal*, and *WPA-Auto-Enterprise*.

Key Settings - Select to **Enable** encryption. Then set the *Key Type*, *Key Size*, *Valid Key* and *Key Value*.

WPA - Set the following parameters: *Cipher Type*, *Group Key Update Interval*, *Pass Phrase*, *RADIUS Server*, *Port*, and *RADIUS Secret*.

Click **Next** to continue.

The screenshot shows the 'Security 5GHz' configuration window. It has a title bar with a close button. The 'Authentication' dropdown is set to 'Open System'. The 'Key Settings' section includes 'Encryption' (Disable), 'Key Size' (64 Bits), 'Key Type' (HEX), and 'Valid Key' (First). There is a 'Key Value' text field. The 'WPA' section includes 'Cipher Type' (AUTO), 'Group Key Update interval' (1800), 'PassPhrase' text field, 'Radius Server' text field, 'Port' (1812), and 'Radius Secret' text field. At the bottom, there are 'Back', 'Next', and 'Cancel' buttons.

Under *Security 2.4GHz*, you can set the following options:

Authentication - Select between an *Open System*, *Shared Key*, *Open System/Shared Key*, *WPA-Personal*, *WPA-Enterprise*, *WPA2-Personal*, *WPA2-Enterprise*, *WPA-Auto-Personal* and *WPA-Auto-Enterprise*.

Key Settings - Select to enable the device then *Key Type*, *Key Size*, *Valid Key* and *Key Value*.

WPA - Set the following parameters: *Cipher Type*, *Group Key Update Interval*, *Pass Phrase*, *RADIUS Server*, *Port* and *RADIUS Secret*.

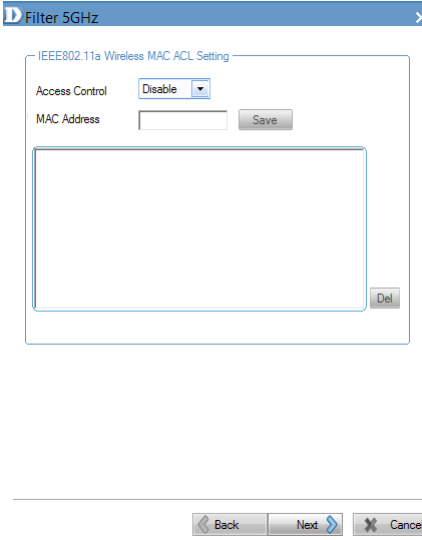
Click **Next** to continue.

The screenshot shows the 'Security 2.4GHz' configuration window. It has a title bar with a close button. The 'Authentication' dropdown is set to 'Open System'. The 'Key Settings' section includes 'Encryption' (Disable), 'Key Size' (64 Bits), 'Key Type' (HEX), and 'Valid Key' (First). There is a 'Key Value' text field. The 'WPA' section includes 'Cipher Type' (AUTO), 'Group Key Update interval' (1800), 'PassPhrase' text field, 'Radius Server' text field, 'Port' (1812), and 'Radius Secret' text field. At the bottom, there are 'Back', 'Next', and 'Cancel' buttons.

Under the *Filter 5GHz IEEE802.11a Wireless MAC ACL Settings*, select the *Access Control* method, enter a *MAC Address* and click **Save**.

Select an item from the list and click **Del** if you wish to delete it.

Click **Next** to continue.

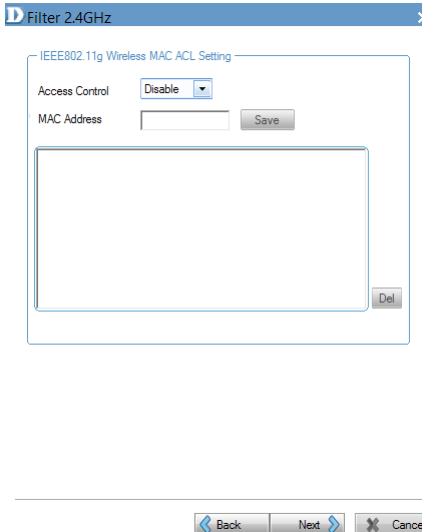


The screenshot shows a dialog box titled "Filter 5GHz". Inside, there is a section titled "IEEE802.11a Wireless MAC ACL Setting". It contains a dropdown menu for "Access Control" set to "Disable", a text input field for "MAC Address", and a "Save" button. Below this is a large empty rectangular area with a "Del" button in its bottom right corner. At the bottom of the dialog, there are three buttons: "Back", "Next", and "Cancel".

Under the *Filter 2.4GHz IEEE802.11g Wireless MAC ACL Settings*, select the *Access Control* method, enter a *MAC Address* and click **Save**.

Select an item from the list and click **Del** if you wish to delete it.

Click **Next** to continue.



The screenshot shows a dialog box titled "Filter 2.4GHz". Inside, there is a section titled "IEEE802.11g Wireless MAC ACL Setting". It contains a dropdown menu for "Access Control" set to "Disable", a text input field for "MAC Address", and a "Save" button. Below this is a large empty rectangular area with a "Del" button in its bottom right corner. At the bottom of the dialog, there are three buttons: "Back", "Next", and "Cancel".

Click the checkbox to enable **Multi SSID 5GHz**. The *Wireless Settings* allow you to index Multi SSID by number or name. Enter an *SSID name*, select the *SSID visibility*, select to enable/disable *WMM settings*, and select a *Security* method.

Key Settings - Select to enable the device, then enter *Key Type*, *Key Size*, *Valid Key* and *Key Value*.

The table below populates with data. Click the **Add** button to add parameters or the **Delete** button to delete parameters.

Click **Next** to continue.

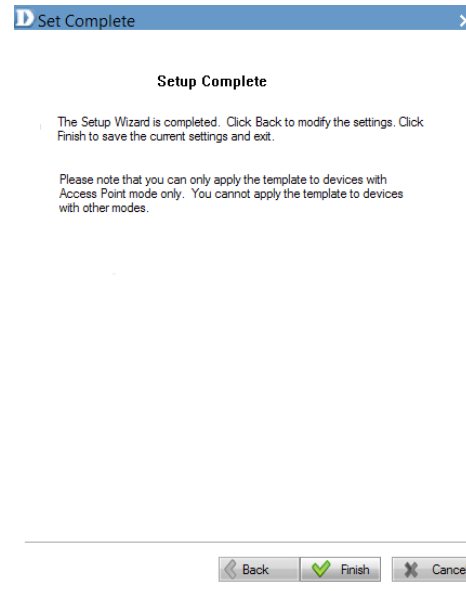
Click the checkbox to enable **Multi SSID 2.4GHz**. The *Wireless Settings* allow you to index Multi SSID by number or name. Enter an *SSID name*, select the *SSID visibility*, select to enable/disable *WMM settings*, and select a *Security* method.

Key Settings - Select to enable the device, then enter *Key Type*, *Key Size*, *Valid Key* and *Key Value*.

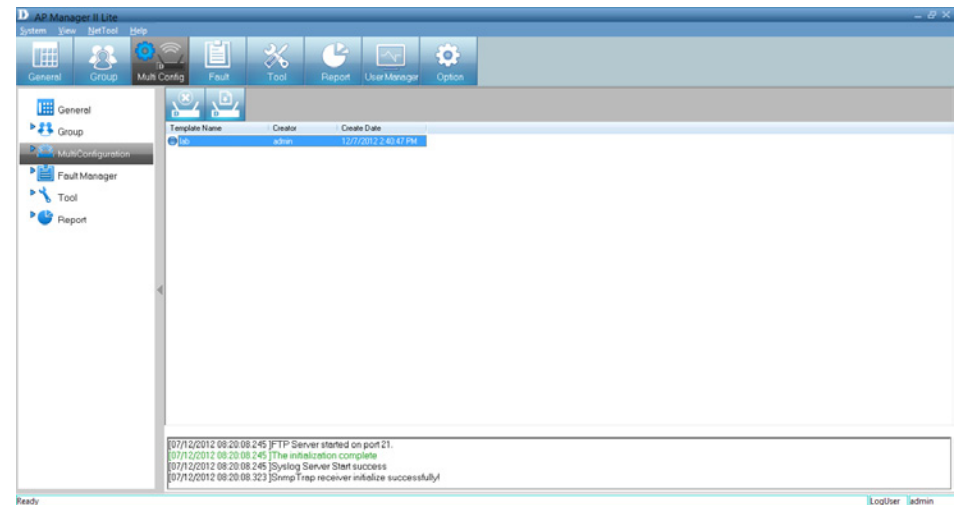
The table below populates with data. Click the **Add** button to add parameters or the **Delete** button to delete parameters.

Click **Next** to continue.

The *Template Setup* is complete. Read the instructions and click **Finish**.



The new template is now in the *Multi Config* window.



Edit a Template

To edit a template, double-click the template, or right-click the template, and click **Edit Item** from the drop-down menu.

D Update

Security 2.4GHz Filter 5GHz Filter 2.4GHz

Multi-SSID 5GHz Multi-SSID 2.4GHz

General System Wireless 5GHz Wireless 2.4GHz Security 5GHz

Basic Info

Name :

Creator :

Time :

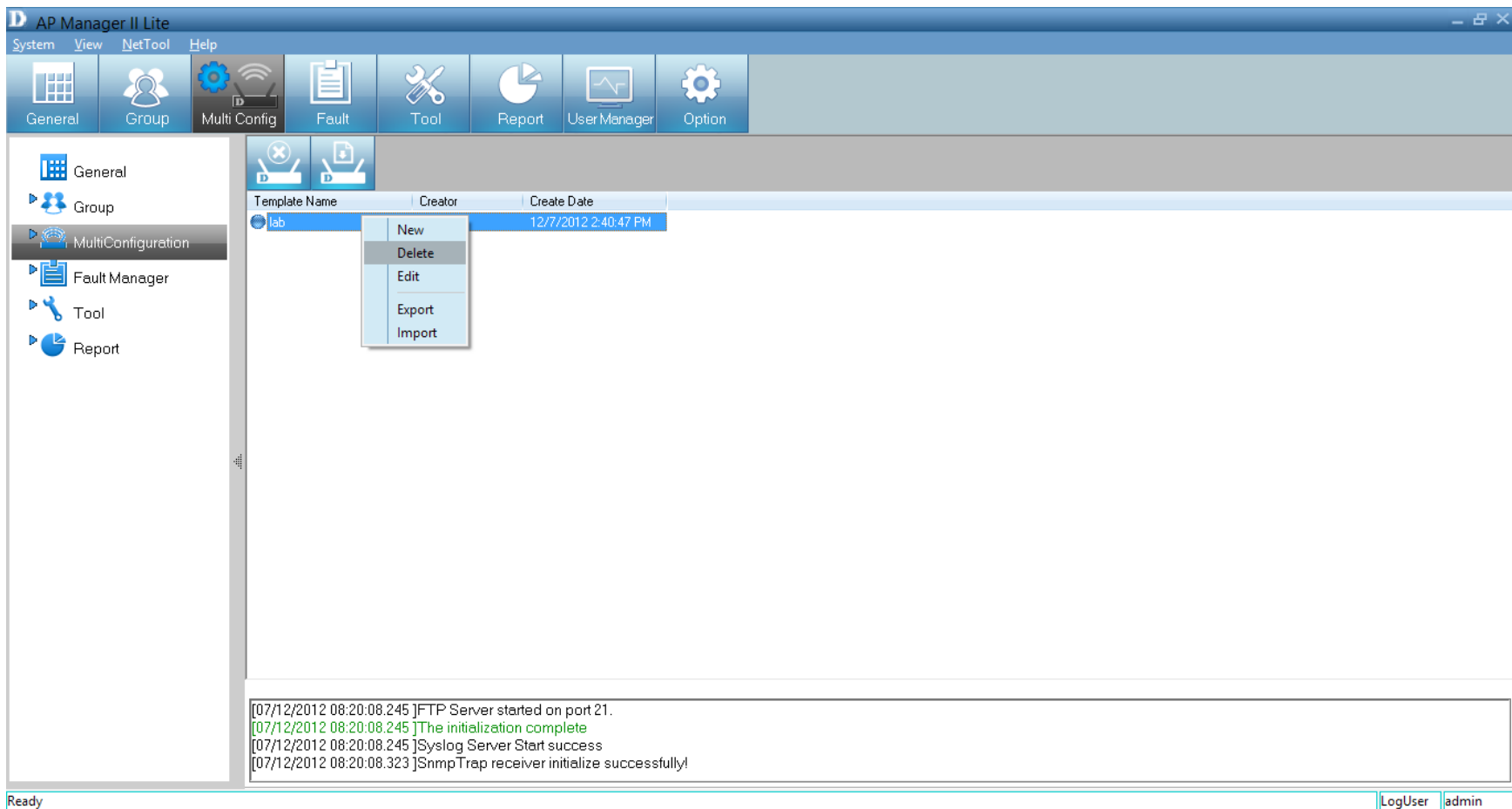
Content Selection

<input checked="" type="checkbox"/> System		
<input checked="" type="checkbox"/> Wireless	2.4GHz <input checked="" type="checkbox"/>	5GHz <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Security	2.4GHz <input checked="" type="checkbox"/>	5GHz <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Filter	2.4GHz <input checked="" type="checkbox"/>	5GHz <input checked="" type="checkbox"/>
<input checked="" type="checkbox"/> Multi_SSID	2.4GHz <input checked="" type="checkbox"/>	5GHz <input checked="" type="checkbox"/>

Ok Cancel

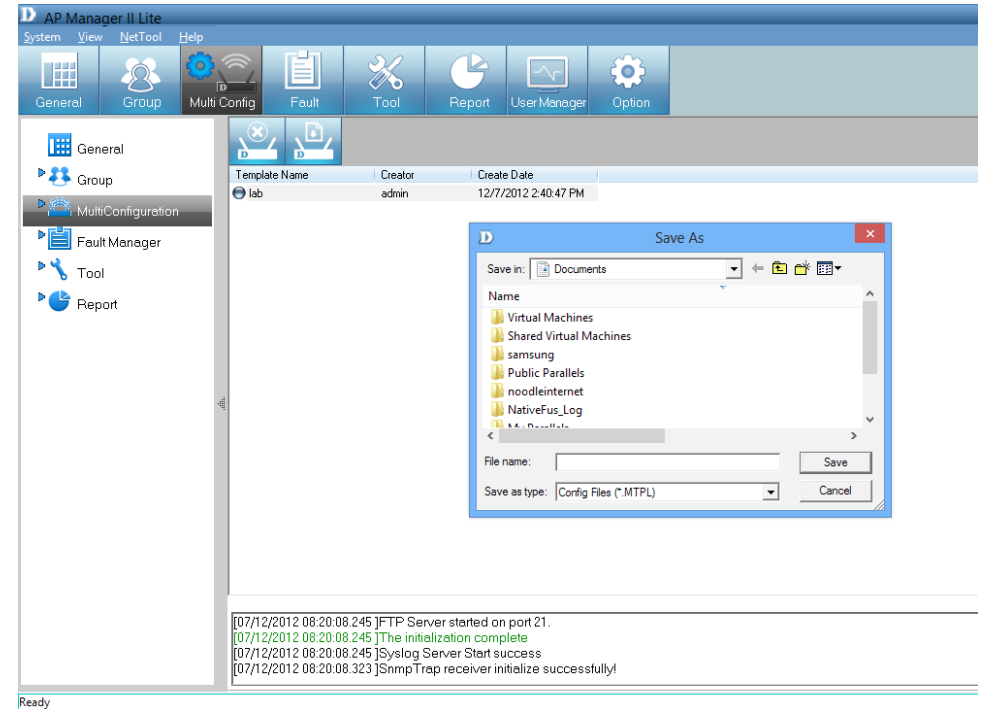
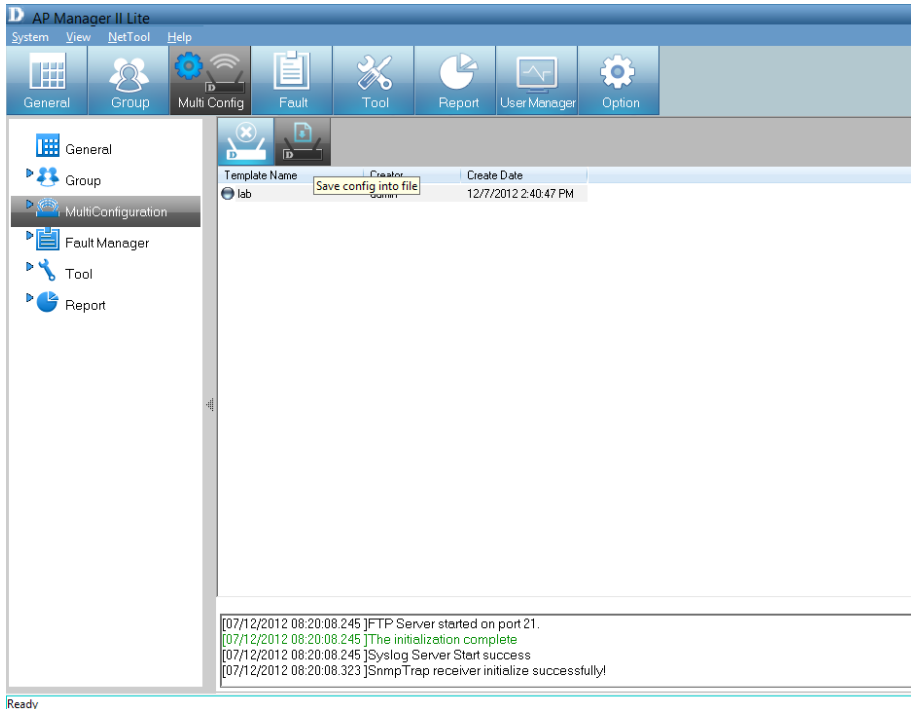
Delete a Template

To delete an existing template, double-click the template, or right-click the template, and select the **Delete Item** from the drop-down menu or click the **Delete** icon.



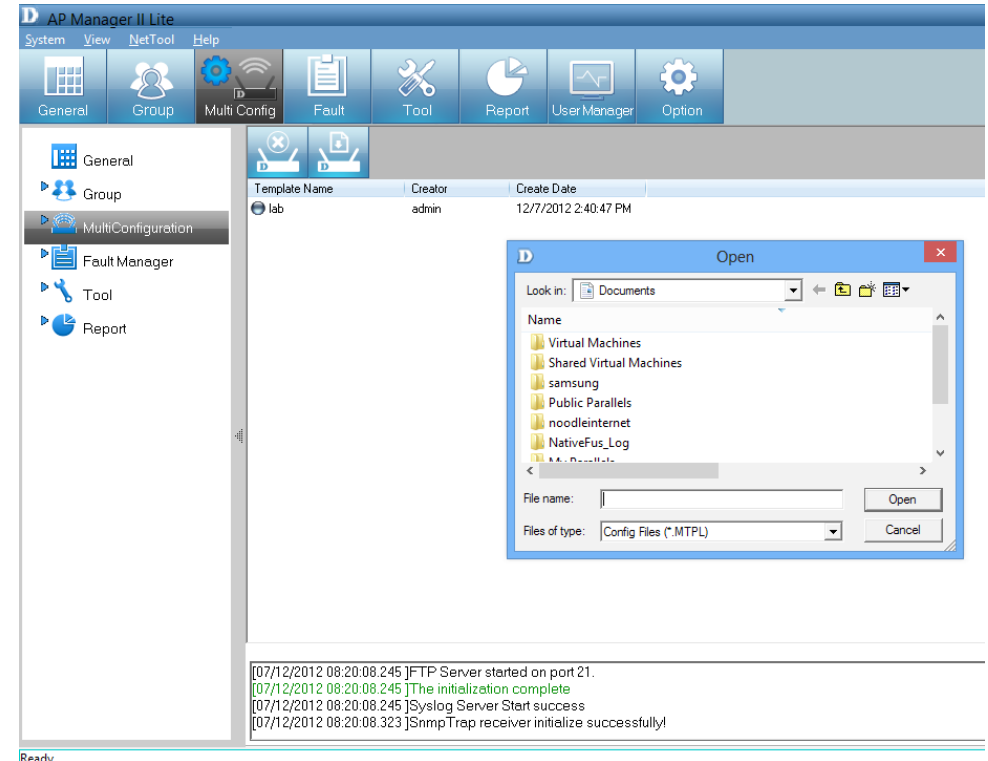
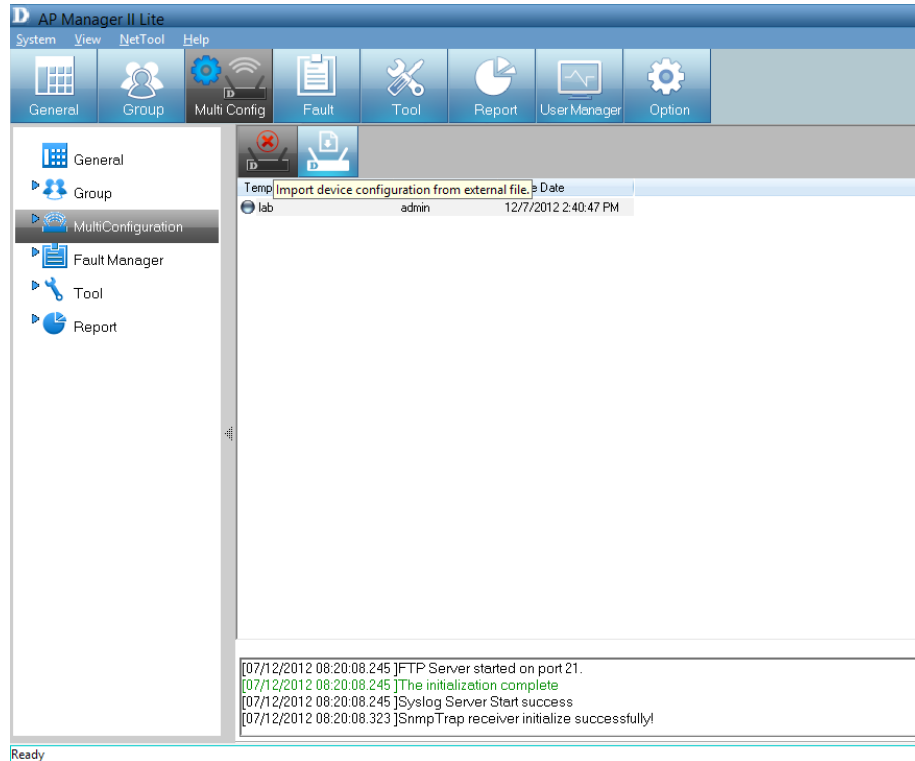
Save Configuration

To save the configuration file, click the **Save** icon above the template window. A pop-up menu will appear with save settings.



Import Configuration

To import a configuration file, click the **Import File** icon above the template window. A pop-up window will appear, allowing you to browse your computer for configuration files. When you have located your configuration files, click the file the click **Open**.



Section 4 - Configuration

When you scroll through the *Multi Configuration* options, you will notice that it has a *Template* folder. The *Template* folder is the folder you created in previous pages.

Click **Task Scheduler** to see the main configuration options - *Config Comparison*, *Upgrade Firmware (FW)*, and *MutiConfig*. To enable each one, click the **Enable** button.

The screenshot displays the AP Manager II Lite software interface. The main window title is "AP Manager II Lite". The menu bar includes "System", "View", "NetTool", and "Help". The toolbar contains icons for "General", "Group", "Multi Config", "Fault", "Tool", "Report", "User Manager", and "Option".

The left sidebar shows a tree view with the following items: "General", "Group", "MultiConfiguration" (expanded), "Template", "Task Schedule" (selected), "Fault Manager", "Tool", and "Report".

The main content area is divided into three sections, each with a "New", "Edit", and "Delete" button:

- Config Comparison:** Radio buttons for "Disable" (selected) and "Enable". Below is a table with columns: Task Name, Activity, Next Run Time, Status, and Result.
- Upgrade FW:** Radio buttons for "Disable" (selected) and "Enable". Below is a table with columns: Task Name, Activity, Next Run Time, Status, and Result.
- MultiConfig:** Radio buttons for "Disable" (selected) and "Enable". Below is a table with columns: Task Name, Activity, Next Run Time, Status, and Result.

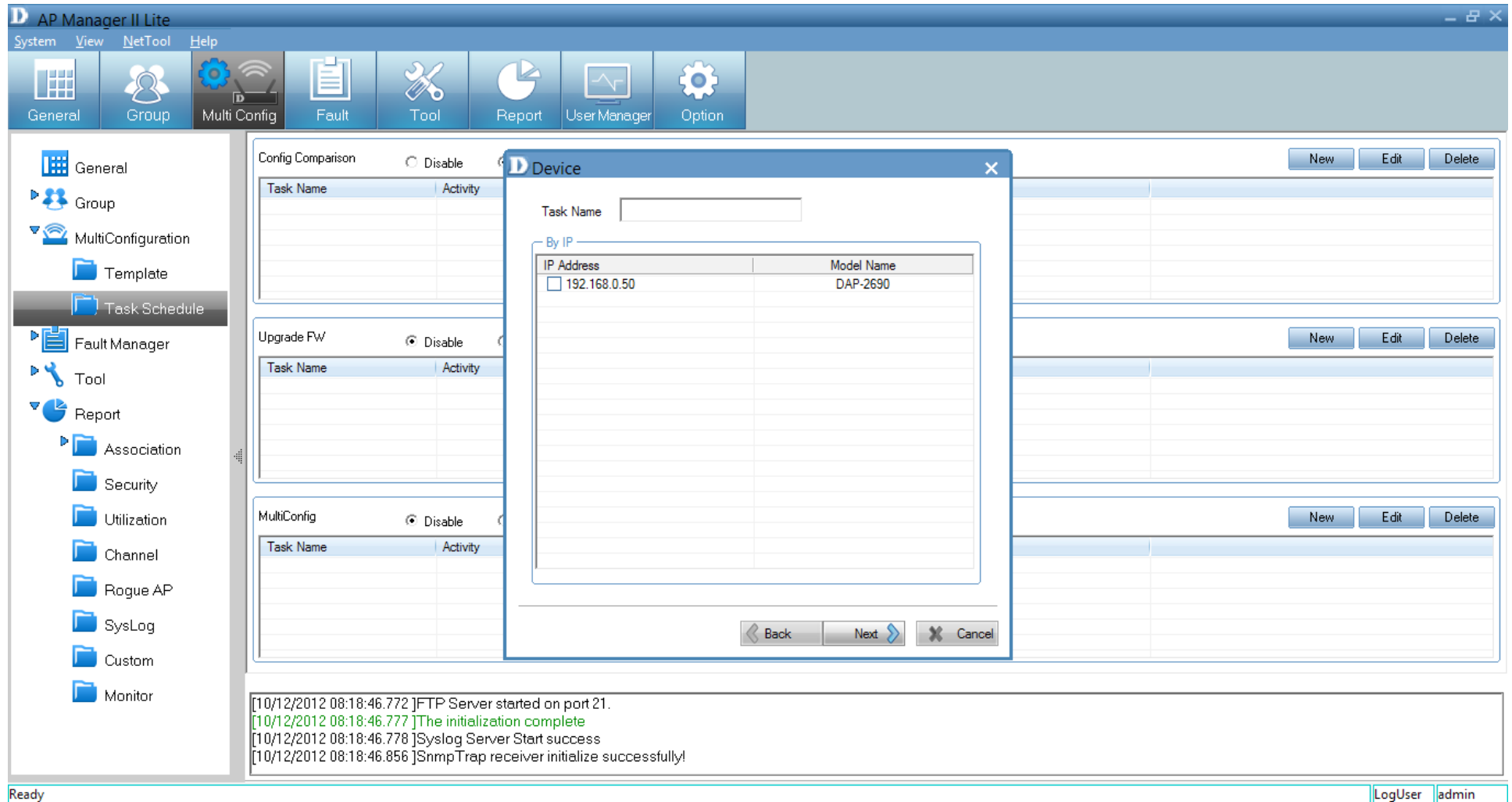
At the bottom of the main content area, there is a log window showing the following messages:

```
[07/12/2012 08:20:08.245 ]FTP Server started on port 21.  
[07/12/2012 08:20:08.245 ]The initialization complete  
[07/12/2012 08:20:08.245 ]Syslog Server Start success  
[07/12/2012 08:20:08.323 ]SnmpTrap receiver initialize successfully!
```

The status bar at the bottom left shows "Ready". The bottom right corner has "LogUser" and "admin" buttons.

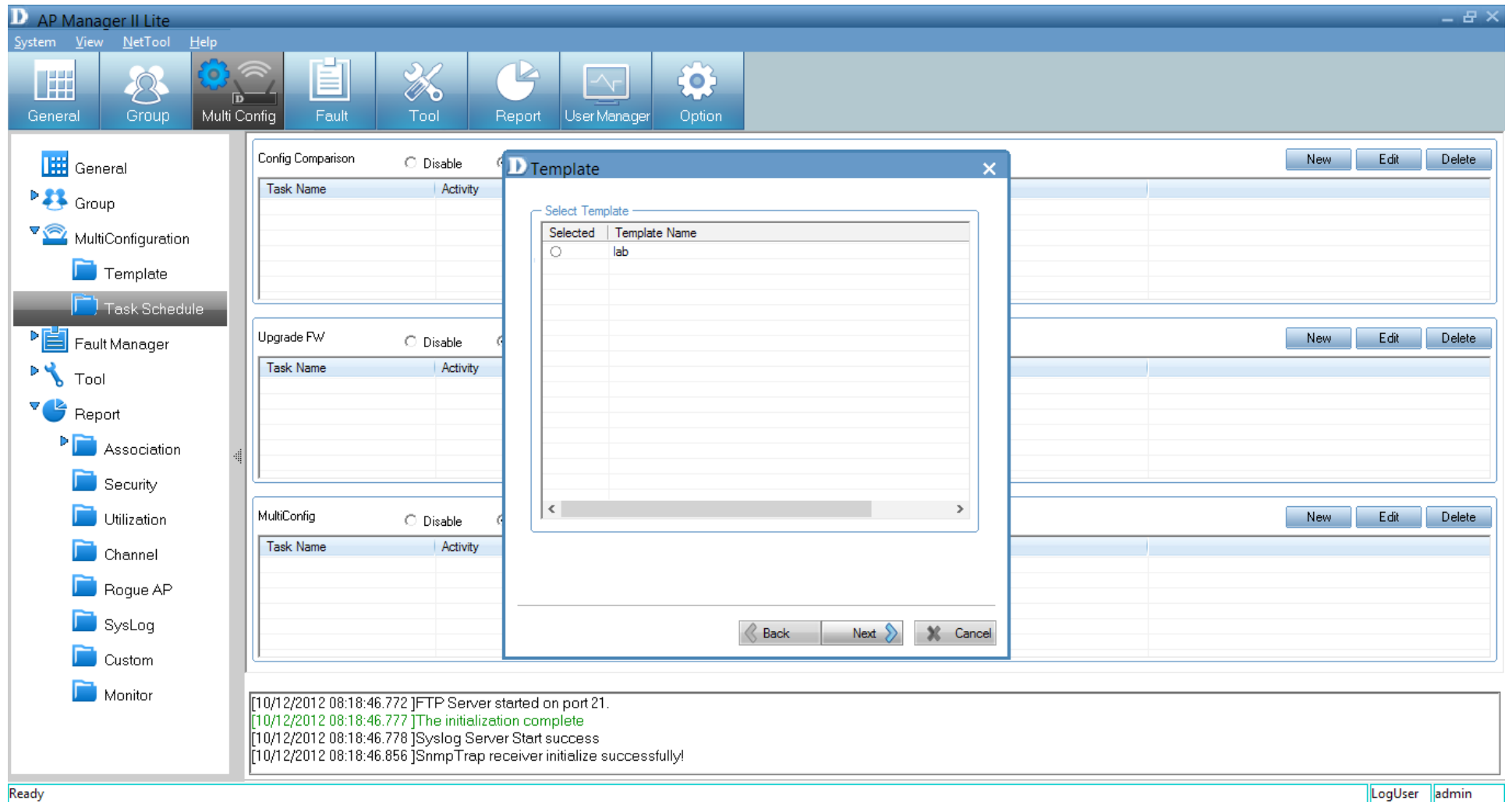
For the *Config Comparison*, click the **Enable** button. Then click **New** and view the options.

Give the task a name. Select the devices and click **Next**.



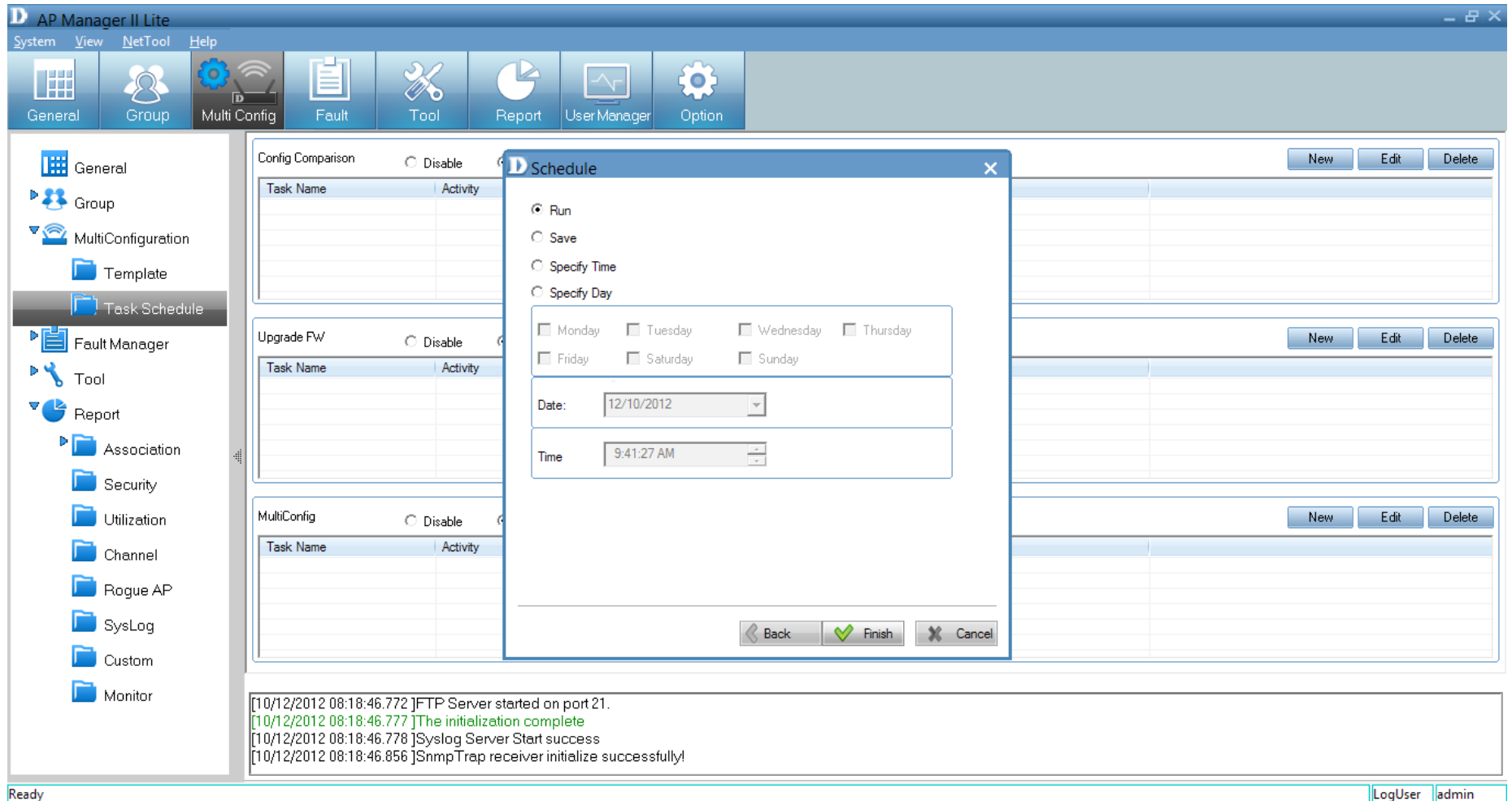
Select a *Template* from the list provided.

Click **Next** to continue.



Select a *Schedule* time frame - Select either **Run**, **Save**, **Specify Time** or **Specify Day**. Then enter the **Date** and **Times**.

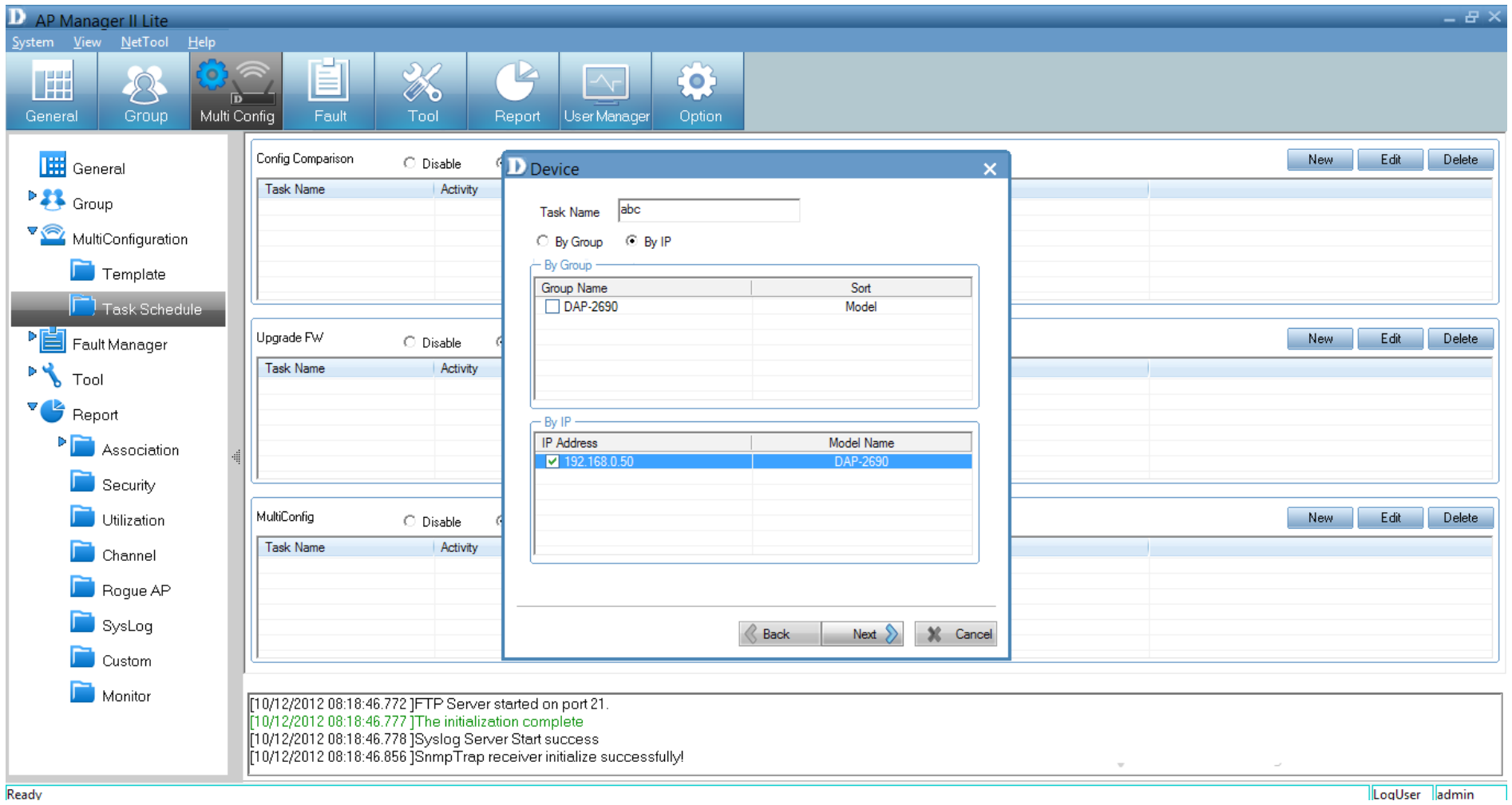
Click **Finish** when complete.



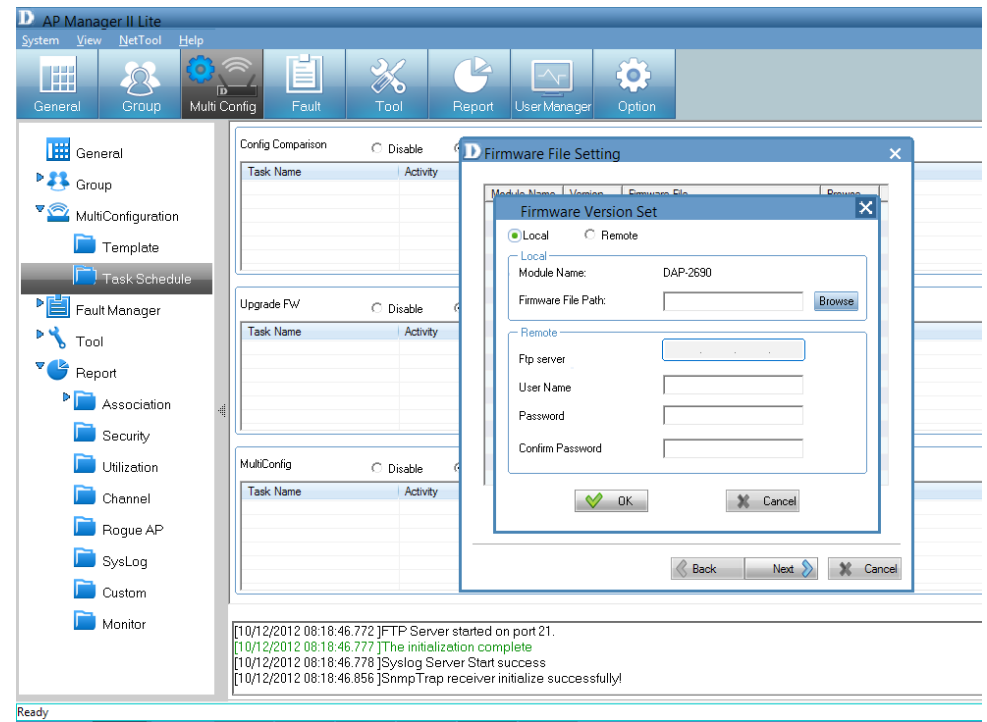
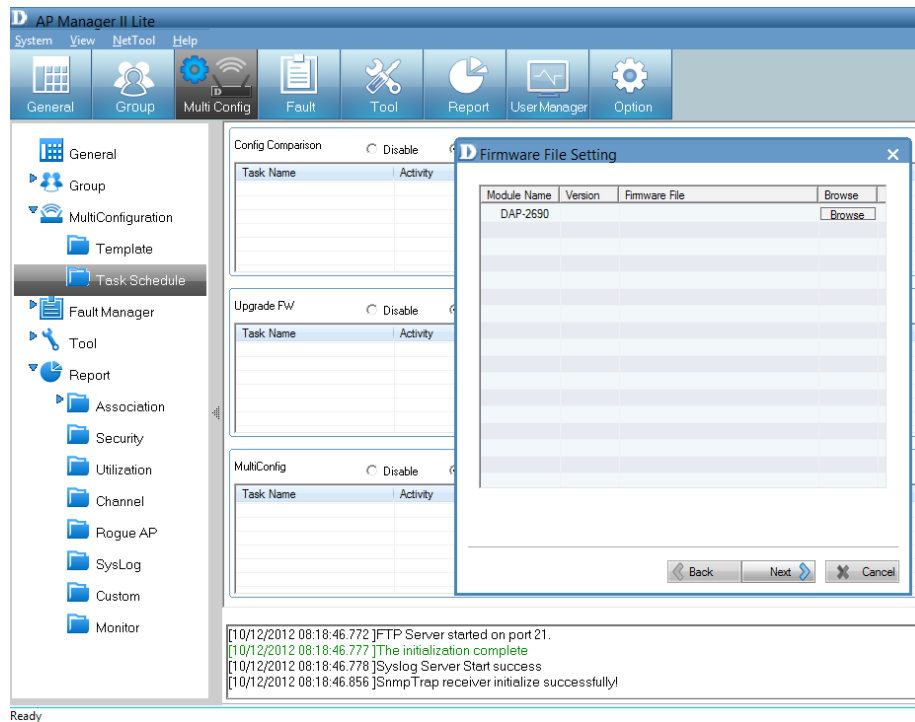
To upgrade the firmware, click **Upgrade Firmware**. Then click the **Enable** button to view the devices available.

Give the *Task* a name. Select to upgrade by **Group** or by **IP**.

Click **Next** to continue.



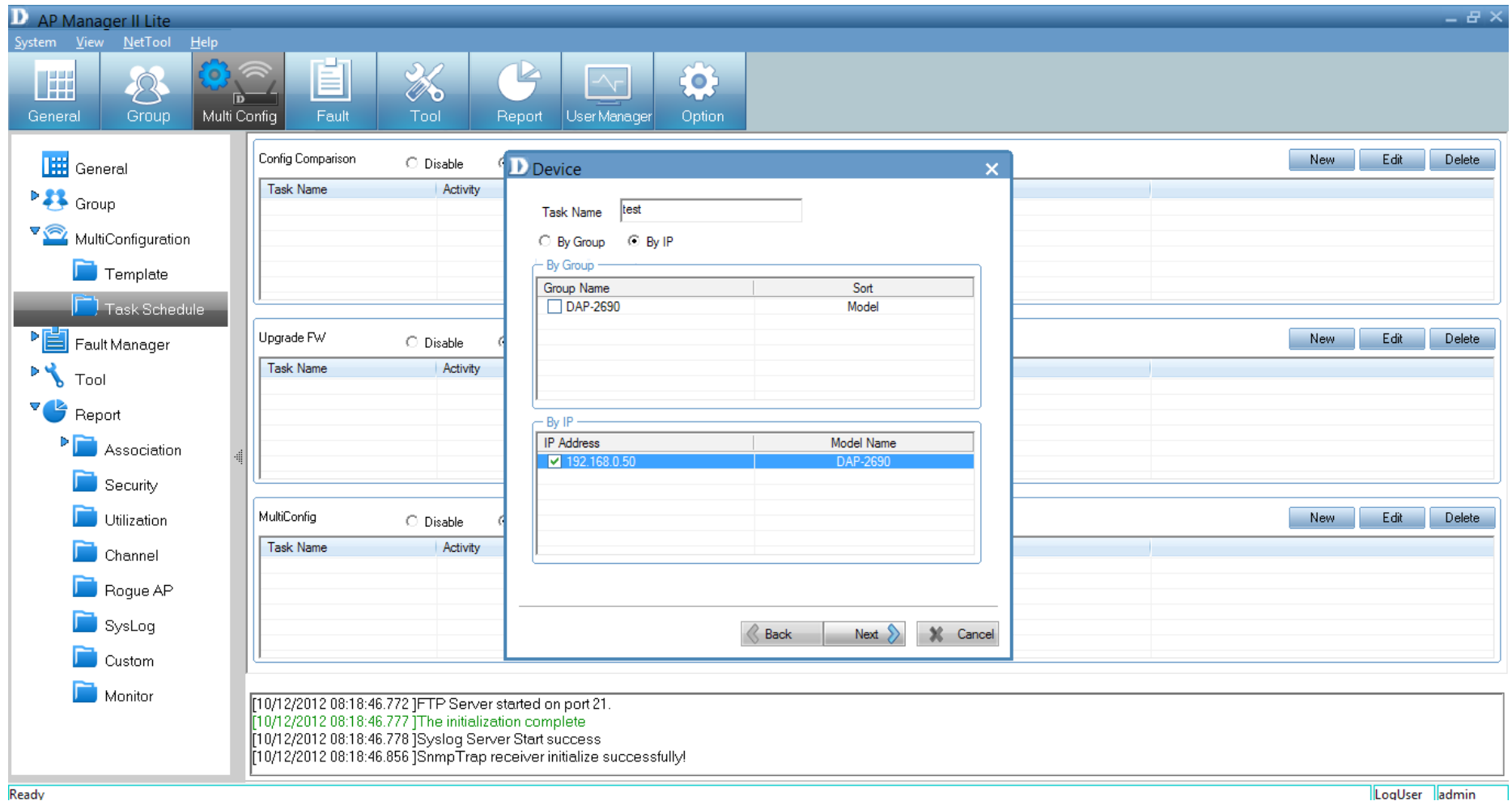
Under *Firmware File Settings*, click the **Browse** button next to your device. Select the new firmware, and click **Next**.



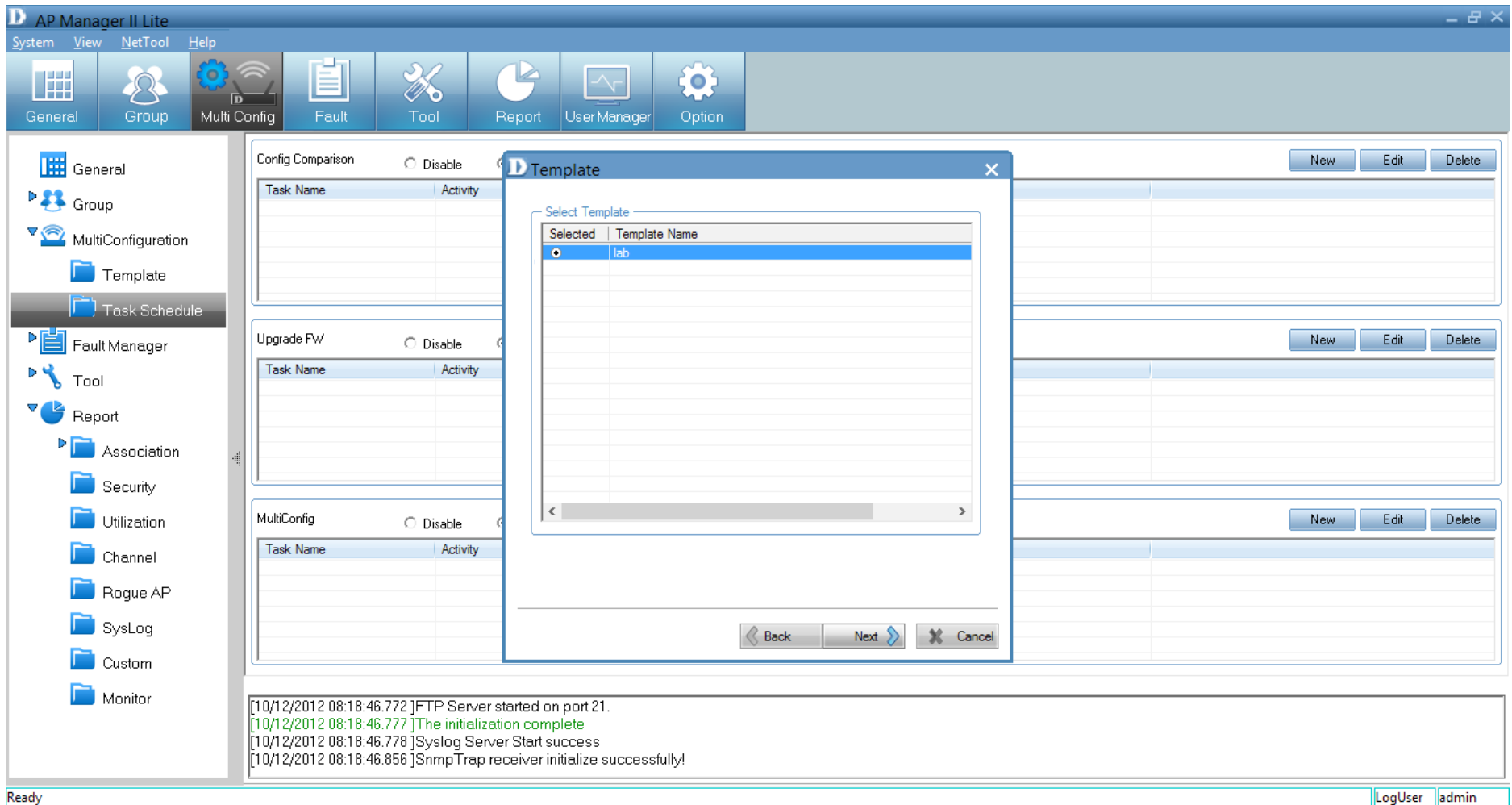
Under the *MultiConfig* section in the table, click the **Enable** button and then click **New**.

Under *Device* enter a *Task Name*, select by **Group** or **IP**.

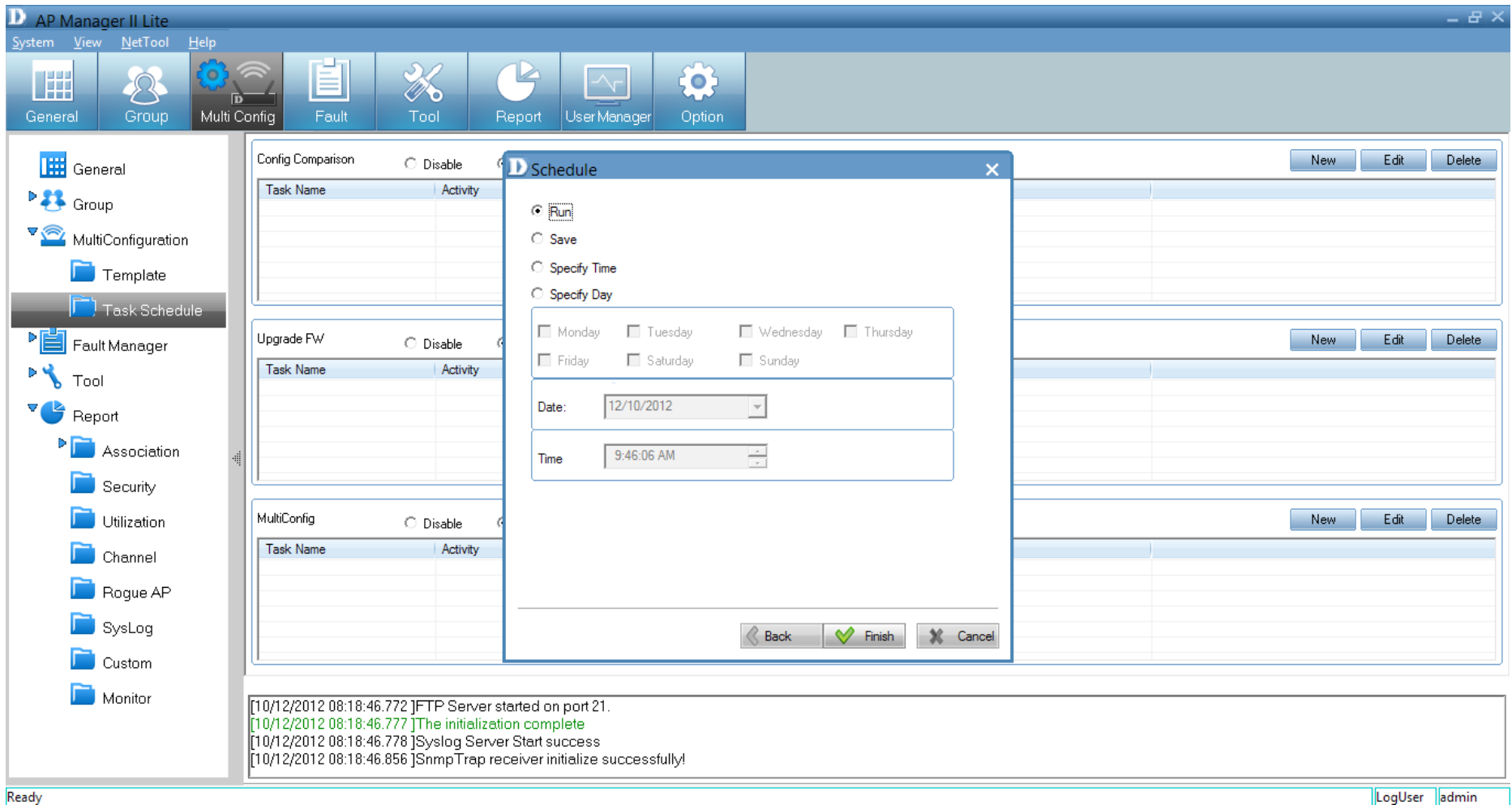
Click **Next** to continue.



Under *Template*, select a template for this configuration and click **Next**.



Under *Schedule*, select one of the options provided and click **Finish**.



Fault Manager

The *Fault Manager* can be accessed from both the side panel and the top panel. Click this icon to access details relating to faults experienced using the access point.

The screenshot shows the 'AP Manager II Lite' software interface. The 'Fault Manager' section is active, displaying a table of events. The table has the following data:

Event Name	Event Type	Event Level	Date Time	Source	Description	Content
PollingFailed	System	Notice	2012-12-06 09:08:51	192.168.0.50	Indicate the m...	
PollingFailed	System	Notice	2012-12-06 09:04:30	192.168.0.50	Indicate the m...	

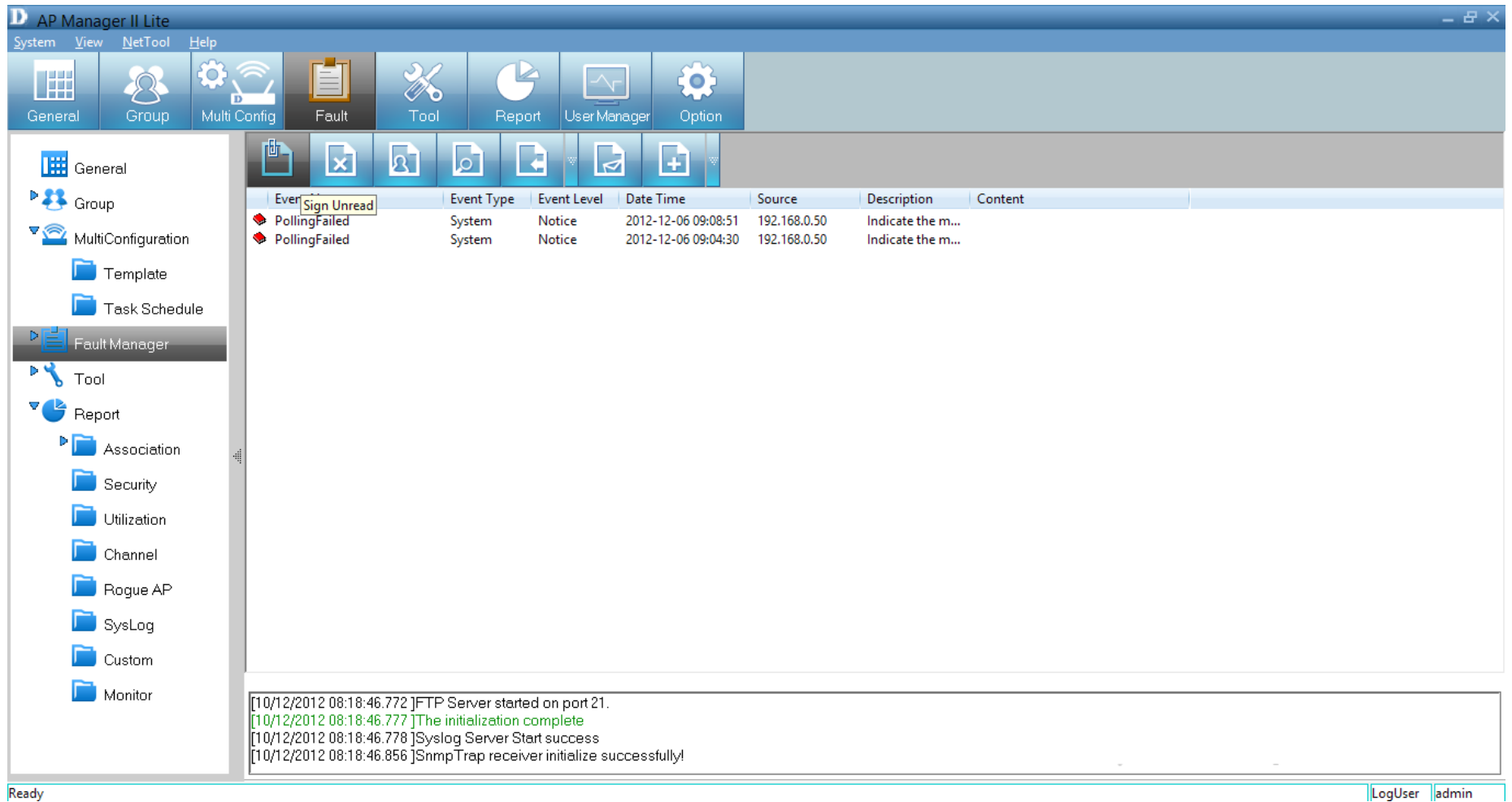
Below the table, a log window displays the following messages:

```
[10/12/2012 08:18:46.772 ]FTP Server started on port 21.
[10/12/2012 08:18:46.777 ]The initialization complete
[10/12/2012 08:18:46.778 ]Syslog Server Start success
[10/12/2012 08:18:46.856 ]SnmpTrap receiver initialize successfully!
```

The status bar at the bottom shows 'Ready' and 'LogUser admin'.

Unread

Click this icon to mark messages as **Unread**.



The screenshot displays the AP Manager II Lite software interface. The main window is titled "AP Manager II Lite" and features a menu bar with "System", "View", "NetTool", and "Help". Below the menu bar is a toolbar with icons for "General", "Group", "Multi Config", "Fault", "Tool", "Report", "User Manager", and "Option". The "Fault" icon is highlighted. On the left side, there is a navigation tree with categories: "General", "Group", "MultiConfiguration" (containing "Template" and "Task Schedule"), "Fault Manager" (selected), "Tool", "Report" (containing "Association", "Security", "Utilization", "Channel", "Rogue AP", "SysLog", "Custom", and "Monitor").

The main content area shows a table of events. The "Sign Unread" button is highlighted. The table has the following data:

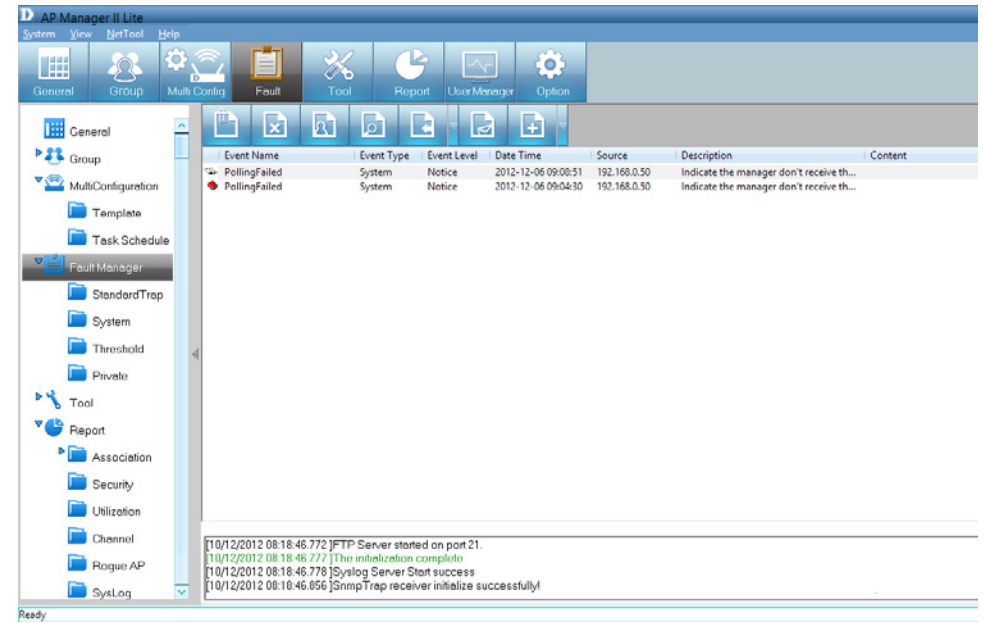
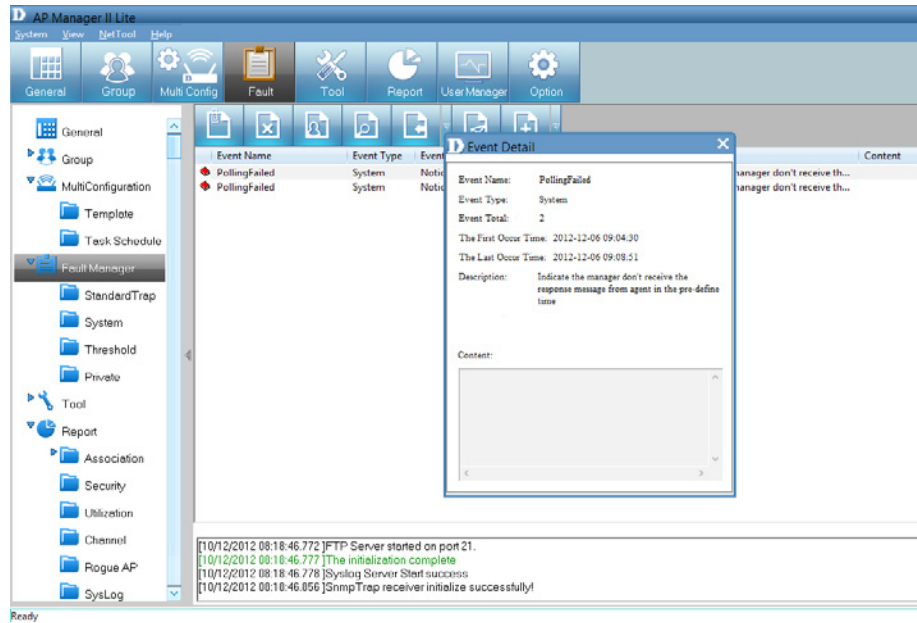
Event	Event Type	Event Level	Date Time	Source	Description	Content
PollingFailed	System	Notice	2012-12-06 09:08:51	192.168.0.50	Indicate the m...	
PollingFailed	System	Notice	2012-12-06 09:04:30	192.168.0.50	Indicate the m...	

At the bottom of the window, there is a log window showing the following messages:

```
[10/12/2012 08:18:46.772]FTP Server started on port 21.  
[10/12/2012 08:18:46.777]The initialization complete  
[10/12/2012 08:18:46.778]Syslog Server Start success  
[10/12/2012 08:18:46.856]SnmpTrap receiver initialize successfully!
```

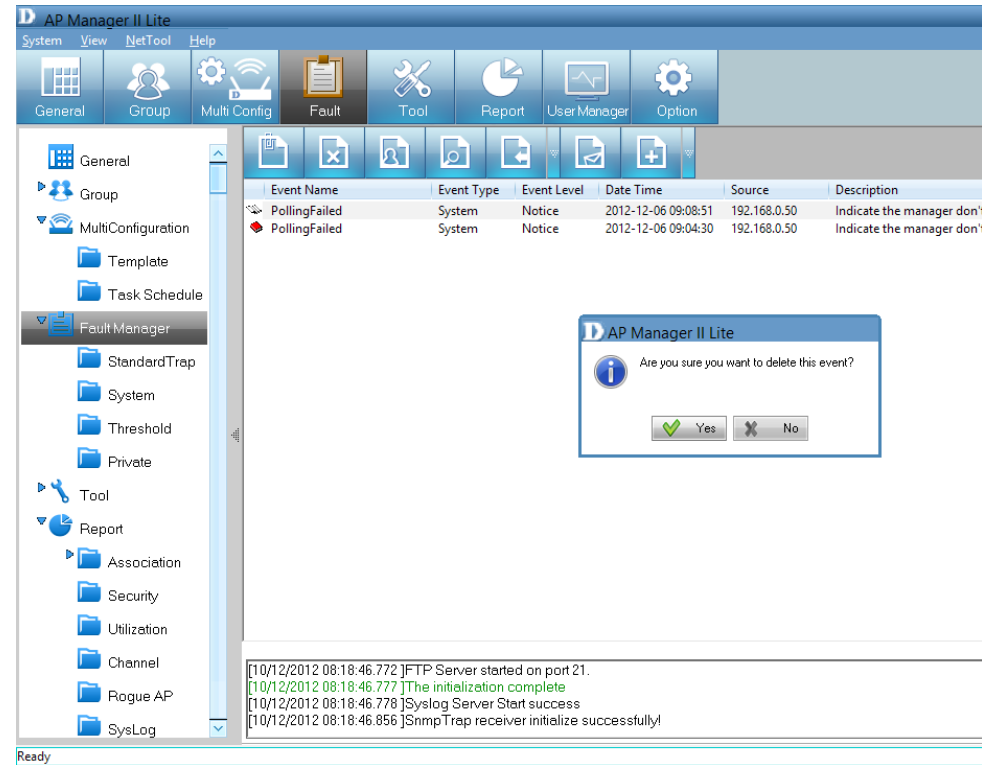
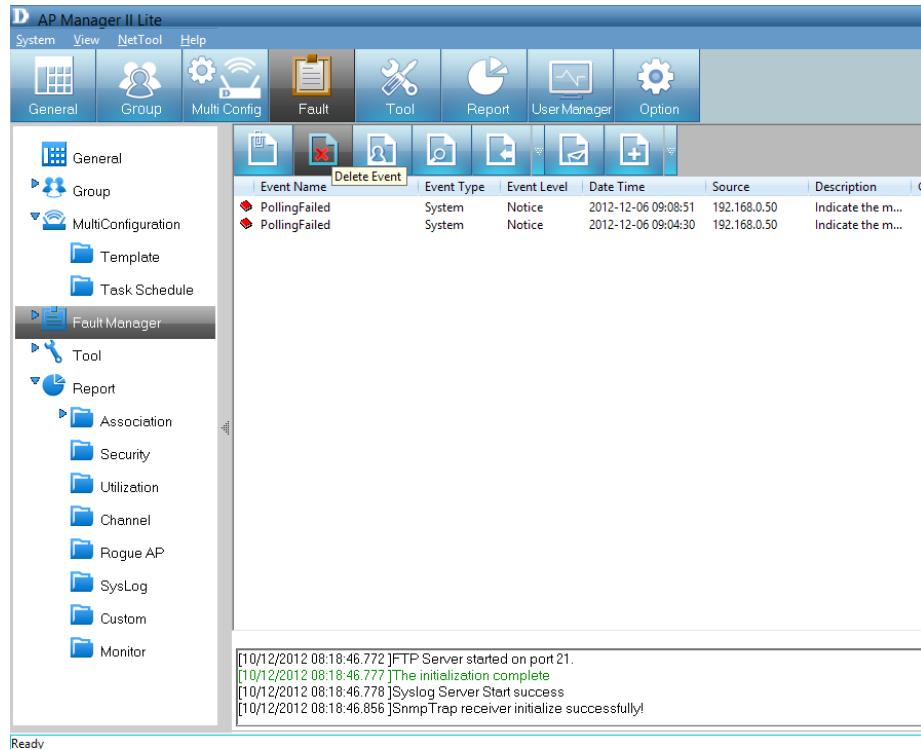
The status bar at the bottom left shows "Ready" and the bottom right shows "LogUser | admin".

Double-click an event to view its details. The icon next to the event will change to an “open book” when event details are accessed.



Delete Event

Click this icon to **Delete** an event. Confirm the delete by clicking **Yes**. Click **No** to exit and do nothing.



Event Settings

Click the icon third from the left above the *Events* window to show **Event Settings**.

The screenshot shows the AP Manager II Lite software interface. The main window displays the 'Event Settings' window, which is the third icon from the left in the toolbar above the Events window. The interface includes a menu bar (System, View, NetTool, Help), a toolbar with icons for General, Group, Multi Config, Fault, Tool, Report, User Manager, and Option. A left sidebar shows a tree view with categories like General, Group, MultiConfiguration, Fault Manager, Tool, Report, and Monitor. The main area displays a table of events with columns for Event Name, Type, Event Level, Date Time, Source, Description, and Content. Below the table is a log window showing system messages.

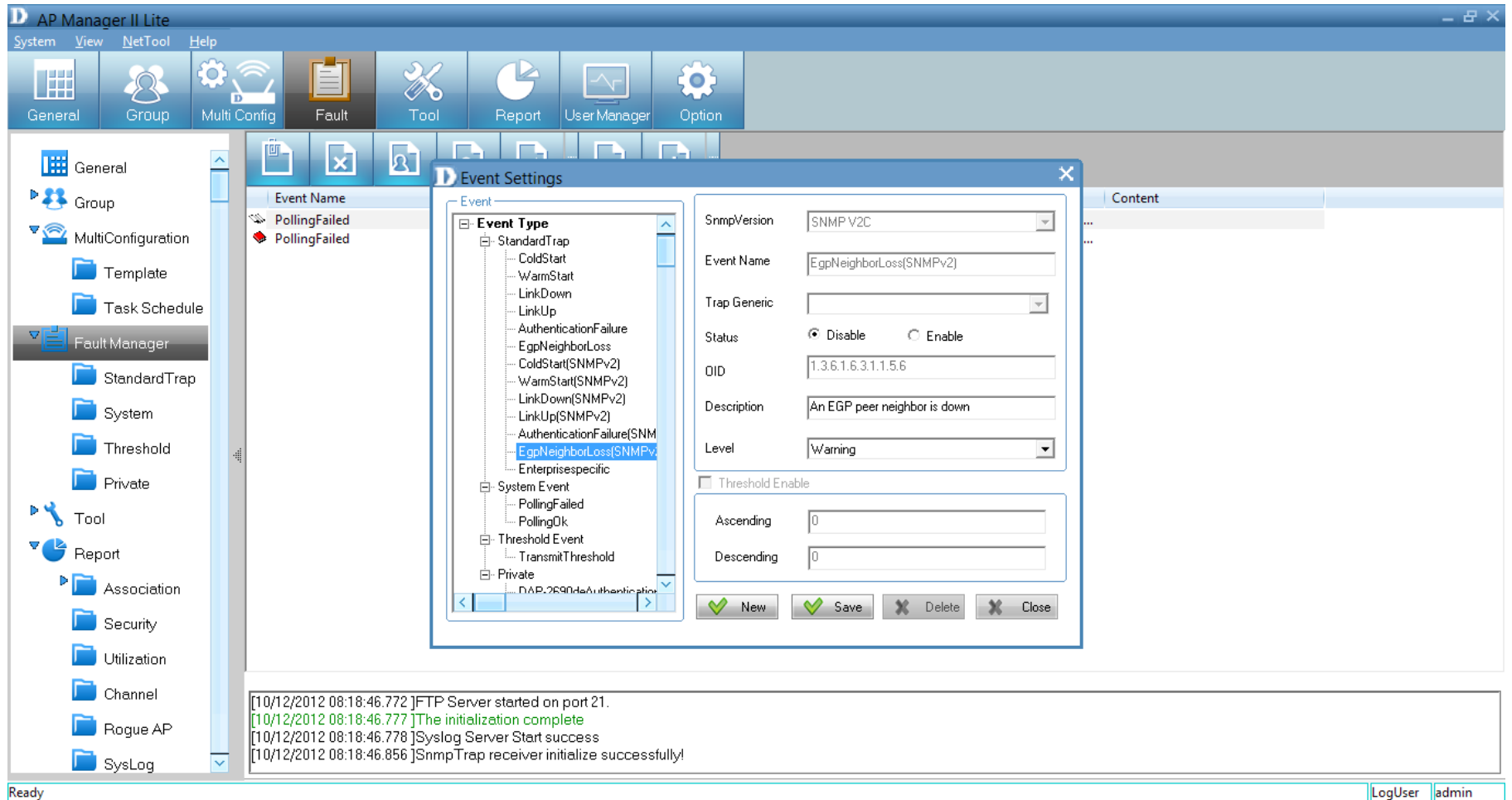
Event Name	Type	Event Level	Date Time	Source	Description	Content
PollingFailed	System	Notice	2012-12-06 09:08:51	192.168.0.50	Indicate the m...	
PollingFailed	System	Notice	2012-12-06 09:04:30	192.168.0.50	Indicate the m...	

Log window content:

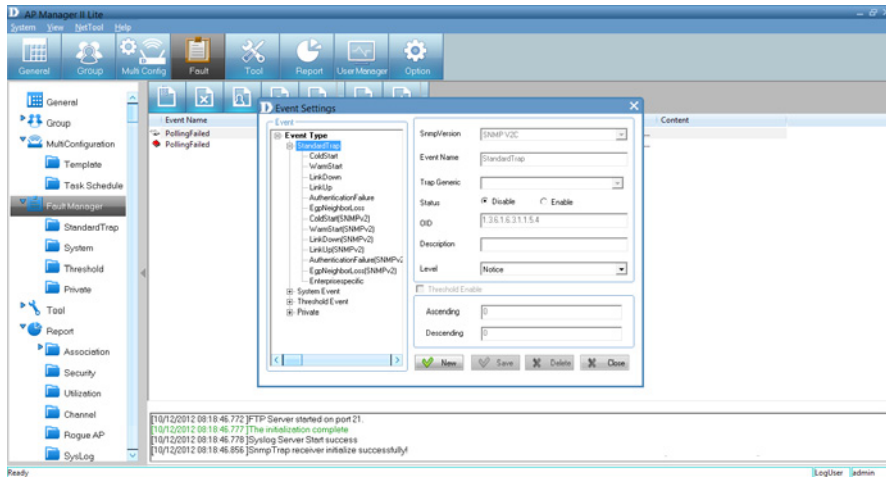
```
[10/12/2012 08:18:46.772 ]FTP Server started on port 21.
[10/12/2012 08:18:46.777 ]The initialization complete
[10/12/2012 08:18:46.778 ]Syslog Server Start success
[10/12/2012 08:18:46.856 ]SnmpTrap receiver initialize successfully!
```

Ready LogUser | admin

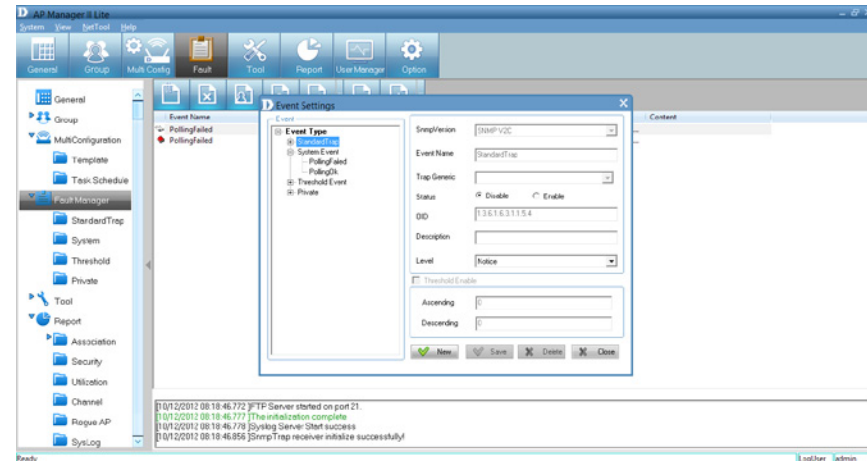
The main *Event Settings* panel will open.



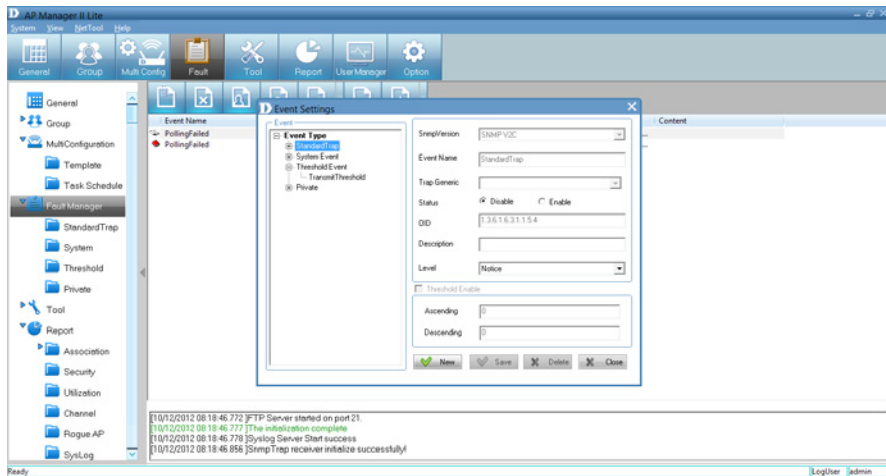
The *Events Settings* panel consists of four main *Event Types*.



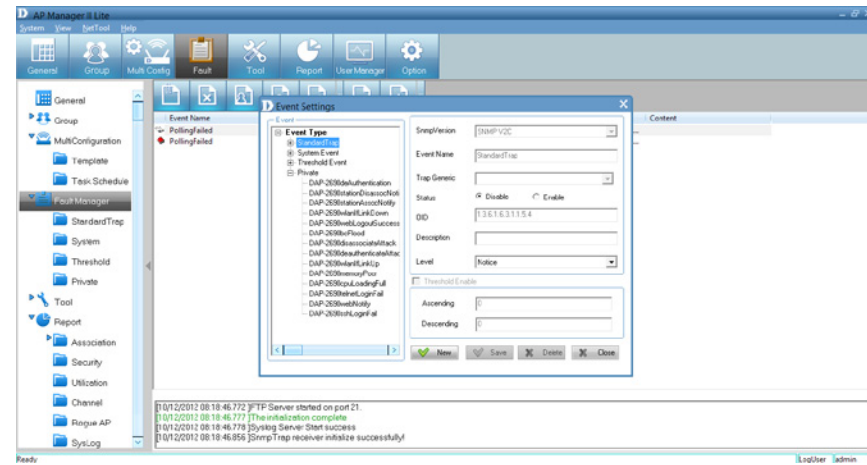
Standard Trap



System Event



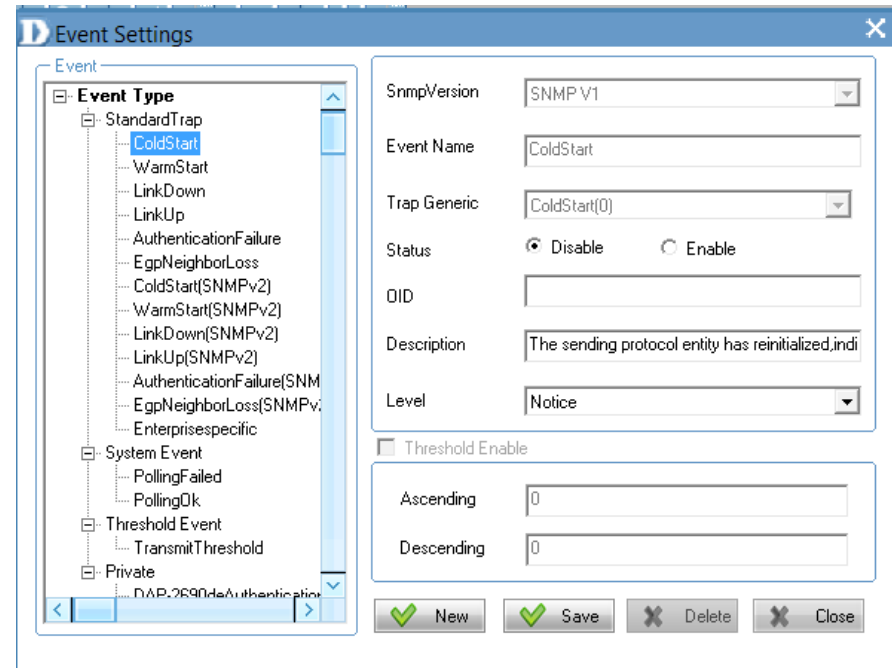
Threshold Event



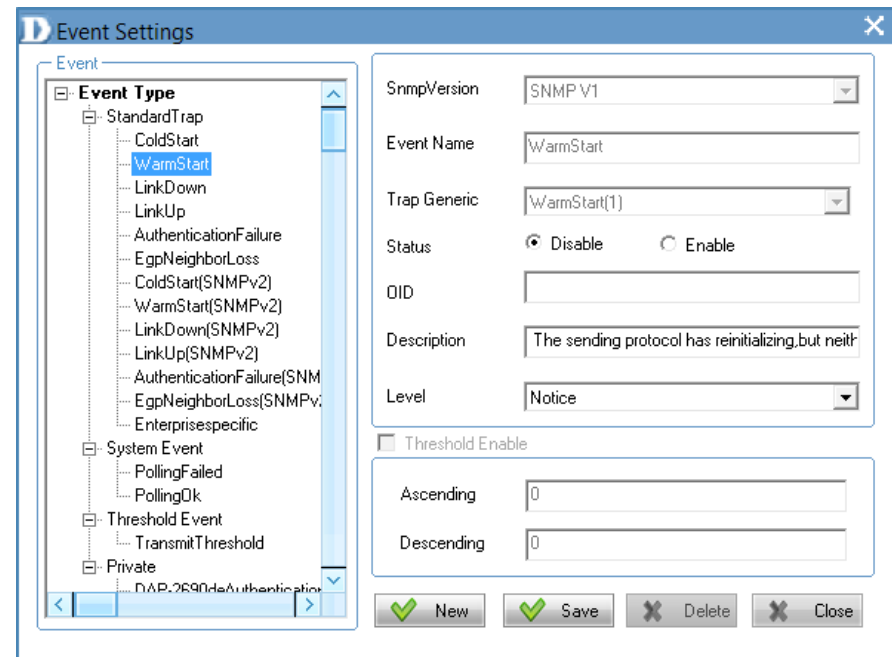
Private

Standard Trap - The standard trap view window displays the standard trap data received from access points and consists of the following options:

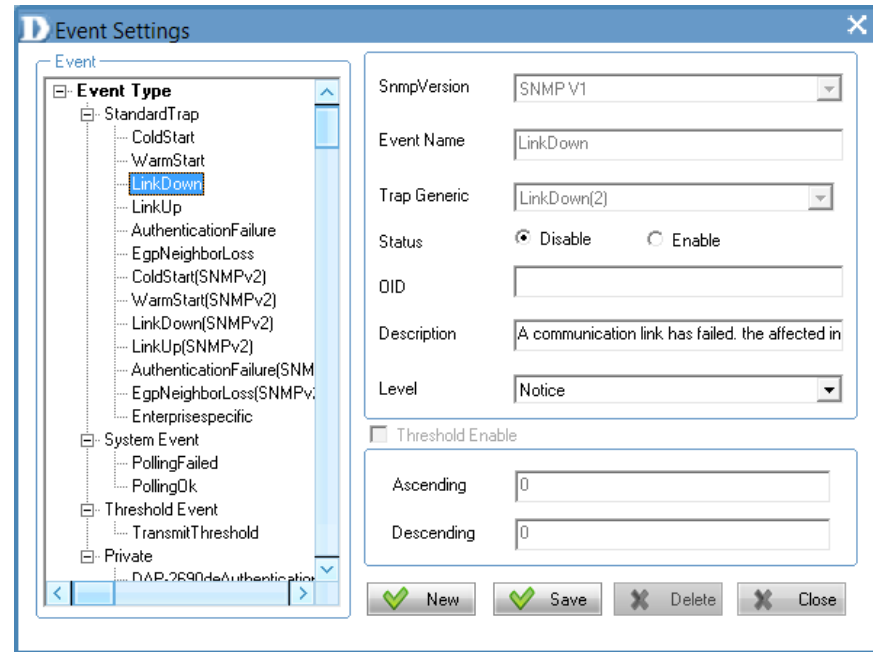
ColdStart



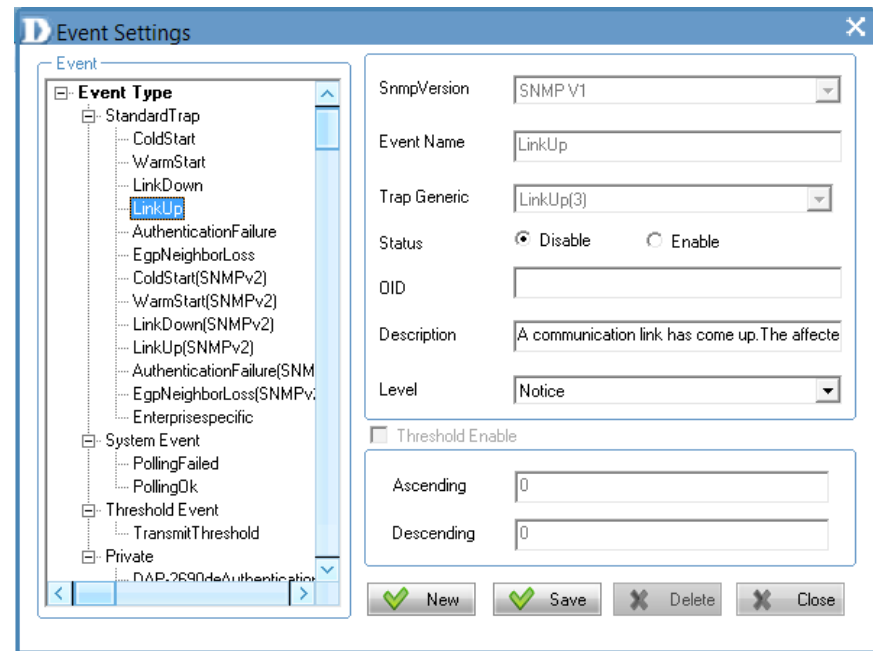
WarmStart



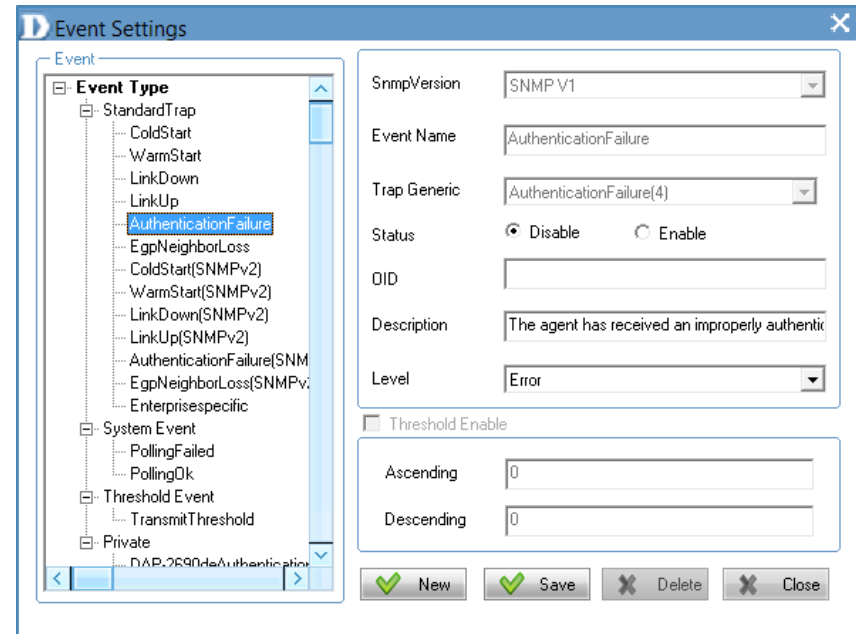
LinkDown



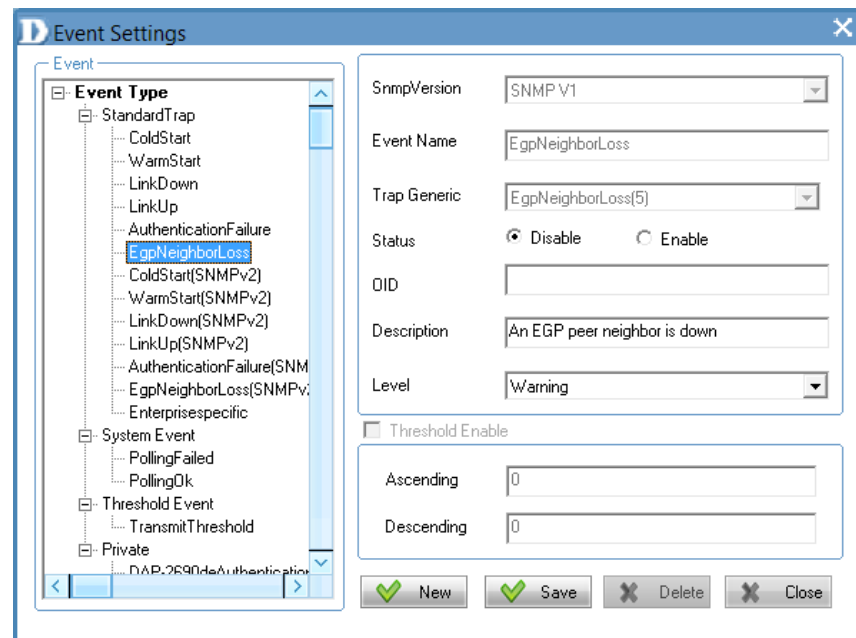
LinkUp



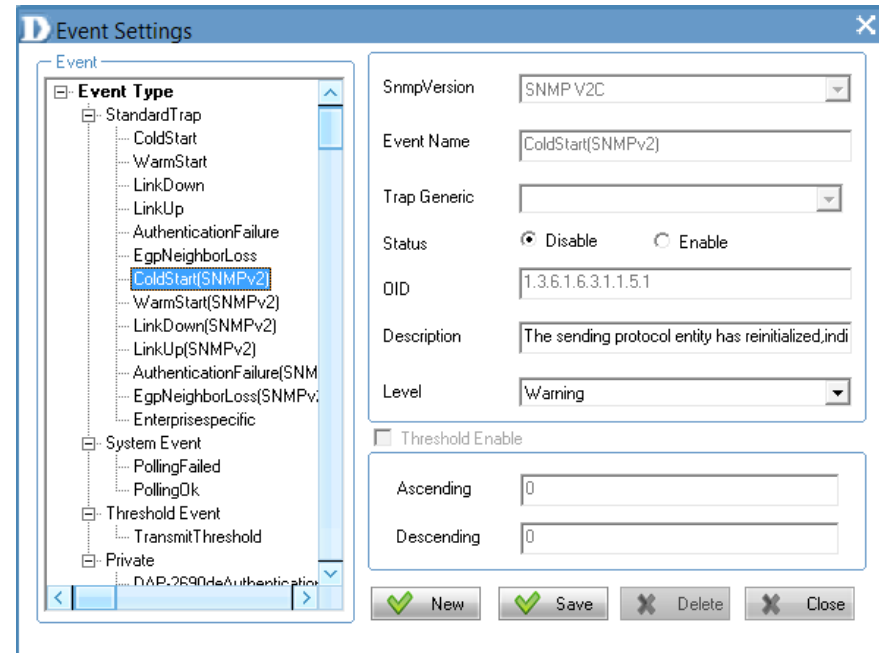
AuthenticationFailure



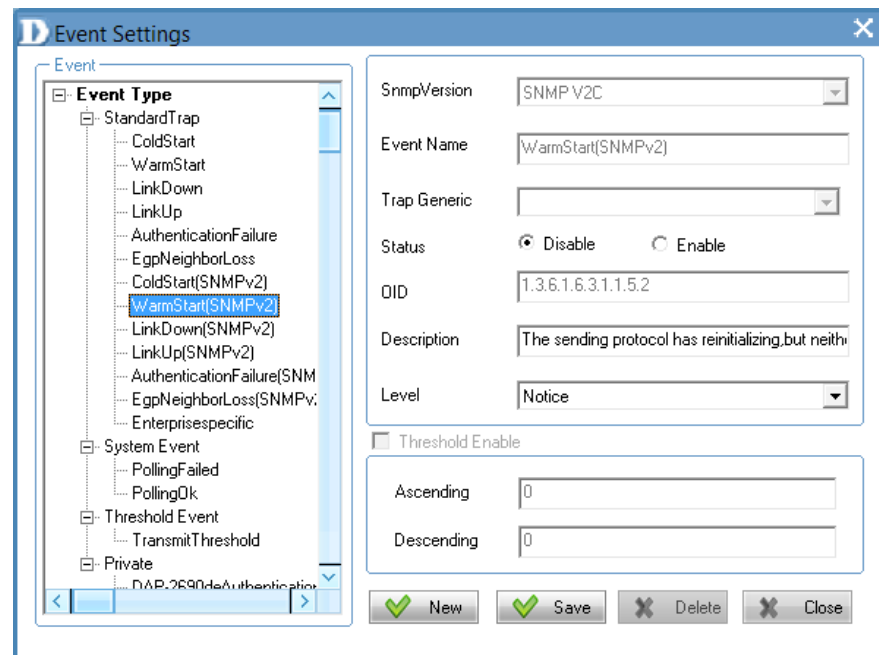
EgpNeighborLoss



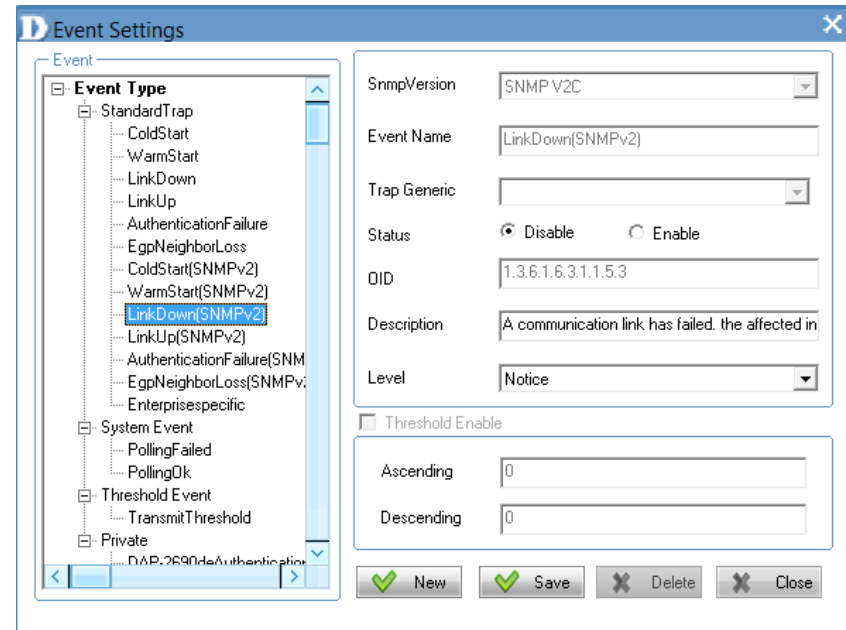
ColdStart (SNMPv2)



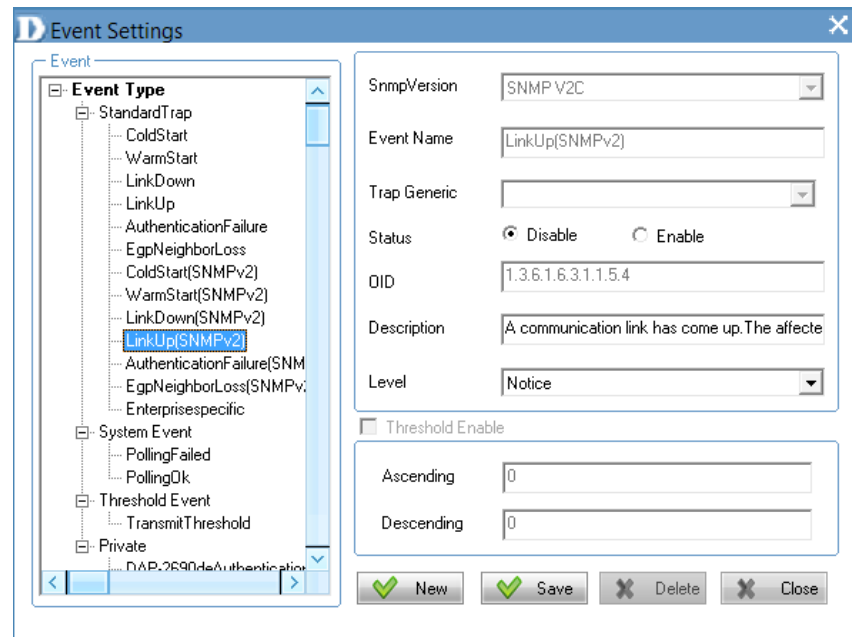
WarmStart (SNMPv2)



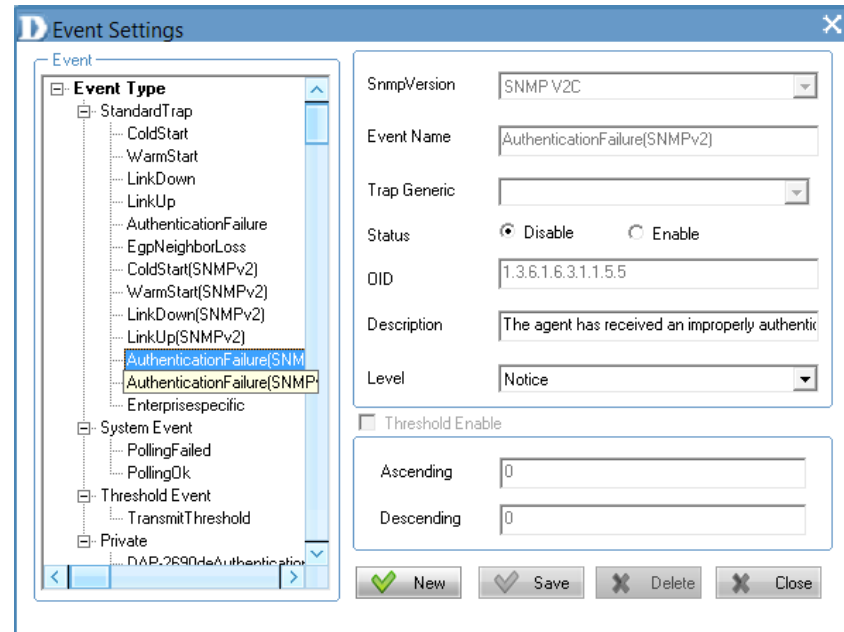
LinkDown(SNMPv2)



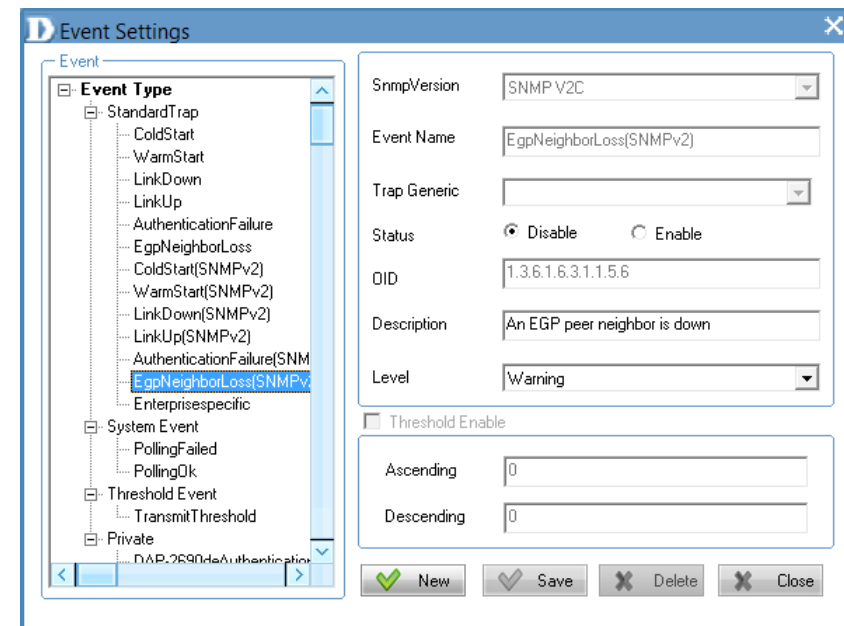
LinkUp(SNMPv2)



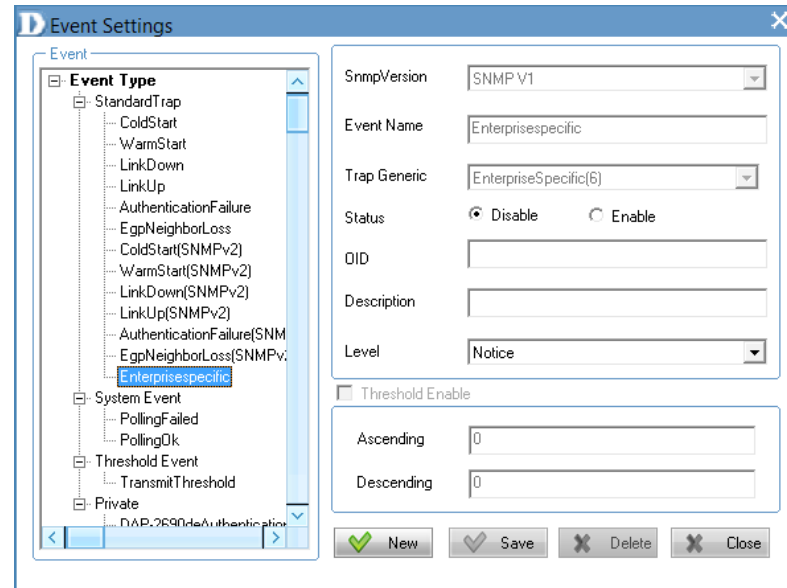
AuthenticationFailure(SNMPv2)



EgpNeighborLoss(SNMPv2)



Enterprisespecific

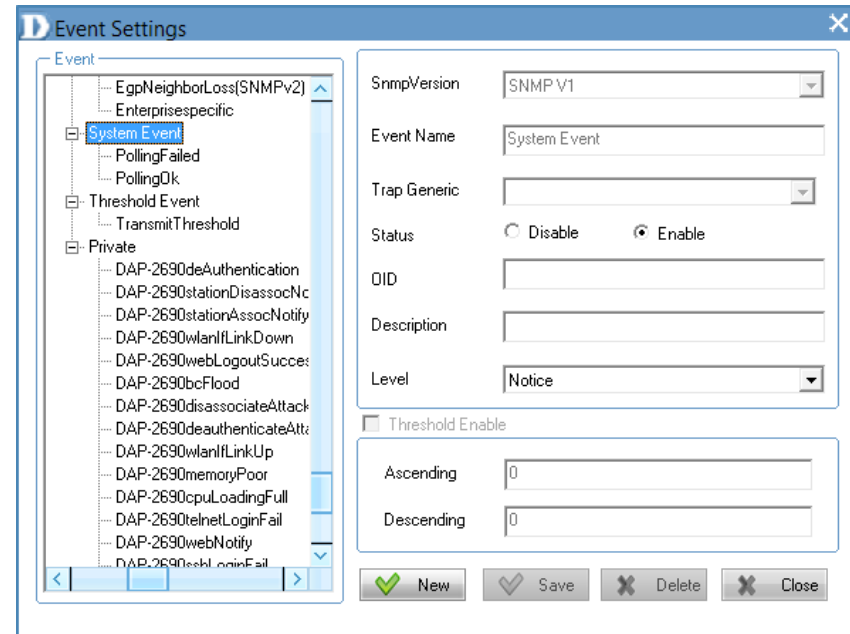


System Event - To configure the trap condition, click the **System Event** icon in the tool bar to set the event settings. It consists of the following options:

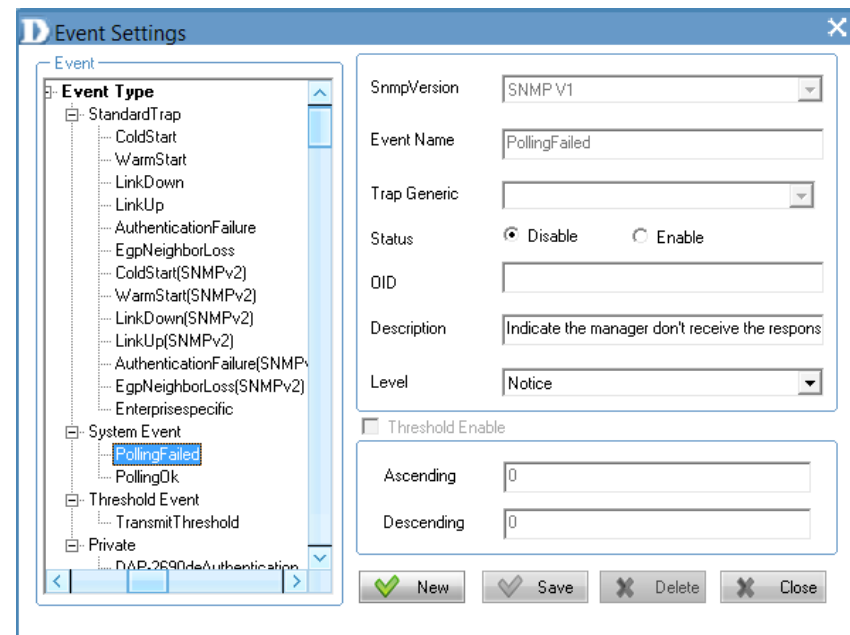
System Event

To modify an event setting, select the event from the *Event Type* list and then change the items. Click **Save** button to apply the changes.

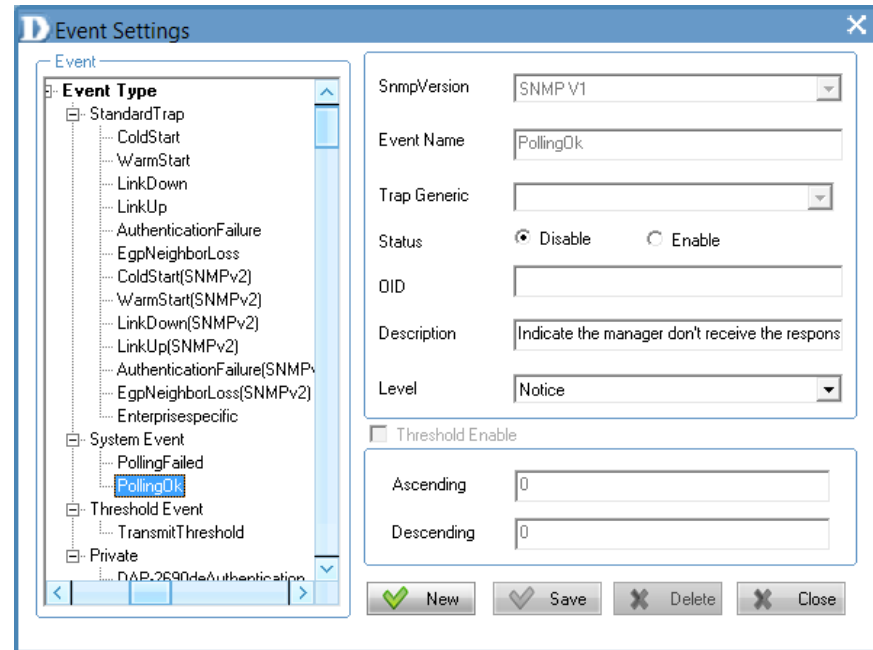
To add a new event, click the **New** button and configure the settings in the event creation window.



PollingFailed

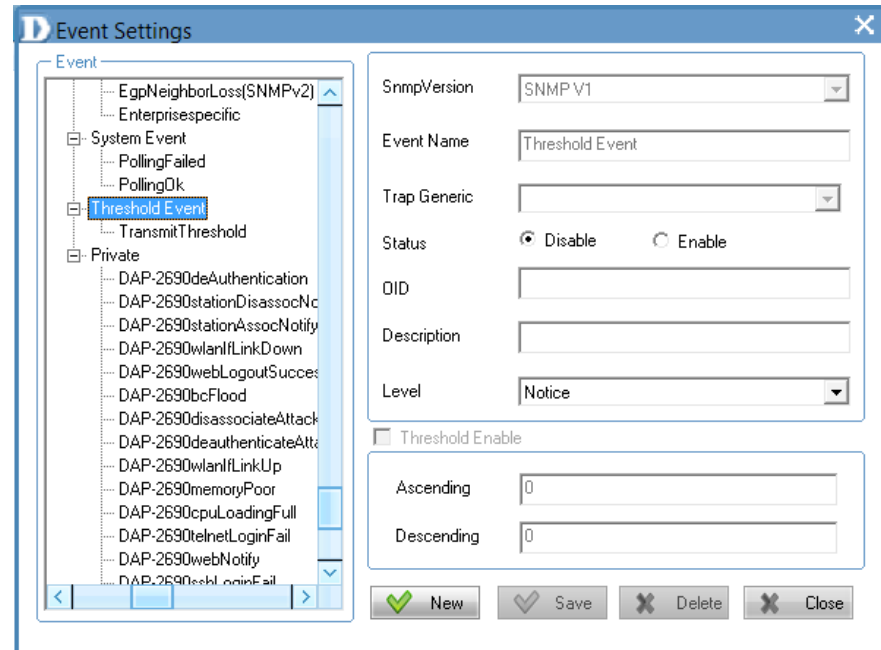


PollingOK

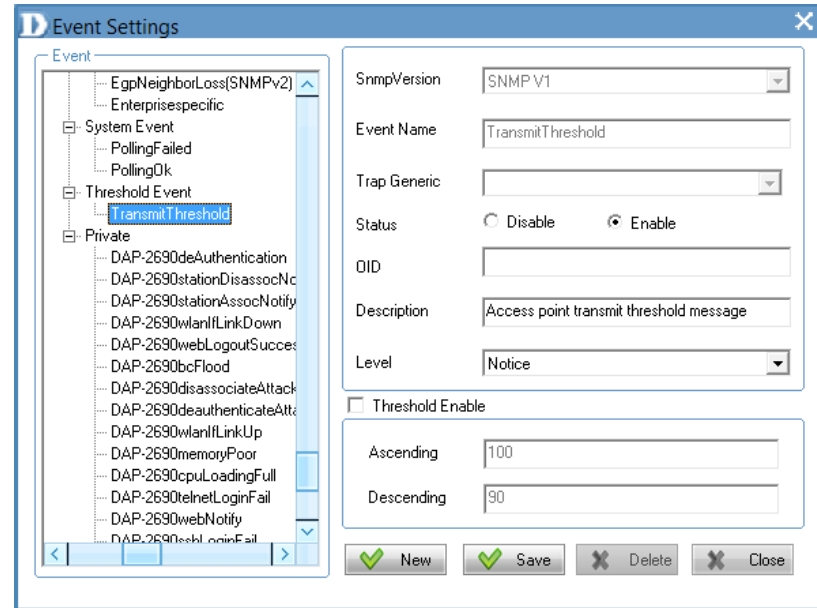


Threshold Event consists of the following options:

Threshold Event

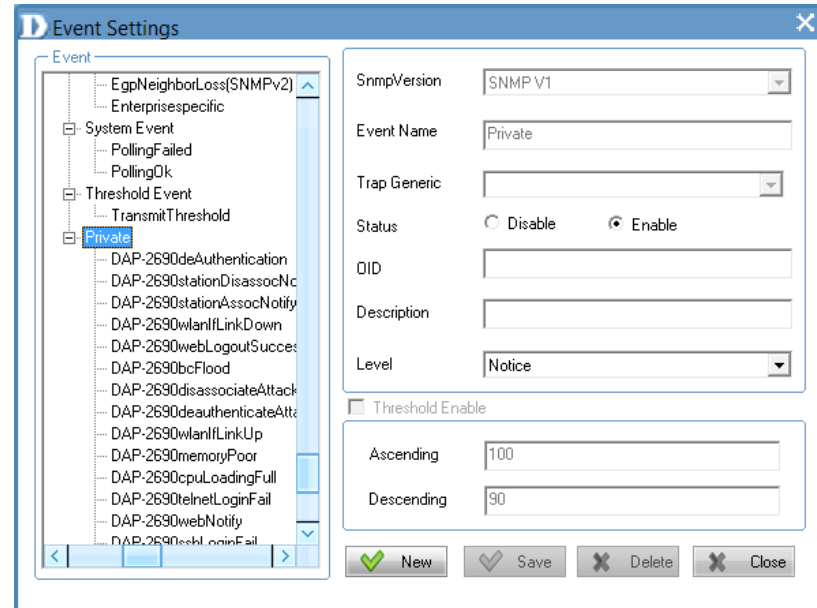


Transmit Threshold

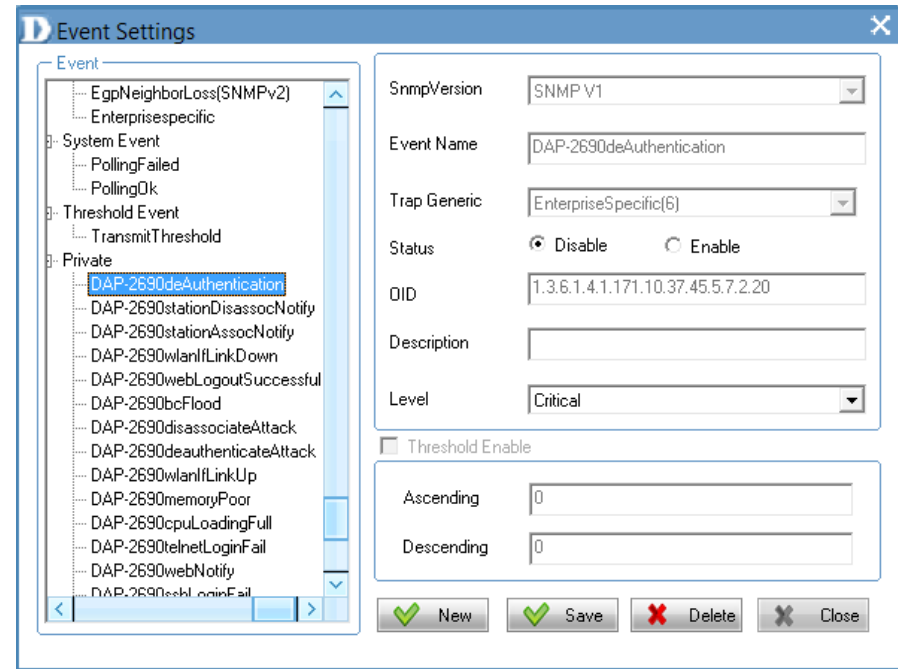


Private consists of the following options:

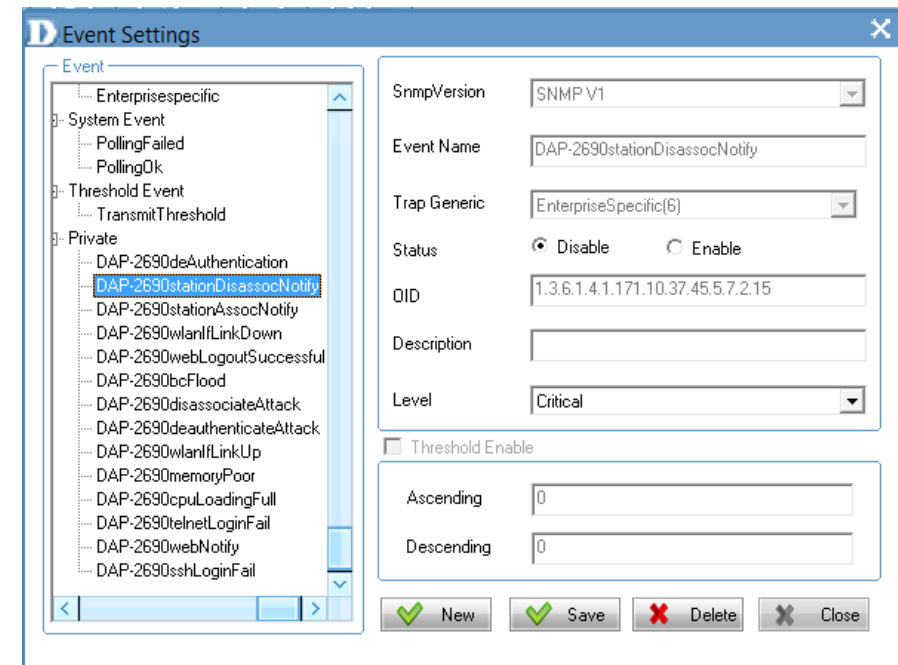
Private



DAP-2690deAuthentication



DAP-2690stationDisassocNotify



DAP-2690stationAssocNotify

The screenshot shows the 'Event Settings' dialog box for the event 'DAP-2690stationAssocNotify'. On the left, a tree view shows the event selected under 'Private'. The right side contains the following fields:

- SnmpVersion: SNMP V1
- Event Name: DAP-2690stationAssocNotify
- Trap Generic: EnterpriseSpecific(6)
- Status: Disable Enable
- OID: 1.3.6.1.4.1.171.10.37.45.5.7.2.14
- Description: (empty)
- Level: Critical
- Threshold Enable: Threshold Enable
- Ascending: 0
- Descending: 0

Buttons at the bottom: New (green checkmark), Save (green checkmark), Delete (red X), Close (grey X).

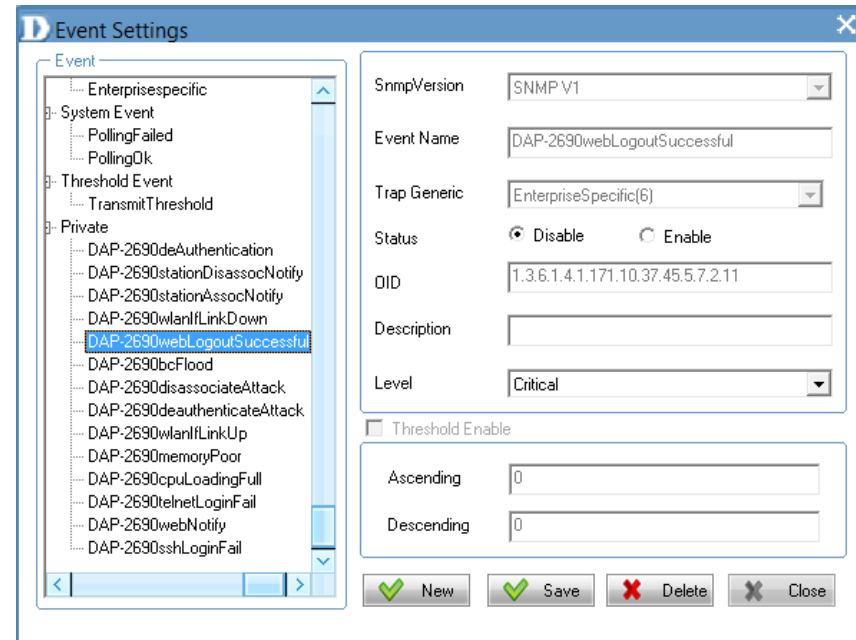
DAP-2690wlanIfLinkDown

The screenshot shows the 'Event Settings' dialog box for the event 'DAP-2690wlanIfLinkDown'. On the left, a tree view shows the event selected under 'Private'. The right side contains the following fields:

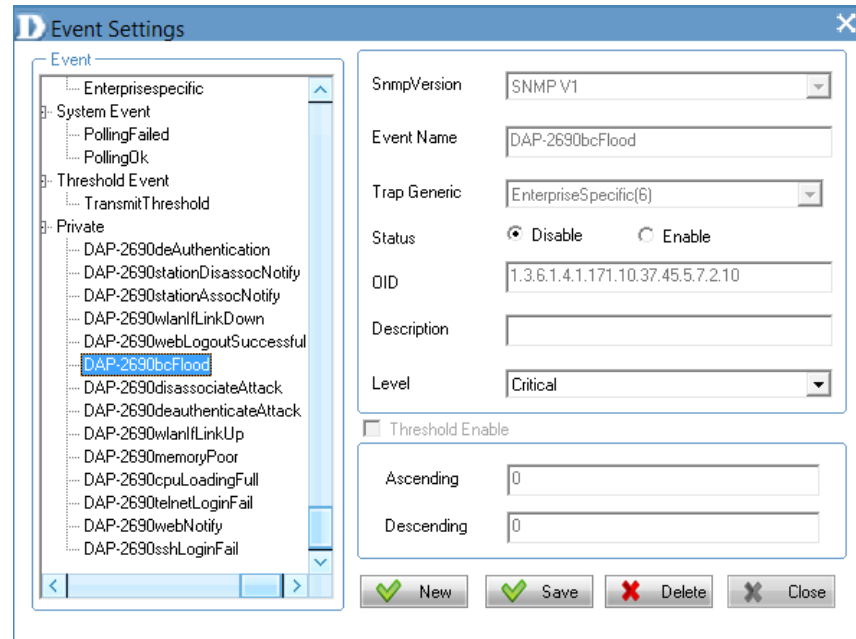
- SnmpVersion: SNMP V1
- Event Name: DAP-2690wlanIfLinkDown
- Trap Generic: EnterpriseSpecific(6)
- Status: Disable Enable
- OID: 1.3.6.1.4.1.171.10.37.45.5.7.2.13
- Description: (empty)
- Level: Critical
- Threshold Enable: Threshold Enable
- Ascending: 0
- Descending: 0

Buttons at the bottom: New (green checkmark), Save (green checkmark), Delete (red X), Close (grey X).

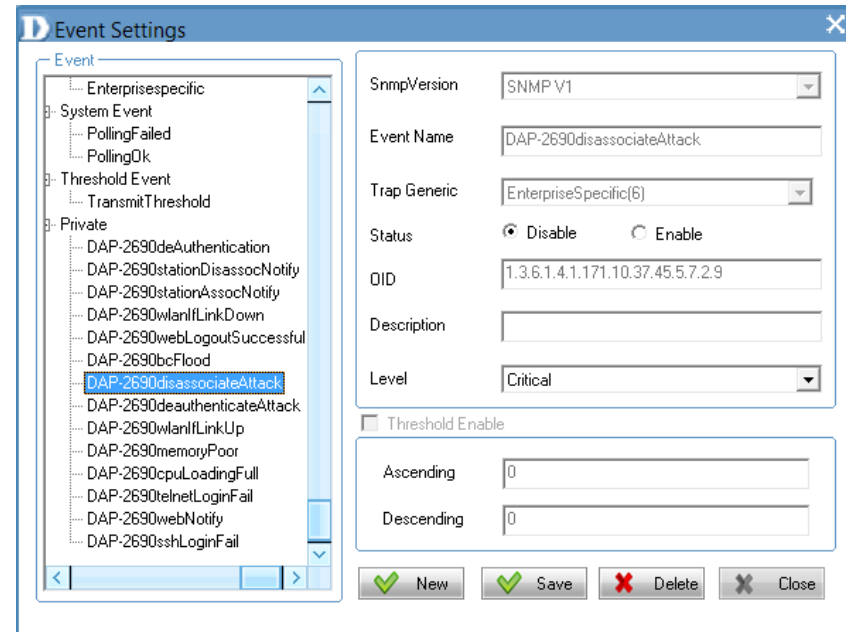
DAP-2690webLogoutSuccessful



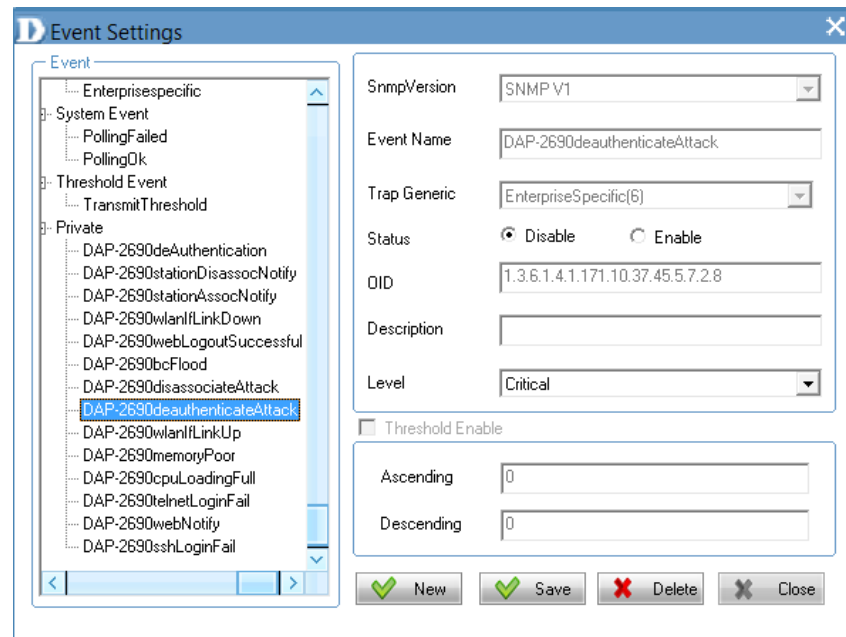
DAP-2690bcFlood



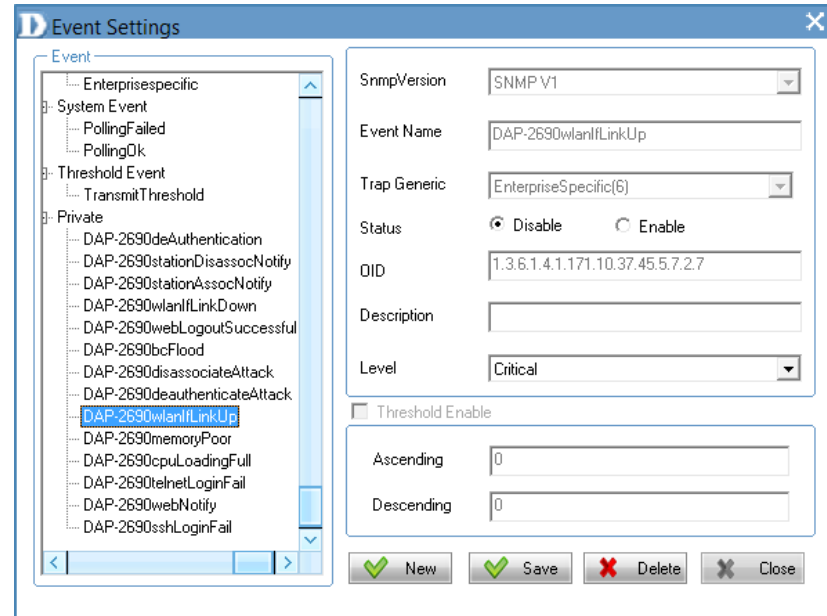
DAP-2690disassociateAttack



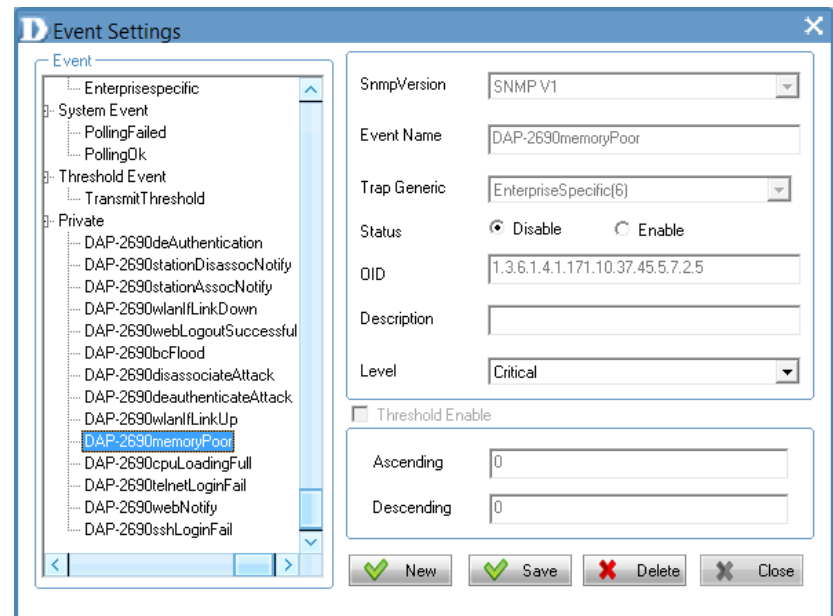
DAP-2690deauthenticateAttack



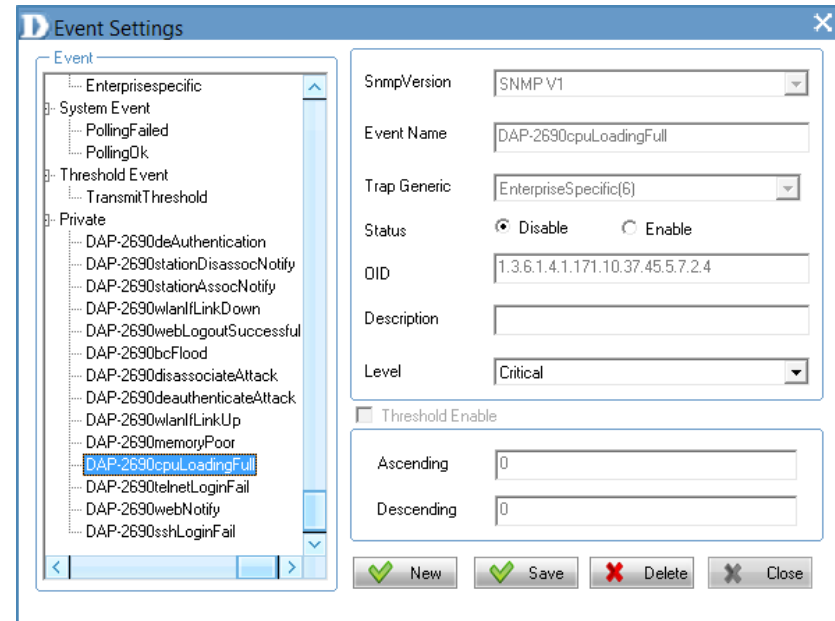
DAP-2690wlanIfLinkUp



DAP-2690memoryPoor



DAP-2690cpuLoadingFull

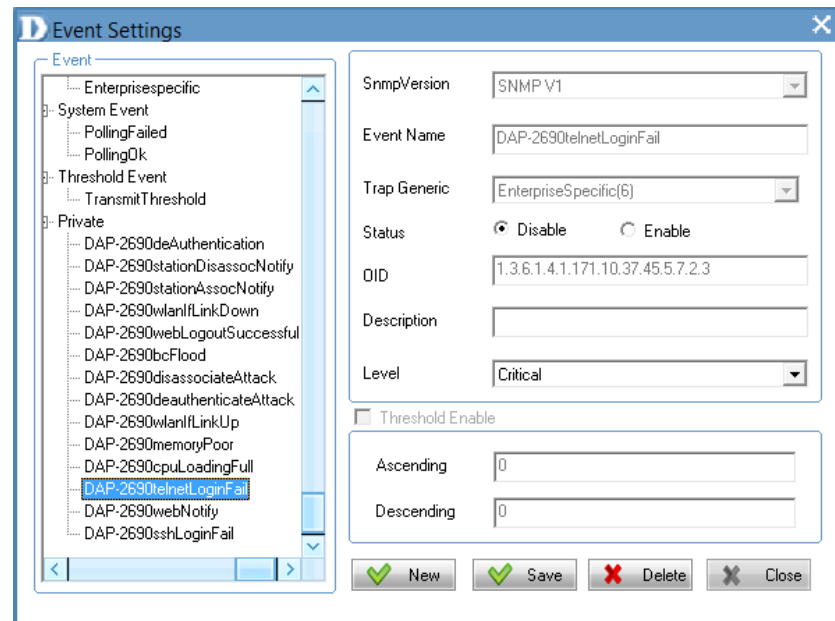


The 'Event Settings' dialog for 'DAP-2690cpuLoadingFull' is shown. The left pane lists event categories: Enterprise-specific, System Event, Threshold Event, and Private. Under Private, 'DAP-2690cpuLoadingFull' is selected. The right pane contains the following fields:

- SnmpVersion: SNMP V1
- Event Name: DAP-2690cpuLoadingFull
- Trap Generic: EnterpriseSpecific(6)
- Status: Disable Enable
- OID: 1.3.6.1.4.1.171.10.37.45.5.7.2.4
- Description: (empty)
- Level: Critical
- Threshold Enable:
- Ascending: 0
- Descending: 0

Buttons at the bottom: New (green checkmark), Save (green checkmark), Delete (red X), Close (grey X).

DAP-2690telnetLoginFail



The 'Event Settings' dialog for 'DAP-2690telnetLoginFail' is shown. The left pane lists event categories: Enterprise-specific, System Event, Threshold Event, and Private. Under Private, 'DAP-2690telnetLoginFail' is selected. The right pane contains the following fields:

- SnmpVersion: SNMP V1
- Event Name: DAP-2690telnetLoginFail
- Trap Generic: EnterpriseSpecific(6)
- Status: Disable Enable
- OID: 1.3.6.1.4.1.171.10.37.45.5.7.2.3
- Description: (empty)
- Level: Critical
- Threshold Enable:
- Ascending: 0
- Descending: 0

Buttons at the bottom: New (green checkmark), Save (green checkmark), Delete (red X), Close (grey X).

DAP-2690webnotify

Event Settings

Event

- Enterprisespecific
- System Event
 - PollingFailed
 - PollingOk
- Threshold Event
 - TransmitThreshold
- Private
 - DAP-2690deAuthentication
 - DAP-2690stationDisassocNotify
 - DAP-2690stationAssocNotify
 - DAP-2690wlanIfLinkDown
 - DAP-2690webLogoutSuccessful
 - DAP-2690bcFlood
 - DAP-2690disassociateAttack
 - DAP-2690deauthenticateAttack
 - DAP-2690wlanIfLinkUp
 - DAP-2690memoryPoor
 - DAP-2690cpuLoadingFull
 - DAP-2690telnetLoginFail
 - DAP-2690webNotify**
 - DAP-2690sshLoginFail

SnmpVersion: SNMP V1

Event Name: DAP-2690webNotify

Trap Generic: EnterpriseSpecific(6)

Status: Disable Enable

OID: 1.3.6.1.4.1.171.10.37.45.5.7.2.2

Description:

Level: Critical

Threshold Enable

Ascending: 0

Descending: 0

Buttons: New, Save, Delete, Close

DAP-2690sshLoginFail

Event Settings

Event

- Enterprisespecific
- System Event
 - PollingFailed
 - PollingOk
- Threshold Event
 - TransmitThreshold
- Private
 - DAP-2690deAuthentication
 - DAP-2690stationDisassocNotify
 - DAP-2690stationAssocNotify
 - DAP-2690wlanIfLinkDown
 - DAP-2690webLogoutSuccessful
 - DAP-2690bcFlood
 - DAP-2690disassociateAttack
 - DAP-2690deauthenticateAttack
 - DAP-2690wlanIfLinkUp
 - DAP-2690memoryPoor
 - DAP-2690cpuLoadingFull
 - DAP-2690telnetLoginFail
 - DAP-2690webNotify
 - DAP-2690sshLoginFail**

SnmpVersion: SNMP V1

Event Name: DAP-2690sshLoginFail

Trap Generic: EnterpriseSpecific(6)

Status: Disable Enable

OID: 1.3.6.1.4.1.171.10.37.45.5.7.2.1

Description:

Level: Critical

Threshold Enable

Ascending: 0

Descending: 0

Buttons: New, Save, Delete, Close

Event Search

Click this icon to begin an *Event Search*.

The screenshot shows the AP Manager II Lite software interface. The 'Fault' menu item is highlighted in the top toolbar, and the 'Event Search' icon is selected in the secondary toolbar. The main window displays a table of events with columns for Event Name, Event Level, Date Time, Source, Description, and Content. Two 'PollingFailed' events are listed. A log window at the bottom shows system messages.

Event Name	Event Level	Date Time	Source	Description	Content
PollingFailed	System Notice	2012-12-06 09:08:51	192.168.0.50	Indicate the m...	
PollingFailed	System Notice	2012-12-06 09:04:30	192.168.0.50	Indicate the m...	

Log window content:

```
[10/12/2012 08:18:46.772]FTP Server started on port 21.
[10/12/2012 08:18:46.777]The initialization complete
[10/12/2012 08:18:46.778]Syslog Server Start success
[10/12/2012 08:18:46.856]SnmpTrap receiver initialize successfully!
```

Section 4 - Configuration

The *Event Search* window will open. Fill in the fields for *Event Type*, *Event Level*, *Start Time*, *End Time* and *Node IP* to narrow your search, and click **Search** to begin.

The screenshot displays the AP Manager II Lite software interface. The main window shows a list of events under the 'Fault Manager' section. An 'Event Search' dialog box is open, allowing users to filter events based on various parameters.

Event Search Dialog Box Parameters:

- Search Parameter: (empty)
- Event Type: All
- Event Level: All
- Start Time: 12/10/2012
- End Time: 12/10/2012
- Node IP: 0 . 0 . 0 . 0

Main Window Event List:

Event Name	Event Type	Event Level	Date Time	Source	Description	Content
PollingFailed	System	Notice	2012-12-06 09:08:51	192.168.0.50	Indicate the m...	
PollingFailed	System	Notice	2012-12-06 09:04:30	192.168.0.50	Indicate the m...	

System Log (Bottom Panel):

```
[10/12/2012 08:18:46.772 ]FTP Server started on port 21.  
[10/12/2012 08:18:46.777 ]The initialization complete  
[10/12/2012 08:18:46.778 ]Syslog Server Start success  
[10/12/2012 08:18:46.856 ]SnmpTrap receiver initialize successfully!
```

The interface includes a menu bar (System, View, NetTool, Help), a toolbar with icons for General, Group, Multi Config, Fault, Tool, Report, User Manager, and Option, and a left-hand navigation pane with categories like General, Group, MultiConfiguration, Template, Task Schedule, Fault Manager, StandardTrap, System, Threshold, Private, Tool, Report, Association, Security, Utilization, Channel, Rogue AP, and SysLog. The status bar at the bottom shows 'Ready' and 'LogUser admin'.

Event Export

Click this icon to do an *Event Export*. *AP Manager II Lite* can export the event results to the files in **Text**, **Excel** or **PDF** format. To save event results, highlight the event record in the *Event Window* and click the **Event Export** icon in the tool bar. Next, select the file format you want to save. *AP Manager II Lite* will save all the records of that type to file.

The screenshot shows the AP Manager II Lite software interface. The main window displays a table of event records. The table has the following columns: Event Name, Event Type, Event Level, Date Time, Source, Description, and Content. Two event records are visible:

Event Name	Event Type	Event Level	Date Time	Source	Description	Content
PollingFailed	System	Notice	2012-12-06 09:08:51	192.168.0.50	Indicate the m...	
PollingFailed	System	Notice	2012-12-06 09:04:30	192.168.0.50	Indicate the m...	

The 'Event Export' icon in the toolbar is highlighted. Below the table, a log window displays the following messages:

```
[10/12/2012 08:18:46.772 ]FTP Server started on port 21.
[10/12/2012 08:18:46.777 ]The initialization complete
[10/12/2012 08:18:46.778 ]Syslog Server Start success
[10/12/2012 08:18:46.856 ]SnmpTrap receiver initialize successfully!
```

The status bar at the bottom shows 'Ready' and 'LogUser admin'.

Notice Settings

Click this icon to view the **Notice Settings**. *AP Manager II Lite* can set the corresponding actions when some level of events occurs. To configure the notice setting, click the **Notice Settings** icon in the tool bar.

Play sound: Click **Browse** to select the sound file. *AP Manager II Lite* will play the sound file when this level of event occurs.

Show Pop Message: *AP Manager II Lite* will pop-up a message window when this level of event occurs.

Send E-mail: Enter the e-mail information for the *To/From e-mail address, SMTP server, User Name/Password* [Optional], *Subject* and *Message* in the respective column. *AP Manager II Lite* will send this e-mail when this level of event occurs.

Event Name	Event Type	Event Level	Notice setting	Source	Description	Content
PollingFailed	System	Notice	2012-12-06 09:08:51	192.168.0.50	Indicate the m...	
PollingFailed	System	Notice	2012-12-06 09:04:30	192.168.0.50	Indicate the m...	

```

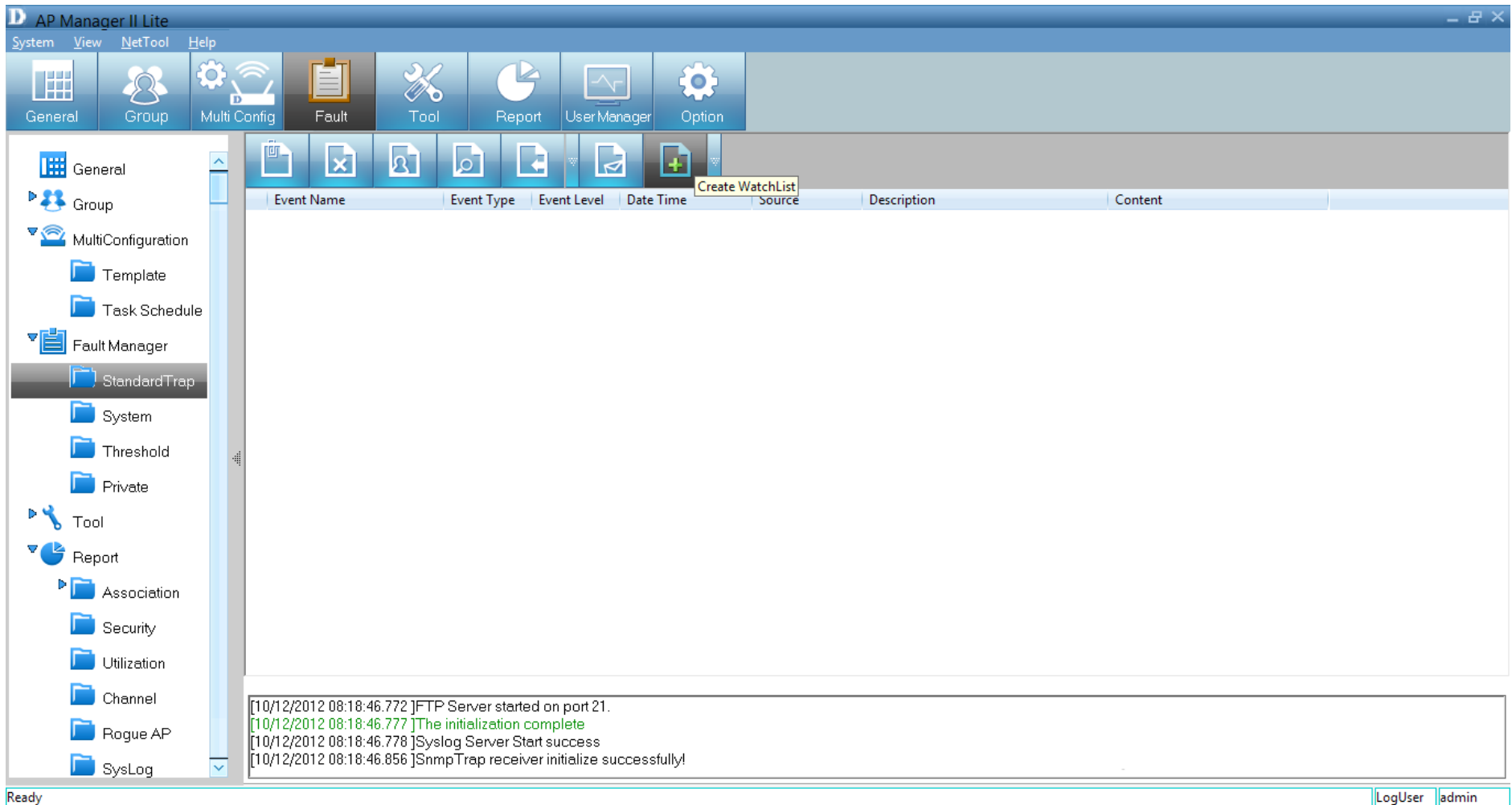
[10/12/2012 08:18:46.772 ]FTP Server started on port 21.
[10/12/2012 08:18:46.777 ]The initialize complete
[10/12/2012 08:18:46.778 ]Syslog Server Start success
[10/12/2012 08:18:46.856 ]SnmpTrap receiver initialize successfully!
  
```

Create Watchlist

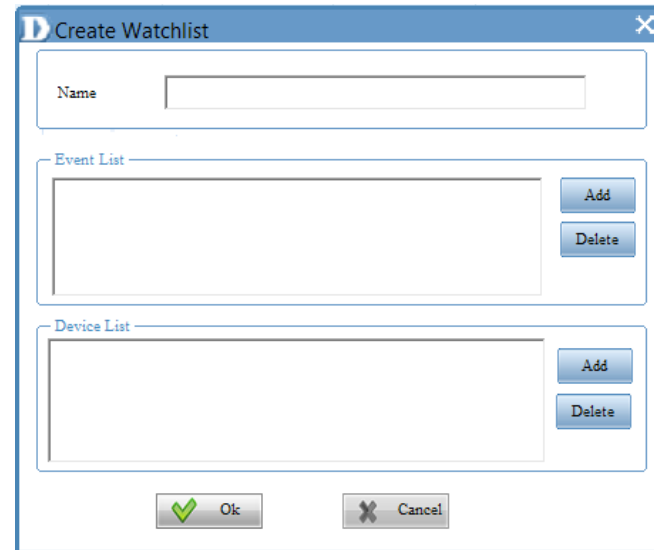
AP Manager II Lite allows a user to add custom watch a list(s) which only shows the specified devices and events.

To create a *Watchlist*, please follow the steps below:

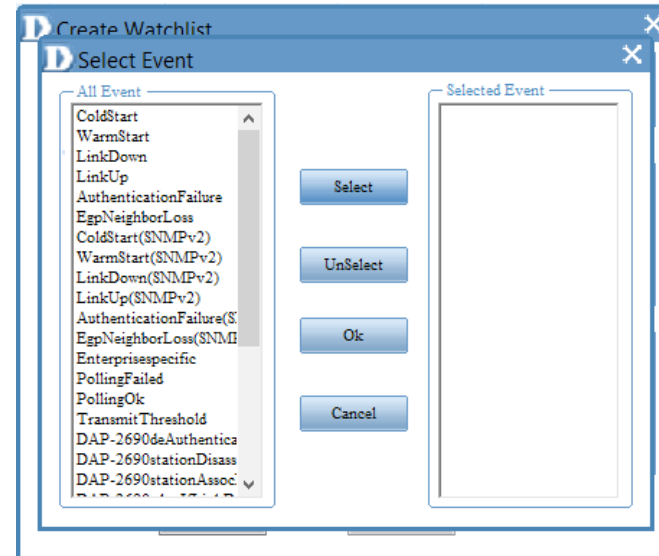
Click the **Create Watchlist** icon above the *Event Window*.



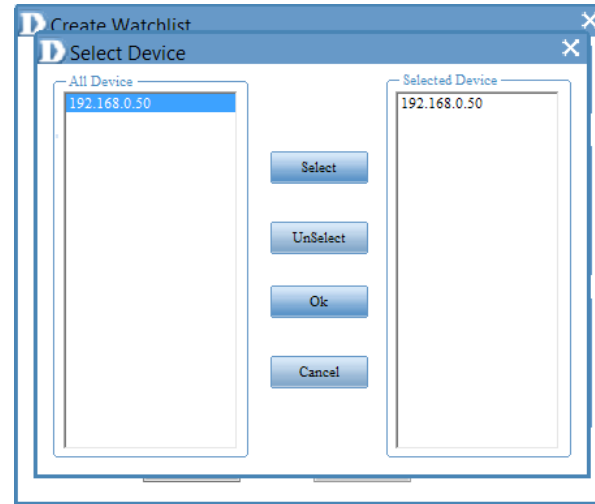
Enter the **Watch List Name** in the *Create Watchlist* form. Click the **Add** button to insert events into *Event List*.



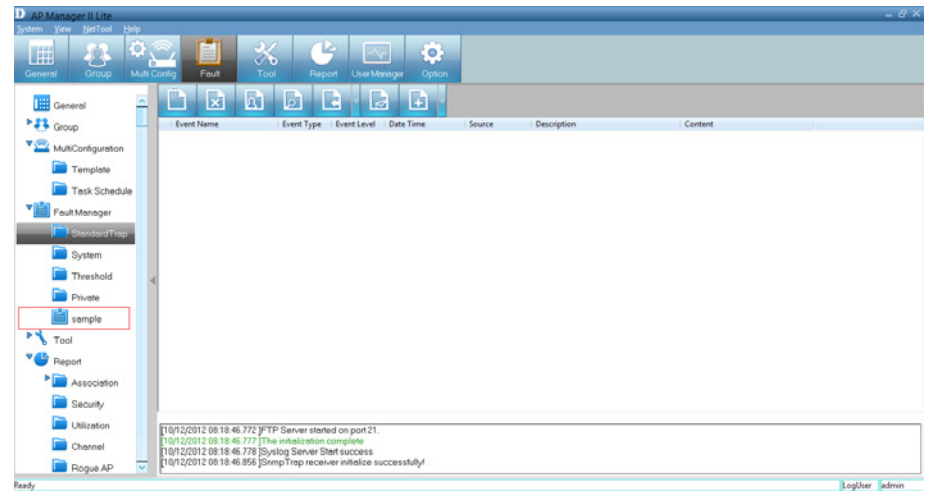
Select the events that need to be added in *Select Event* form, click the **Select** button, then click the **OK** button



Click the **Add** button to insert the devices into *Device List*. Select the devices that need to be added in the *Select Device* form. Click the **Select** button, then click the **OK** button.



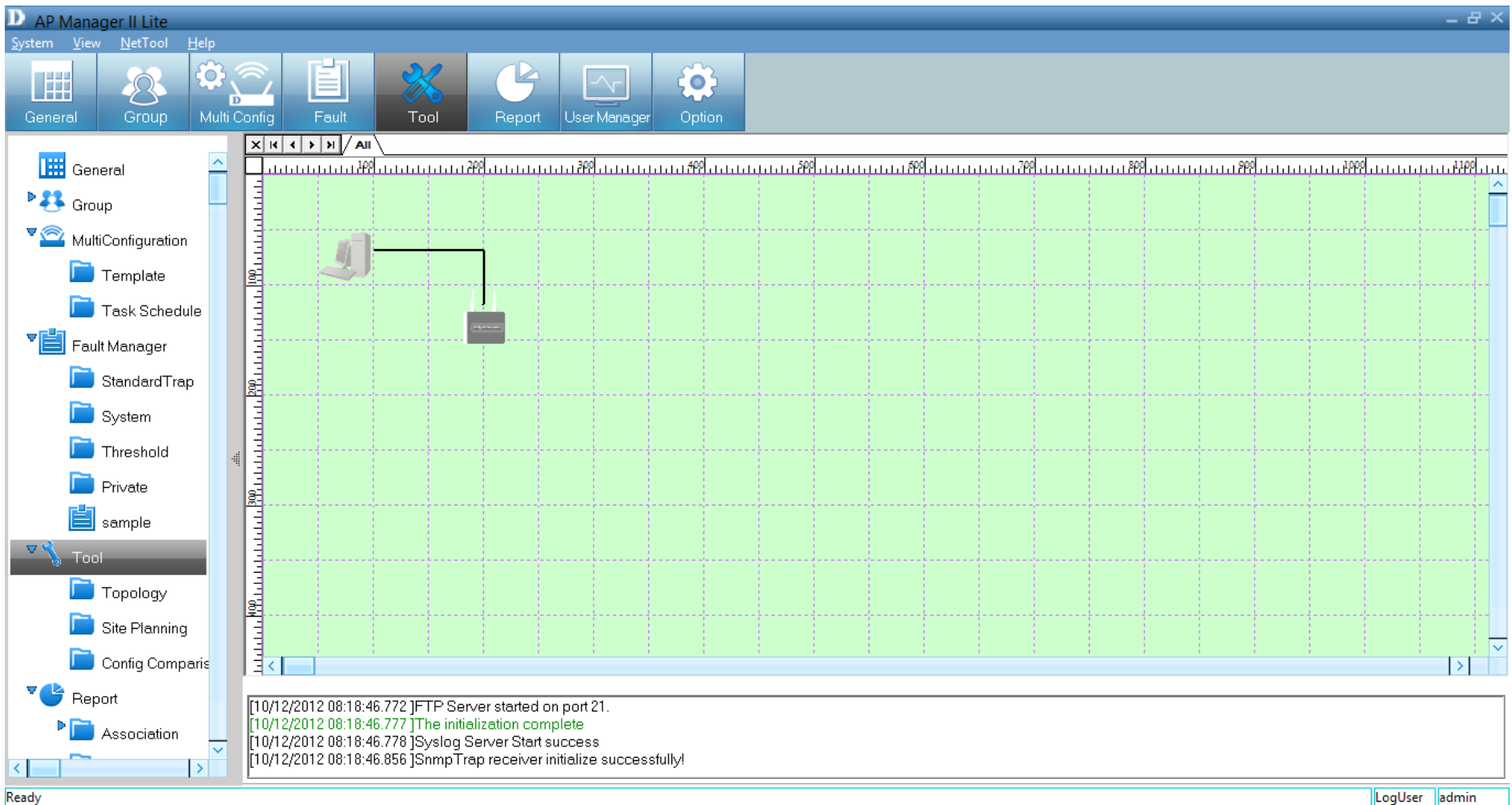
The new *Watchlist* will appear on the left-hand panel.



Tools

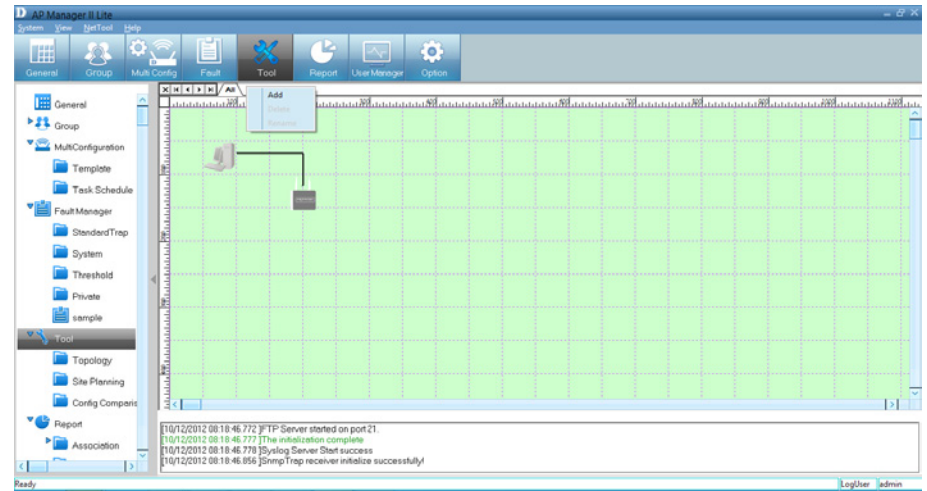
Topology

You can create a topology map to graphically represent planned or existing networks to aid network design. Also, *AP Manager II Lite* will periodically poll network devices to monitor their status. You can further customize your diagrams with selected icons and bitmap files used for the background. When a topology map is opened, *AP Manager II Lite* will discover the devices connected on the network and display their icons on the map.

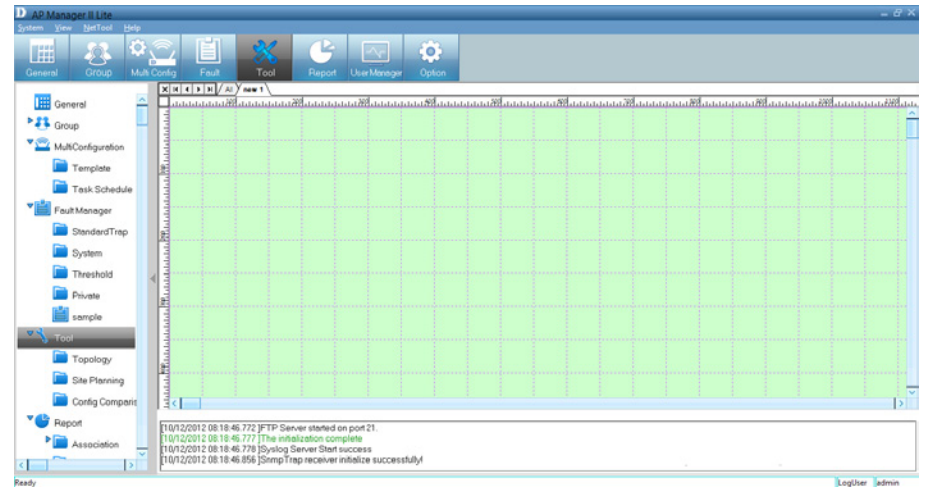


Section 4 - Configuration

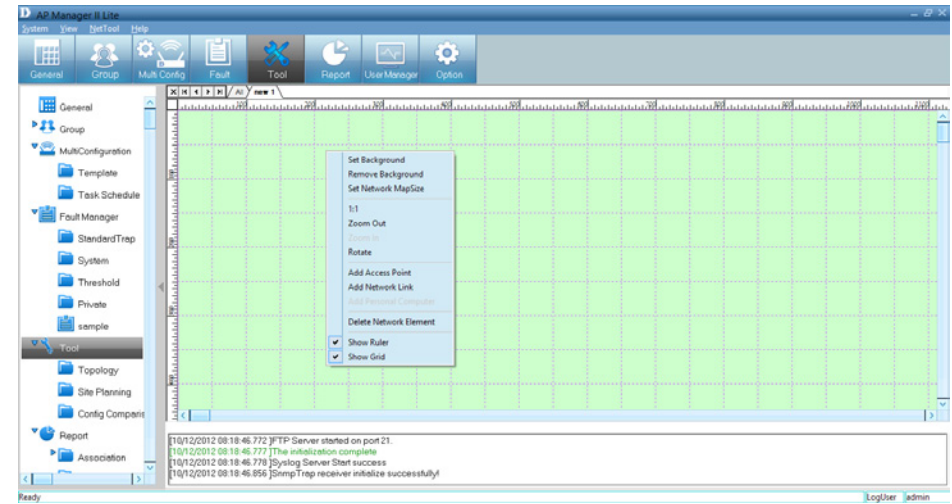
To create a new topology view, right-click on the *Tool* tab, and click **Add** on the pop-up window.



The new workspace will open.

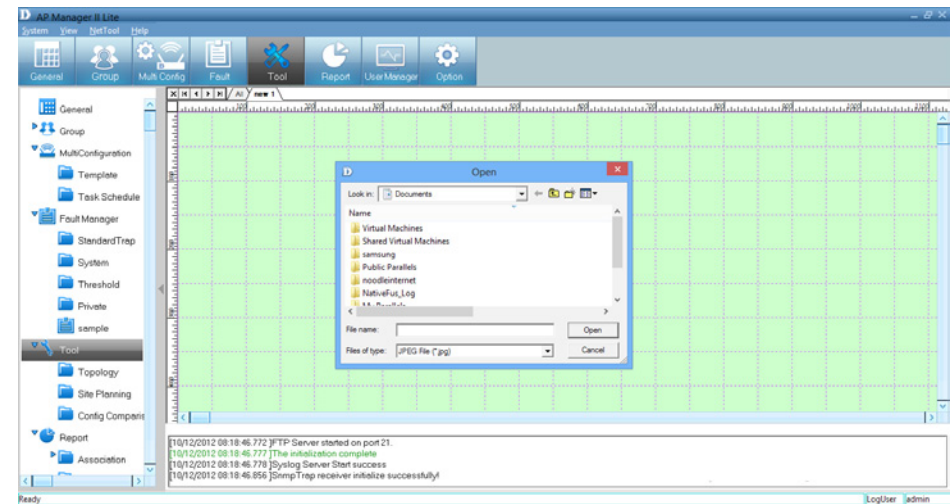


Right-click on the **workspace**.



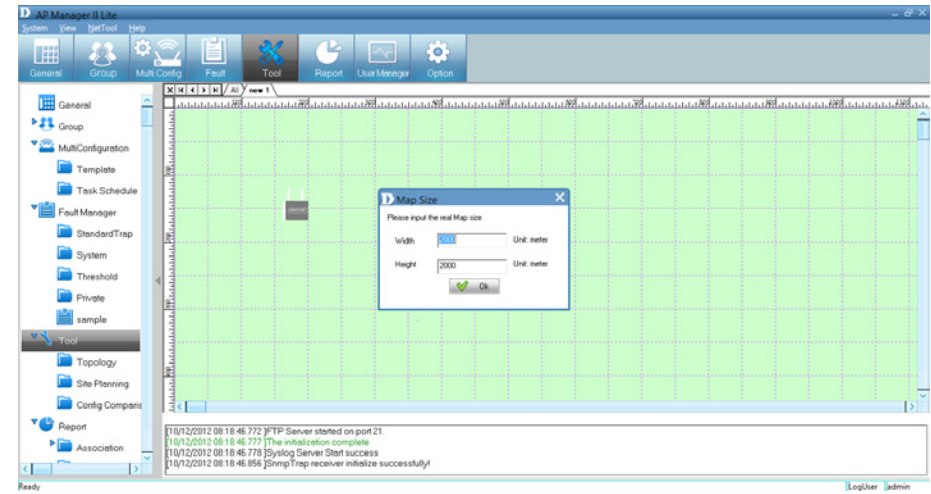
To change the background, click **Set Background** in the pop-up window. Use the *Open* window to browse your computer files. When you locate a file, click it, then click **Open** to load.

To remove the background, right-click the workspace and select **Remove Background**.

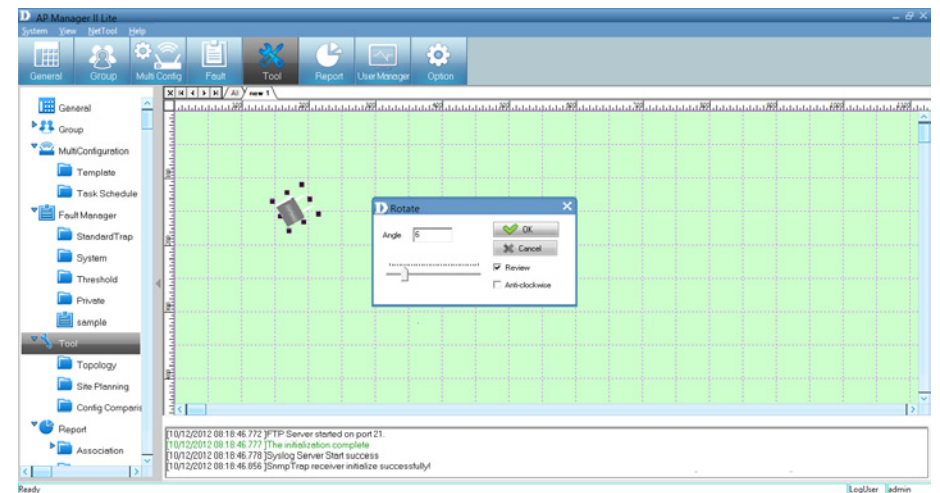


To *Set Network Map Size*, right-click on the workspace and click **Set Network Map Size**. The *Map Size* window will appear.

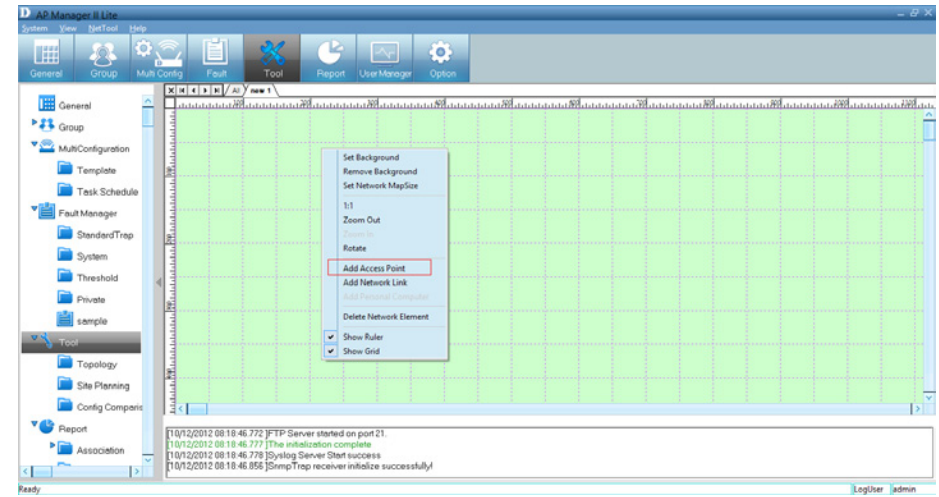
Adjust the **Width** and **Height** settings and click **OK**.



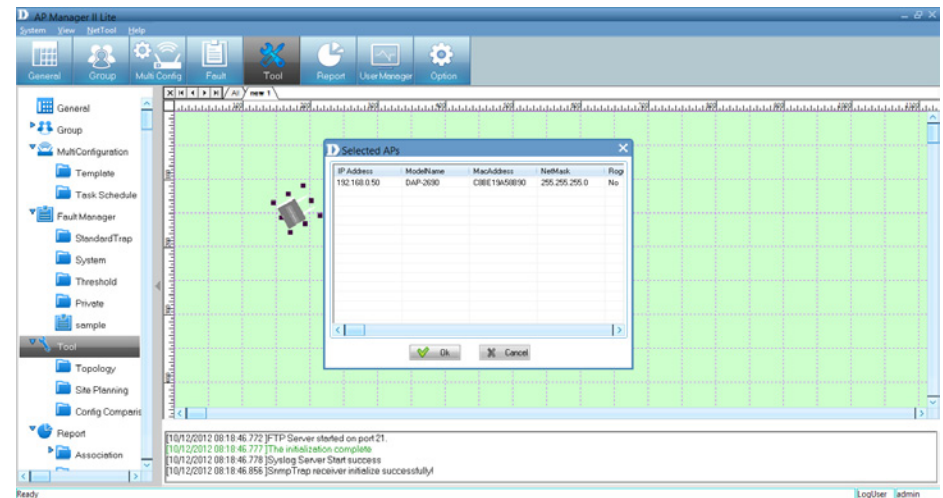
To *Rotate* the image, select the image first and click **Rotate**. Enter a figure in the field provided or use the slider to set the rotation. Click **OK** when complete.



To add an access point, right-click in on the workspace and select **Add Access Point**.

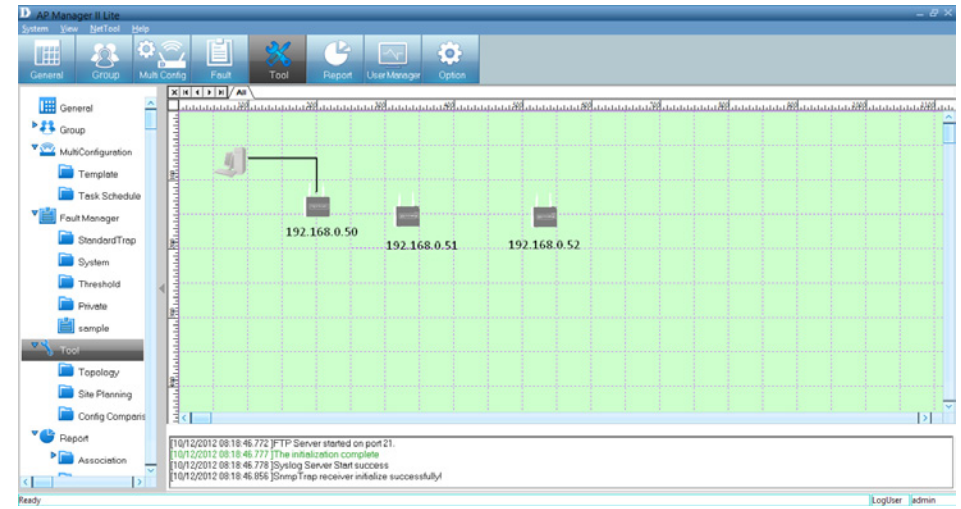


Under *Selected APs*, select the new access point you wish to use and click **OK**. The new access point will appear on the screen alongside the access point(s) you previously had.

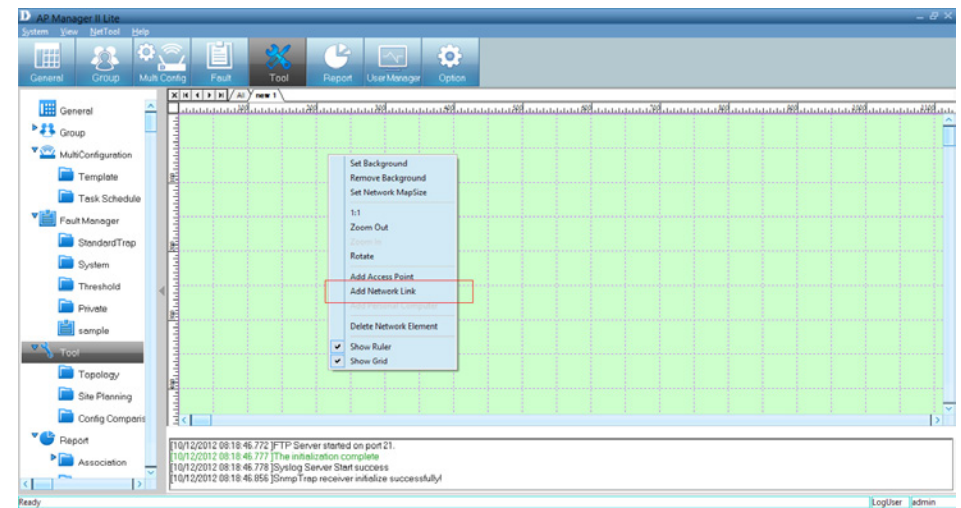


Section 4 - Configuration

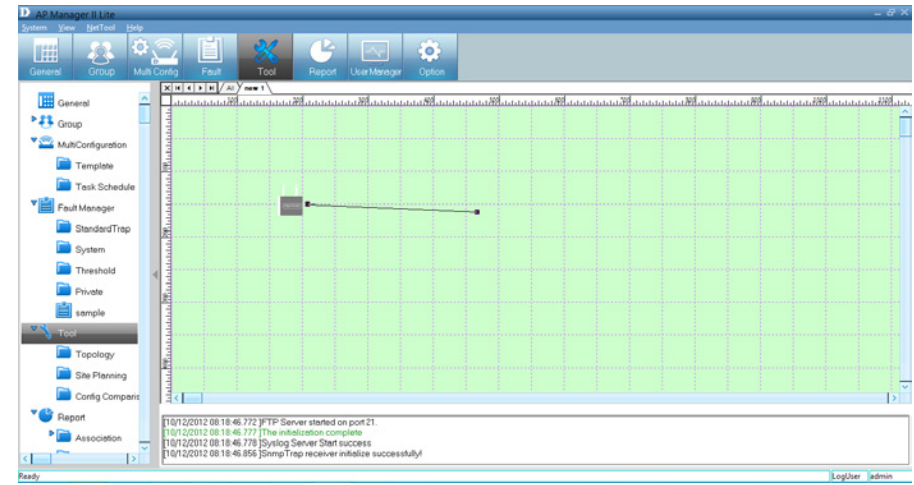
The new access point(s) will appear on the workspace.



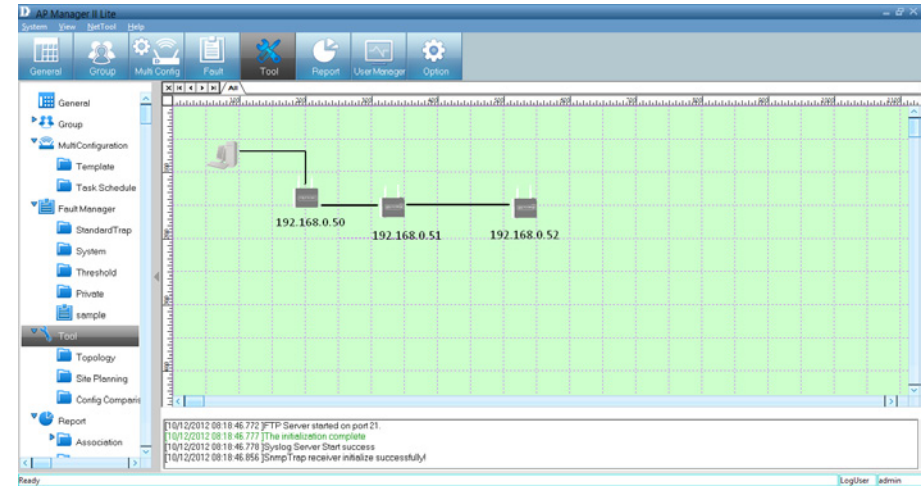
To add lines and organize the APs more efficiently, right-click in the workspace and click **Add Network Link**.



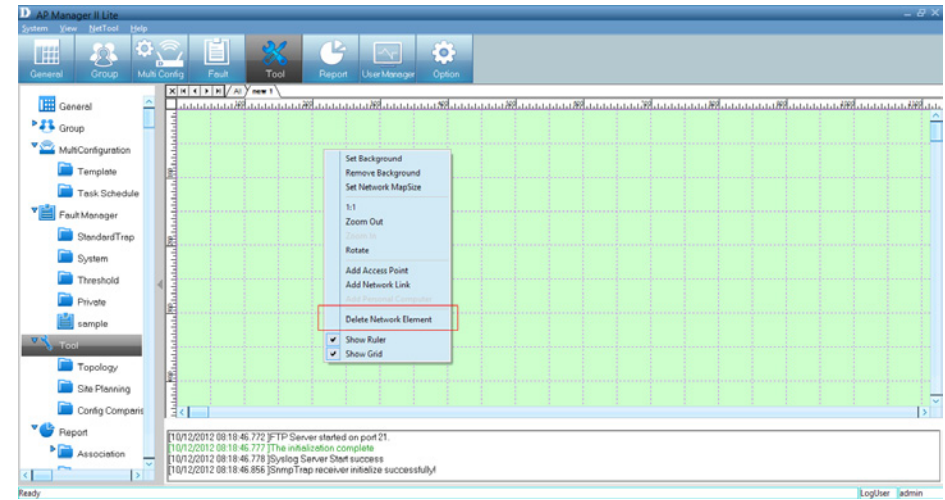
A drawing icon appears for you to create a line between devices.



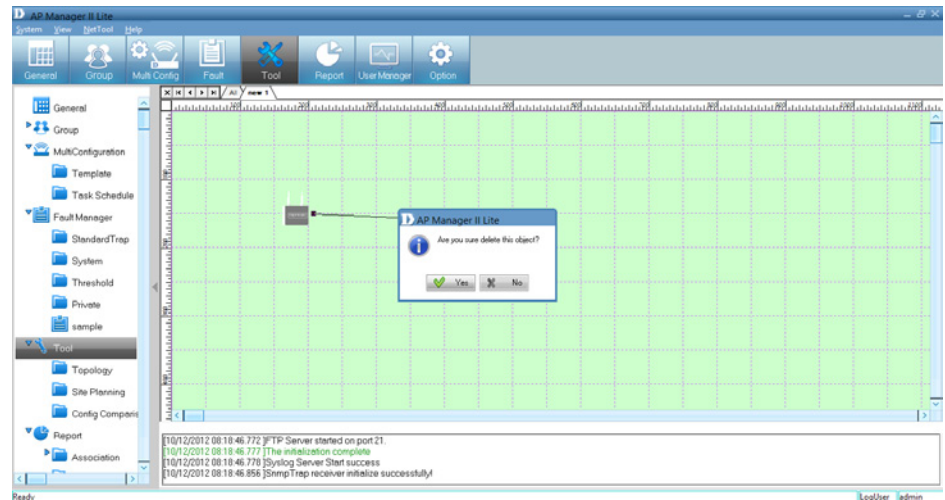
The topology now appears like a normal network schematic.



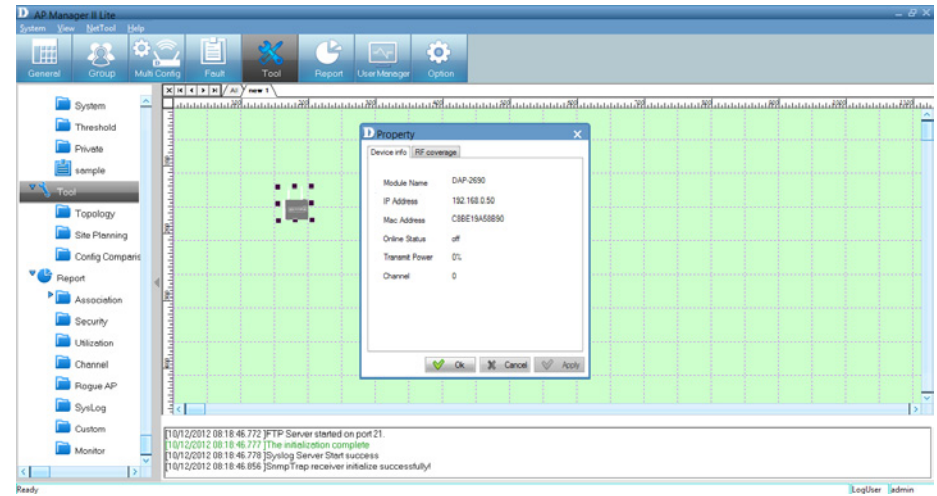
To delete a device, right-click the device and click **Delete Network Element**.



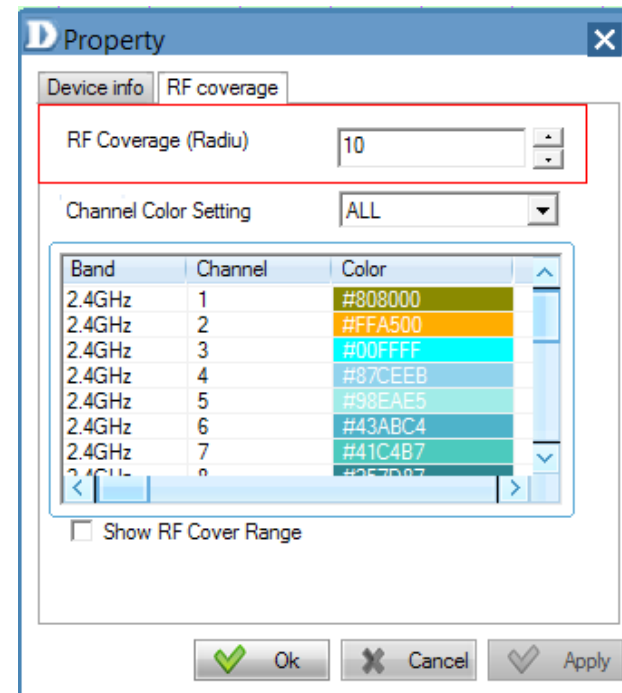
A warning message will appear, prompting you to verify your selection. Click **Yes** to continue with deleting the device or click **No** to cancel.



To find out the properties of each device, double-click the device. The *Properties* window appears.



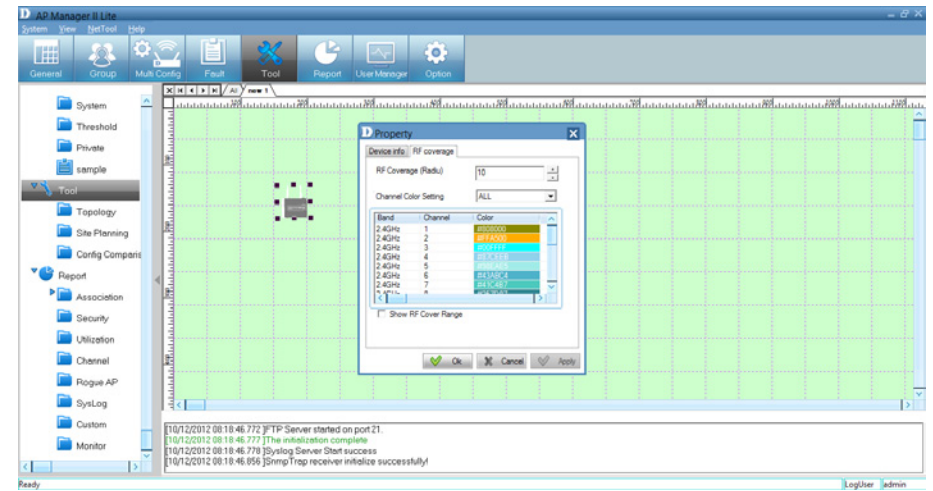
To define the *RF Coverage*, select the **RF Coverage tab**, click the **Up/Down** arrows to select the RF Coverage.



Section 4 - Configuration

To define the channel color settings, click **ALL** or the device you want to configure. Double-click each channel or the color you want to change. A color palette will pop-up for you to select a new color.

Click **Apply** and **OK** to finish.



Site Planning

Site Planning is designed to help a user layout the wireless network. Before establishing a wireless network, a user needs to plan and evaluate the wireless network. A user locates access points using his/her notebook to scan for access points. Once the access points are located, it can be imported into the *AP Manager II Lite* for analysis.

The *Site Planning Interface* shows the *Location ID (BSSID)*, *Start Time (Band)*, *Interval Time (average RSSI)*, *Length (Min RSSI)*, and a *description (MaxRSSI)*.

The screenshot displays the AP Manager II Lite software interface. The main window is titled "AP Manager II Lite" and has a menu bar with "System", "View", "NetTool", and "Help". Below the menu bar is a toolbar with icons for "General", "Group", "Multi Config", "Fault", "Tool" (which is currently selected), "Report", "User Manager", and "Option".

On the left side, there is a navigation tree with the following items: System, Threshold, Private, sample, Tool, Topology, Site Planning (highlighted), Config Comparison, Report, Association, Security, Utilization, Channel, Rogue AP, SysLog, Custom, and Monitor.

The central area contains a table with the following columns: LocationID(BSSID), Start Time(Band), Interval Time(avgRSSI), Lenth(MinRSSI), and Description(MaxRSSI). The table is currently empty.

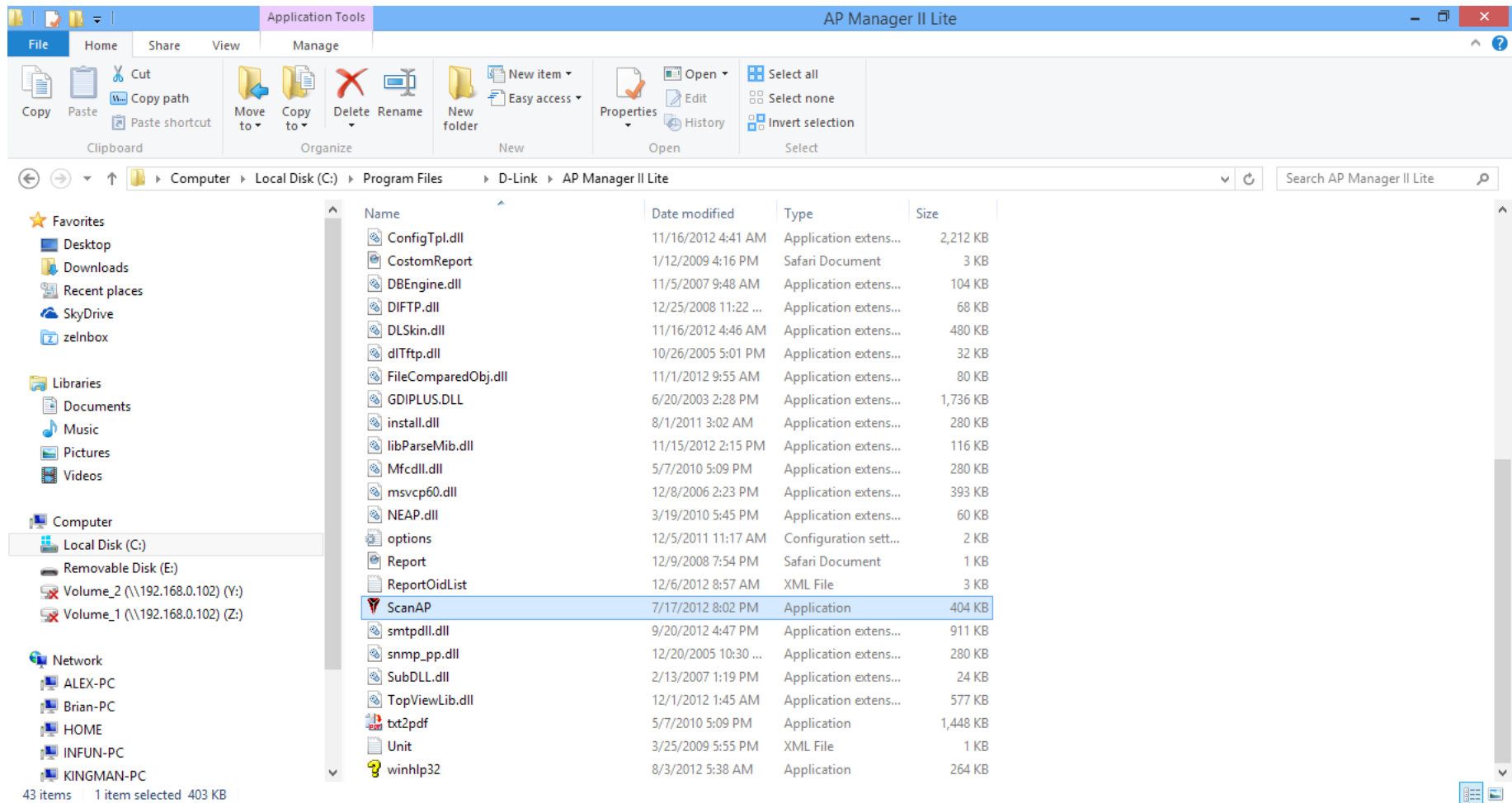
Below the table is a graph titled "By DateTime". The y-axis is labeled "RSSI" and ranges from 0 to 100. The x-axis shows time intervals from 16:17 to 18:07. The graph shows a flat line at a low RSSI value, approximately 20.

At the bottom of the interface, there is a log window displaying the following messages:

```
[10/12/2012 08:18:46.772]FTP Server started on port 21.
[10/12/2012 08:18:46.777]The initialization complete
[10/12/2012 08:18:46.778]Syslog Server Start success
[10/12/2012 08:18:46.856]SnmpTrap receiver initialize successfully!
```

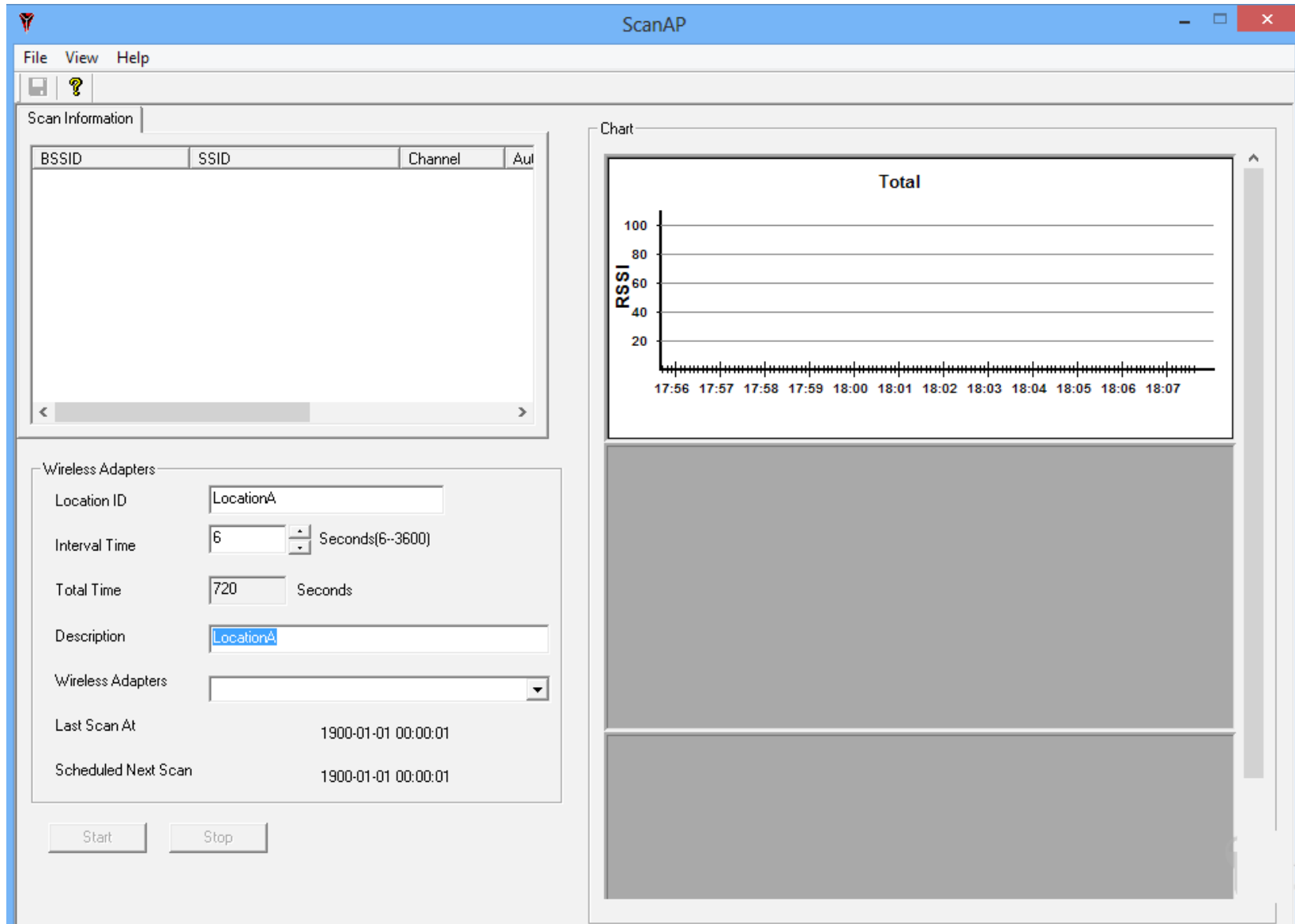
The status bar at the bottom left shows "Ready" and the bottom right shows "LogUser | admin".

To run the scan, go to the directory where the *AP Manager II Lite* is located. Double-click the **ScanAP.exe** file.

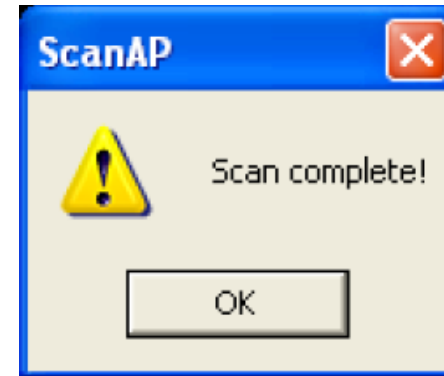


To collect the *Access Points RF information*, click **ScanAP**.

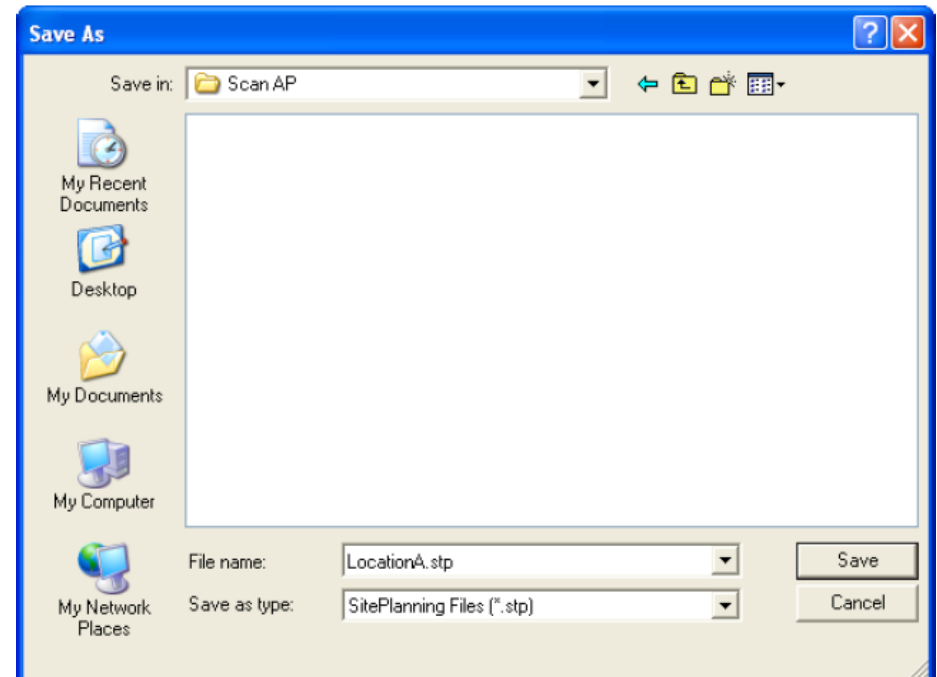
Select the target access point. Enter the *Location ID*, *Description*, *Interval Time* and *Wireless Adapter*, and then click the **Start** button.



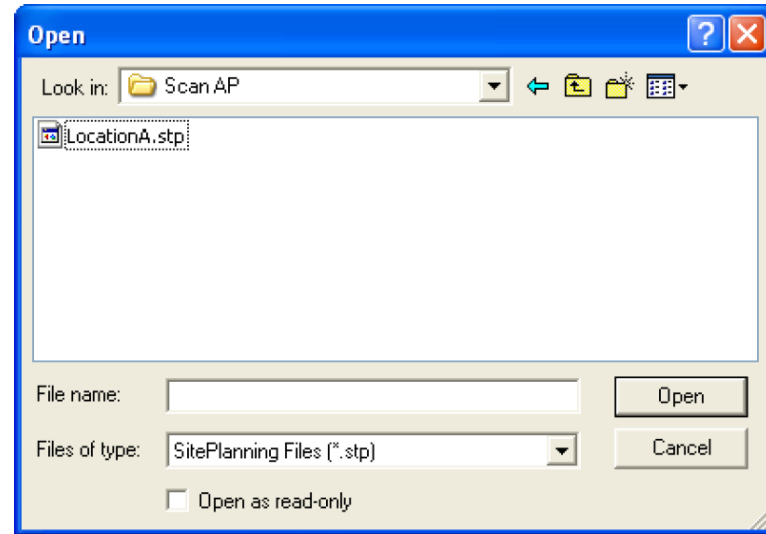
ScanAP starts to collect information on the access point. A message will appear when the access point scan is complete.



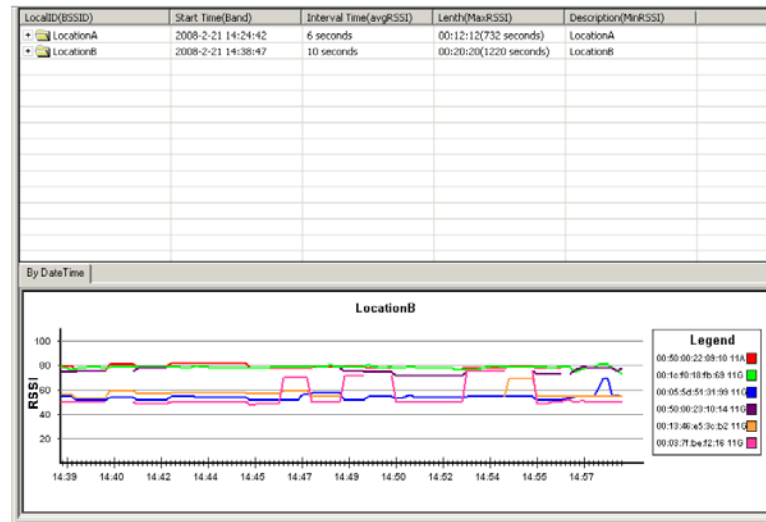
You can also save the location information by clicking the **Save** button when you are prompted.



To load the *Location Information*, click the **Load** button from the **Site Planning** window, then click **Open**.

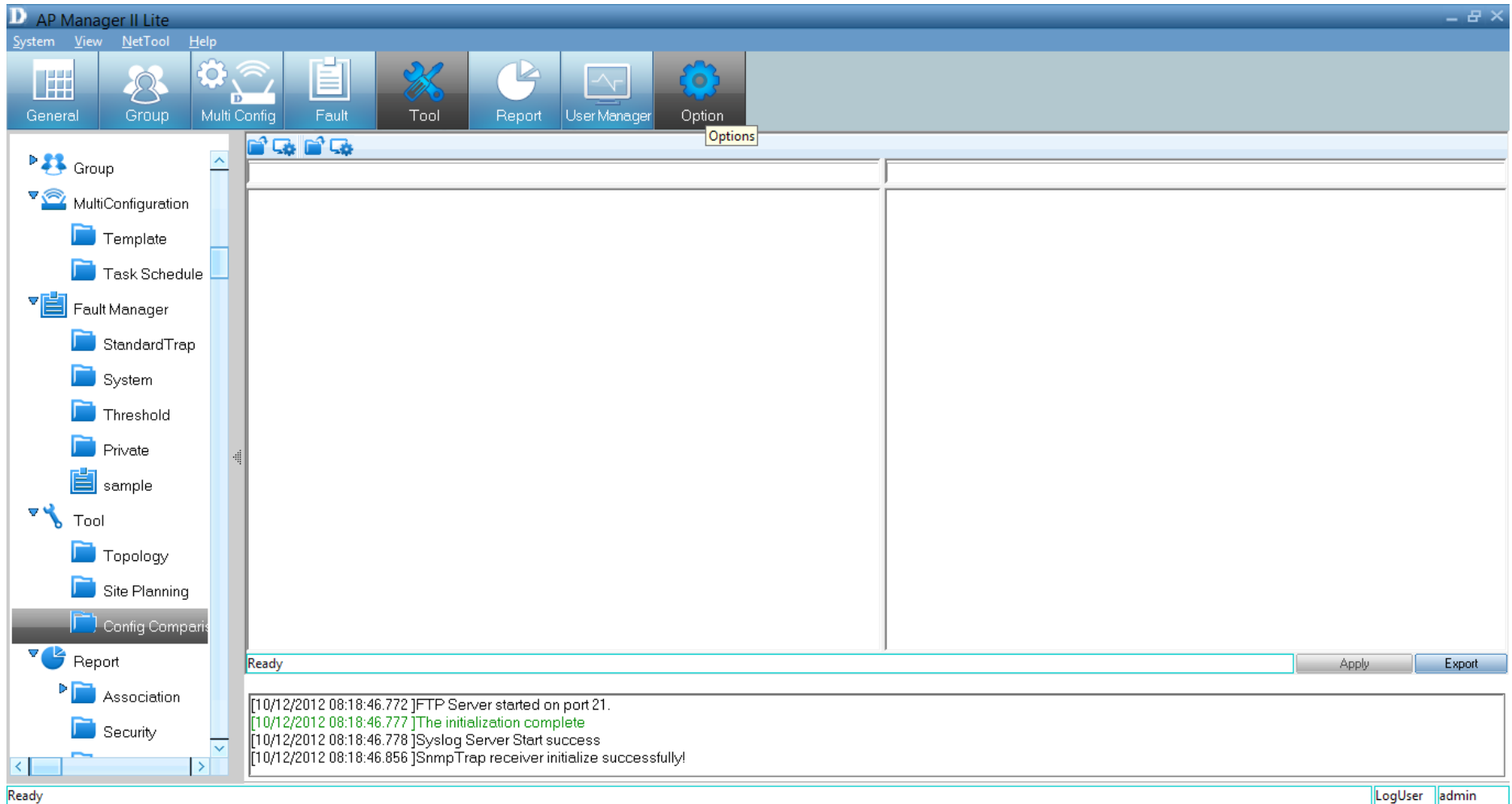


Select the file from the list or expand the file to see the details on each location.

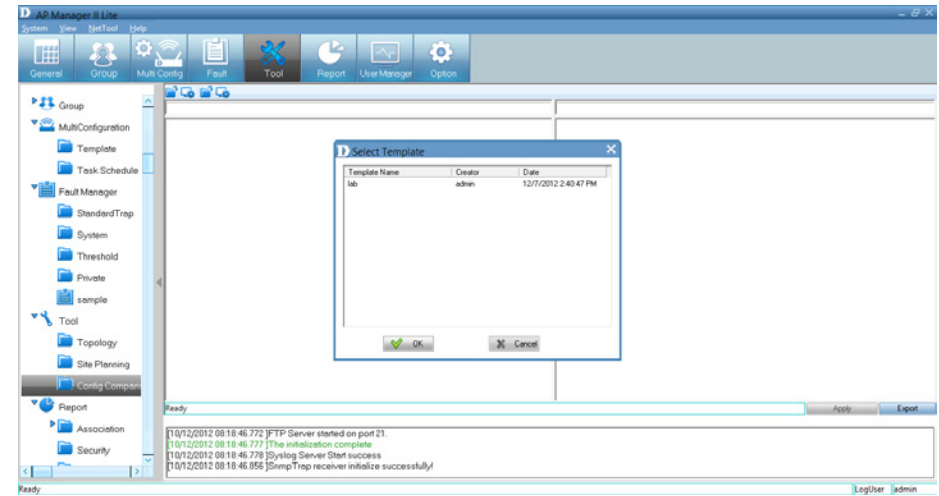


Config Comparison

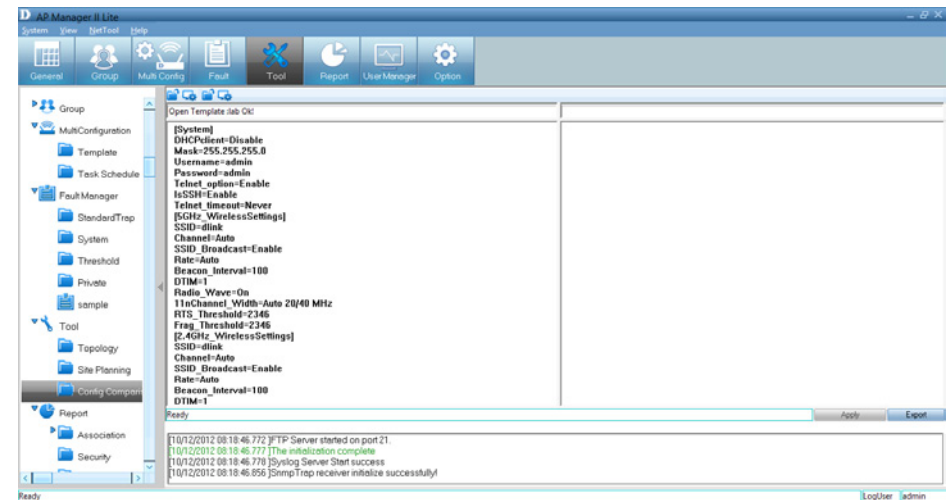
The *Config Comparison* tool displays template information side-by-side for analysis. It provides all system data on the access points to view and collate.



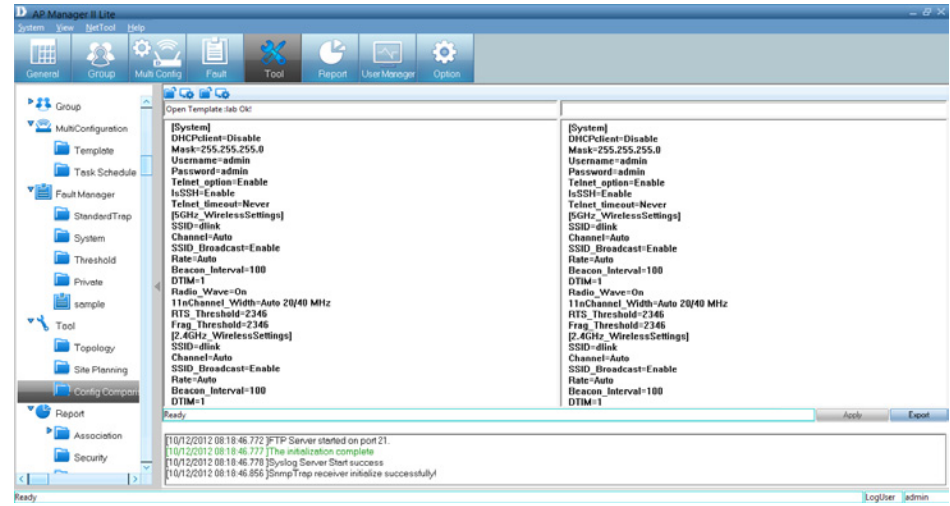
Select the *File* icon to open the *Template*. Click the **Template** you want to compare and click **OK**.



The *Template* is displayed in the left pane. The second option is to click the icon below to download the file to the comparison table.



Once you have downloaded both profiles, they will be displayed side-by-side for analysis.



Report

Report is segmented into different categories. Each category is assigned a function to summarize details on its particular area. The *Report* categories are based on *Association*, *Security*, *Utilization*, *Channel*, *Rogue AP*, *Syslog*, *Custom* and *Monitor*.

The screenshot shows the 'Report' section of the D-Link AP Manager II Lite software. The interface includes a menu bar (System, View, NetTool, Help) and a toolbar with icons for General, Group, Multi Config, Fault, Tool, Report, User Manager, and Option. A left sidebar shows a tree view of categories: Group, MultiConfiguration (Template, Task Schedule), Fault Manager (StandardTrap, System, Threshold, Private, sample), Tool (Topology, Site Planning, Config Comparis), Report (Association, Security), and a bottom status bar (Ready, LogUser, admin).

The main area displays the 'Access Point' section. It includes a 'GroupType' dropdown menu set to 'Model' and a 'All Group' dropdown menu. Below this is a table with the following data:

Model Name	MAC Address	IP Address
<input type="checkbox"/> DAP-2690	C8BE19A58890	192.168.0.50

Buttons for 'Select None', 'Select All', and 'Refresh' are located below the table. Below the 'Access Point' section is the 'Station Detail' section, which includes a table with the following columns: DateTime, MAC Address, Alias, Access Point, SSID, Band, Authentication, RSSI, and Power Save Mode. The table is currently empty. Buttons for 'Export Text' and 'Clear' are located below the table.

At the bottom of the interface is a log window showing the following messages:

```
[10/12/2012 08:18:46.772]FTP Server started on port 21.
[10/12/2012 08:18:46.777]The initialization complete
[10/12/2012 08:18:46.778]Syslog Server Start success
[10/12/2012 08:18:46.856]SnmpTrap receiver initialize successfully!
```


Association

The *Association* window shows managed access points and their associated client stations in two ways: *By Access Point* and *By Wireless Station*.

The screenshot shows the AP Manager II Lite software interface. The main window is titled "Association" and displays a table of Access Points. The table has columns for Model Name, MAC Address, and IP Address. Below the table are buttons for "Select None", "Select All", and "Refresh".

Below the Access Point table is a "Station Detail" section with a table showing details for each station. The table has columns for DateTime, MAC Address, Alias, Access Point, SSID, Band, Authentication, RSSI, and Power Save Mode.

The left sidebar shows the navigation menu with "Association" selected. Below "Association" are sub-items: "By Access Point", "By Wireless Station", "Security", "Utilization", "Channel", "Rogue AP", and "SysLog".

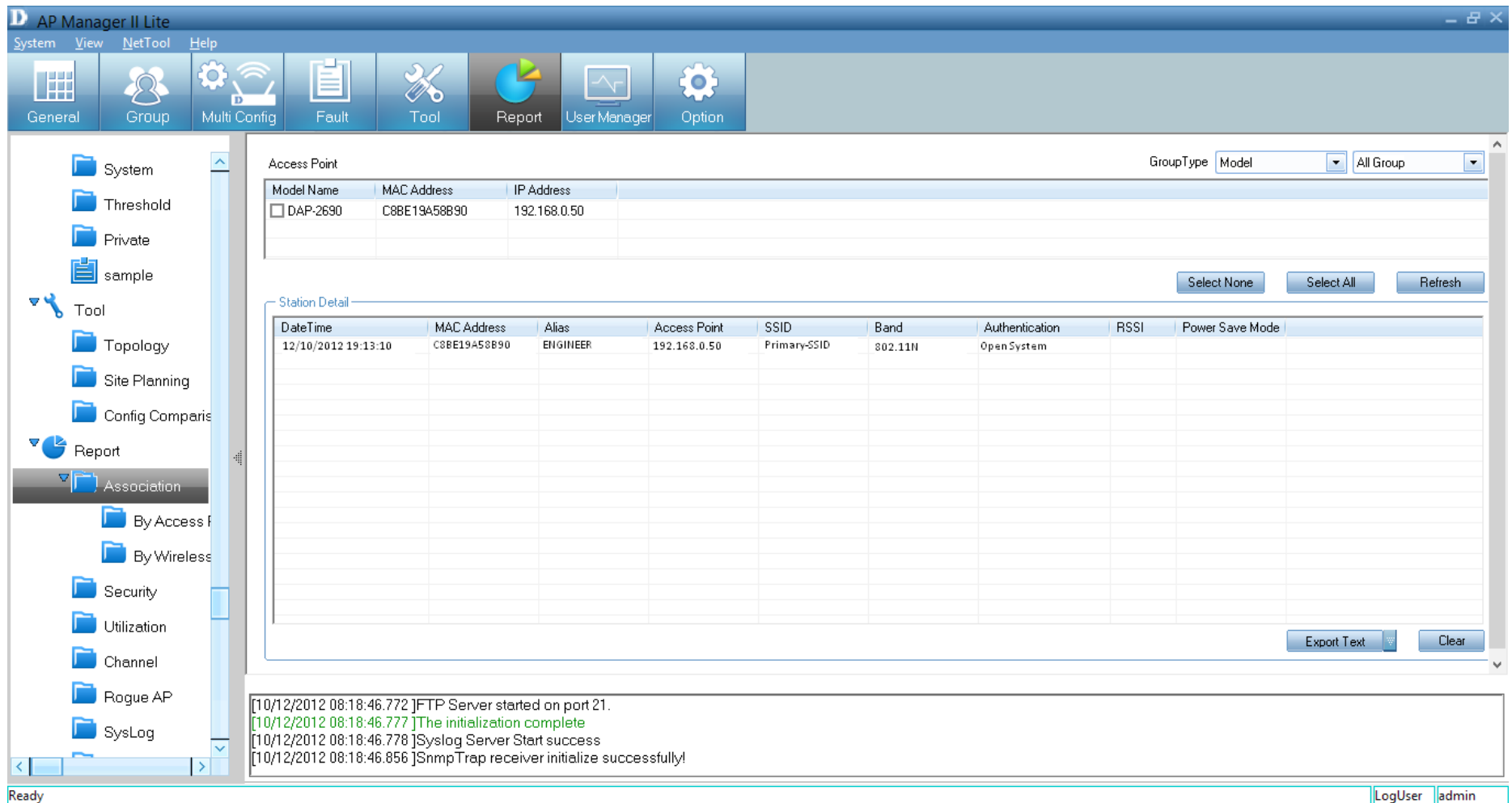
At the bottom of the window, there is a log window showing system messages:

```
[10/12/2012 08:18:46.772]FTP Server started on port 21.
[10/12/2012 08:18:46.777]The initialization complete
[10/12/2012 08:18:46.778]Syslog Server Start success
[10/12/2012 08:18:46.856]SnmpTrap receiver initialize successfully!
```

The status bar at the bottom shows "Ready" and "LogUser admin".

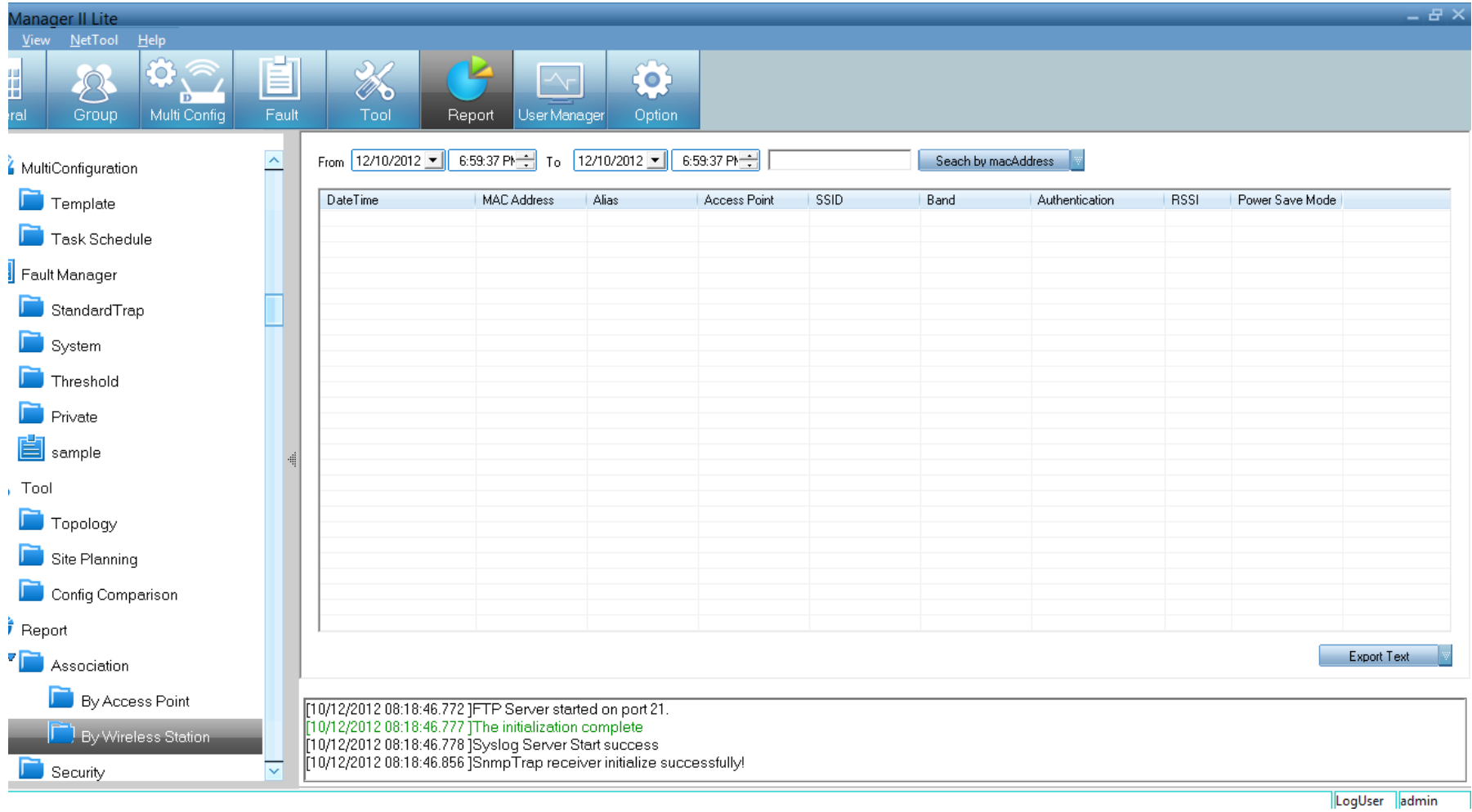
By Access Point - Highlight an access point, and the details of client stations that are associated with the AP list will be shown. The detail information includes *Date/Time*, *MAC Address*, *Alias*, *Access Point*, *SSID*, *Band*, *Authentication*, *RSSI* and *Power Save Mode*.

From the *Group Type* you can specify the summary to show the data according to a specified model or group. To export the access point data to a file, click a file type from the *Export Text* drop-down menu or click the **Export Text** button. Then enter a file name in the *Export* window and click the **Save** button to save the access point data.



By Wireless Station - To list the access points according to the specified station and detected date, choose the date range from the **From/To** drop-down menu, or type the *MAC address* of the device.

Export the access point data to a file. Click a file type from the *Export Text* drop-down menu or click the **Export Text** button. Then enter a file name in the *Export* window and click the **Save** button to save the access point data.



Security

The *Security* pane graphically lists the security level of the managed access point(s) from lowest to highest - *Open System*, *Shared Key*, *WPA-Personal*, *WPA-Enterprise*, *WPA2-Personal* and *WPA2-Enterprise*.

The *Security Details* pane shows the *SSID*, *Mode Name*, *MAC Address*, *IP Address*, *Authentication* and *Band* information of the access points.

The screenshot displays the AP Manager II Lite software interface. The main window is titled "AP Manager II Lite" and features a menu bar with "System", "View", "NetTool", and "Help". Below the menu bar is a toolbar with icons for "General", "Group", "Multi Config", "Fault", "Tool", "Report", "User Manager", and "Option".

The left sidebar contains a tree view with the following folders: Private, sample, Tool, Topology, Site Planning, Config Comparison, Report, Association, By Access Point, By Wireless Station, Security (highlighted), Utilization, Channel, Rogue AP, SysLog, Custom, and Monitor.

The main content area is divided into two panes:

- Security Report:** A bar chart showing the security level of wireless networks. The y-axis is labeled "Security Level(Low-hight)" and ranges from 1 to 12. The x-axis is labeled "Wireless Network (SSID)".
- Security Details:** A table with the following columns: SSID, Model Name, MAC Address, IP Address, Authentication, and Band. The table contains one row of data:

SSID	Model Name	MAC Address	IP Address	Authentication	Band
DLINK-1	DAP-2690	C8BE19A58B90	192.168.0.50	Open System	802.11n

At the bottom of the main content area, there is a "Refresh" button and a log window showing the following messages:

```
[10/12/2012 08:18:46.772 ]FTP Server started on port 21.
[10/12/2012 08:18:46.777 ]The initialization complete
[10/12/2012 08:18:46.778 ]Syslog Server Start success
[10/12/2012 08:18:46.856 ]SnmpTrap receiver initialize successfully!
```

The status bar at the bottom of the window shows "Ready" on the left and "LogUser admin" on the right.

Utilization

The *Utilization* window shows the band usage of a specific access point. The *AP Manager II Lite* can poll the access points to show the usage. To start polling, select the access points that *AP Manager II Lite* will poll from the *Select* window by clicking the **Change** button of *Dependency* and then click **Start** button. You can also enable the threshold notice by clicking **Enable Threshold Notice** and select the type of *Threshold Column*.

The screenshot displays the **AP Manager II Lite** interface. The **Utilization** window is active, showing a sidebar with various navigation options. The main area is divided into several sections:

- Transmit Detail:** A table with columns: DateTime, IP Address, Max STA's Number, UpTime, Transmitted Packets, Transmitted Success Rate, Transmitted Retry Rate, and Band.
- Select devices:** A dialog box with a table containing one entry:

Model Name	MAC Address	IP Address	Netmask
DAP-2690	C8BE19A58B90	192.168.0.50	255.255.255.0
- Polling Detail:**
 - Polling Interval: 5 (Change button)
 - Scheduled Next Poll: 2012-12-10 19:33:44
 - Enable Threshold Notice: (Start button)
 - Dependency: None (Change button)
 - Last Polled At: 2012-12-10 19:33:44
 - Threshold: TransSuccessf (dropdown menu, End button)
- Log Window:**

```
[10/12/2012 08:18:46.772]FTP Server started on port 21.
[10/12/2012 08:18:46.777]The initialization complete
[10/12/2012 08:18:46.778]Syslog Server Start success
[10/12/2012 08:18:46.856]Snmp Trap receiver initialize successfully!
```

The status bar at the bottom shows "Ready" and "LogUser admin".

Channel

The *Channel* window graphically lists the channel usage of the managed access points. From the *Group Type*, specify the graph data according to a specific model or group.

The screenshot displays the AP Manager II Lite software interface. The main window is titled "AP Manager II Lite" and features a menu bar with "System", "View", "NetTool", and "Help". Below the menu bar is a toolbar with icons for "General", "Group", "Multi Config", "Fault", "Tool", "Report", "User Manager", and "Option".

The left sidebar contains a tree view with the following items: Private, sample, Tool, Topology, Site Planning, Config Comparison, Report, Association, By Access Point, By Wireless Station, Security, Utilization, Channel (highlighted), Rogue AP, SysLog, Custom, and Monitor.

The main content area shows three channel usage reports:

- 802.11 b/g/n Channel Usage:** A bar chart titled "802.11 g/b/n Channel Report" showing channel counts for channels 1 through 13. The y-axis is labeled "Channel Counts" and ranges from 0 to 20. Channel 1 shows a count of approximately 20, while other channels show counts near zero.
- 802.11 a/n Channel Usage:** A bar chart titled "802.11 a/n Channel Report" showing channel counts for channels 1 through 13. The y-axis is labeled "Channel Counts" and ranges from 0 to 20. Channel 1 shows a count of approximately 20, while other channels show counts near zero.
- Show Channel Usage By Group:** A bar chart titled "Channel Report" showing channel counts for channels 1 through 13. The y-axis is labeled "Channel Counts" and ranges from 0 to 20. Channel 1 shows a count of approximately 20, while other channels show counts near zero.

At the bottom right of the main content area, there are two dropdown menus: "GroupType" set to "Model" and "All Group". A "Refresh" button is located to the right of these dropdowns.

The status bar at the bottom of the window displays "Ready" on the left and "LogUser admin" on the right. A log window at the bottom of the main content area shows the following messages:

```
[10/12/2012 08:18:46.772 ]FTP Server started on port 21.
[10/12/2012 08:18:46.777 ]The initialization complete
[10/12/2012 08:18:46.778 ]Syslog Server Start success
[10/12/2012 08:18:46.856 ]SnmpTrap receiver initialize successfully!
```

Rogue AP

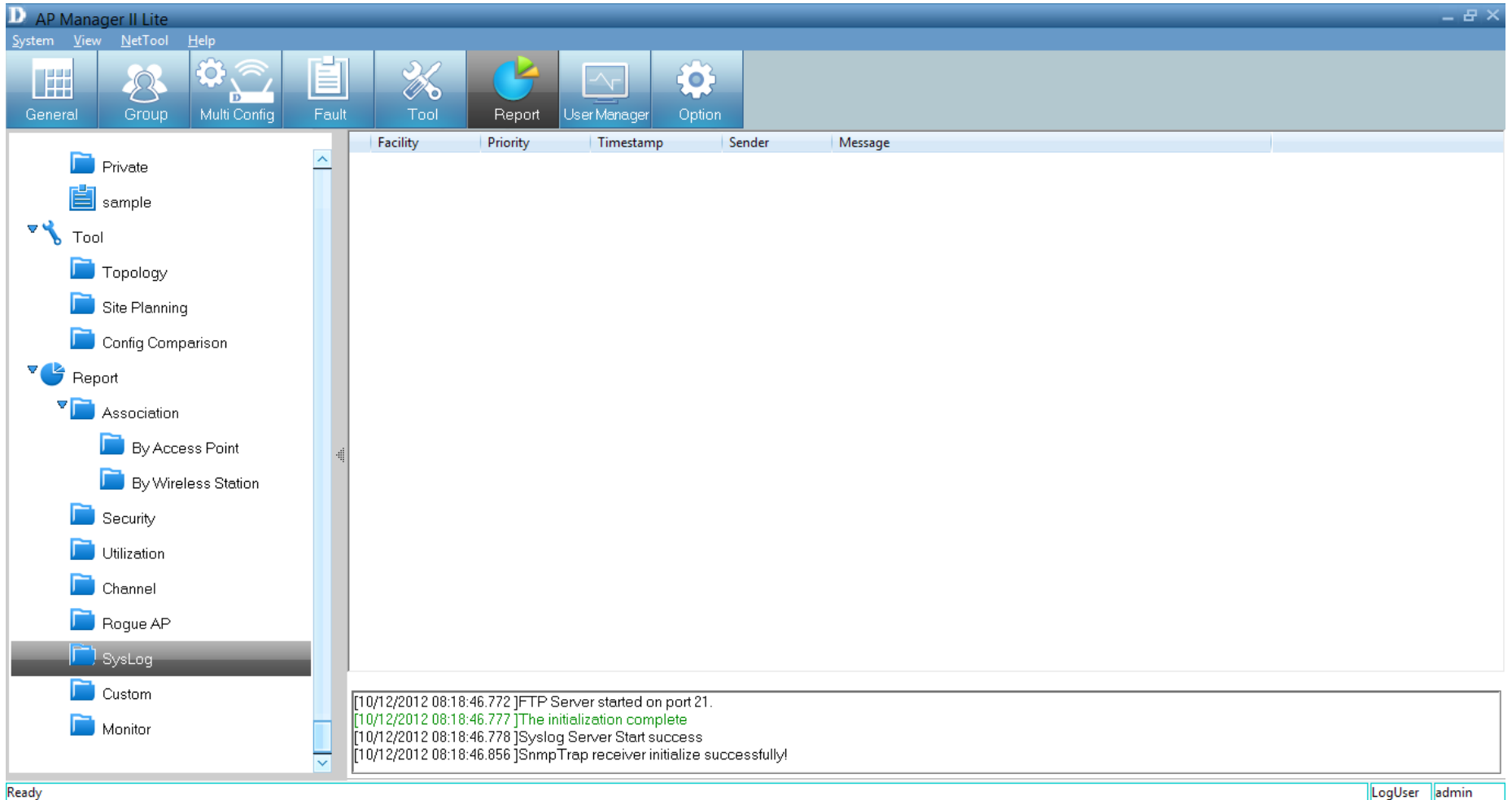
The *Rogue AP* pane shows the access points that are not a part of same subnet. *Rogue Access Points* are showed by *Channel*, *BSSID*, *Mode* and *SSID*. To categorize the APs, click the **Detect** button to scan the APs and then click the category at the right side of window. Next, drag the AP from top window to bottom window.

The screenshot displays the D-Link AP Manager II Lite software interface. The main window is titled "AP Manager II Lite" and features a menu bar (System, View, NetTool, Help) and a toolbar with icons for General, Group, Multi Config, Fault, Tool, Report, User Manager, and Option. A left-hand navigation pane shows a tree structure with folders like Private, sample, Tool, Topology, Site Planning, Config Comparison, Report, Association, Security, Utilization, Channel, Rogue AP (selected), SysLog, Custom, and Monitor. The main area contains two tables. The top table, labeled "New AP", has columns for Channel, BSSID, Mode, and SSID, with data for channels 11, 6, 1, 7, and 8. The bottom table, labeled "Rogue AP", has the same columns but is currently empty. A "Detect" button is located below the bottom table. At the bottom of the window, a status bar shows "Ready" on the left and "LogUser | admin" on the right. A log window at the bottom displays system messages:

```
[10/12/2012 08:18:46.772]FTP Server started on port 21.
[10/12/2012 08:18:46.777]The initialization complete
[10/12/2012 08:18:46.778]Syslog Server Start success
[10/12/2012 08:18:46.856]SnmpTrap receiver initialize successfully!
```

Syslog

The *Syslog* window shows the *System Log* information of the managed access point.



Custom

The *Custom* log report allows you to configure the read-out from a specific date to a designated date. Click the **Search** button once you have finalized your time frame. Alternatively, you can create a custom configuration according to the *Group Type* (*Model* or *Category*) and *Group*.

The screenshot displays the D-Link AP Manager II Lite software interface. The main window is titled "AP Manager II Lite" and features a menu bar with "System", "View", "NetTool", and "Help". Below the menu bar is a toolbar with icons for "General", "Group", "Multi Config", "Fault", "Tool", "Report", "User Manager", and "Option".

The left sidebar contains a tree view with the following folders: Private, sample, Tool, Topology, Site Planning, Config Comparison, Report, Association (By Access Point, By Wireless Station), Security, Utilization, Channel, Rogue AP, SysLog, Custom (highlighted), and Monitor.

The main workspace is divided into several sections:

- Search Filters:** "From" and "To" date and time pickers (both set to 12/10/2012 7:37:27 PM), a "Search" button, "GroupType" dropdown (Model), and "All Group" dropdown.
- Table:** A table with columns "DateTime", "Access Point", and "Station's numbers". The table is currently empty.
- Custom Report:** A chart titled "Custom Report" with a y-axis labeled "Number" (0 to 10) and an x-axis labeled "Time: 2012-12-10 19:37:27--2012-12-11 03:37:27". The chart area is empty.
- Export:** An "Export" button located at the bottom right of the Custom Report section.
- Log Output:** A text area at the bottom showing system logs:


```
[10/12/2012 08:18:46.772]FTP Server started on port 21.
[10/12/2012 08:18:46.777]The initialization complete
[10/12/2012 08:18:46.778]Syslog Server Start success
[10/12/2012 08:18:46.856]SnmpTrap receiver initialize successfully!
```

The status bar at the bottom shows "Ready" on the left and "LogUser admin" on the right.

Monitor

The *Monitor* window shows the performance of an access point that you create from scratch.

AP Manager II Lite

System View NetTool Help

General Group Multi Config Fault Tool Report User Manager Option

Private
sample
Tool
Topology
Site Planning
Config Comparison
Report
Association
By Access Point
By Wireless Station
Security
Utilization
Channel
Rogue AP
SysLog
Custom
Monitor

Profile

Devices data monitor

Action

Create Delete Edit Start Stop Report

Profile Name Interval Time Total Time

Details

Color	Last Polled At	Scheduled Next Poll	Data

[10/12/2012 08:18:46.772]FTP Server started on port 21.
 [10/12/2012 08:18:46.777]The initialization complete
 [10/12/2012 08:18:46.778]Syslog Server Start success
 [10/12/2012 08:18:46.856]Snmp Trap receiver initialize successfully!

Ready LoqUser admin

Create a new *Surveillance* profile by clicking the **Create** button under *Action*.

The Profile is automatically generated.

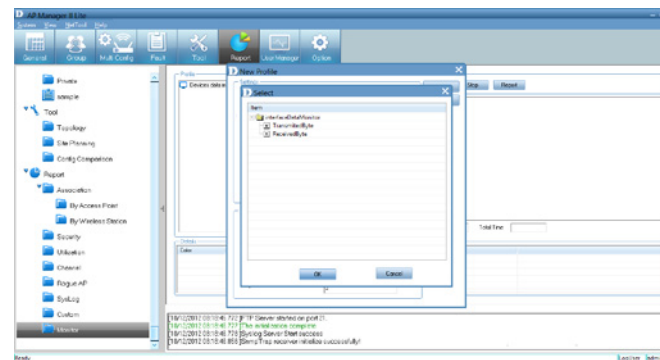
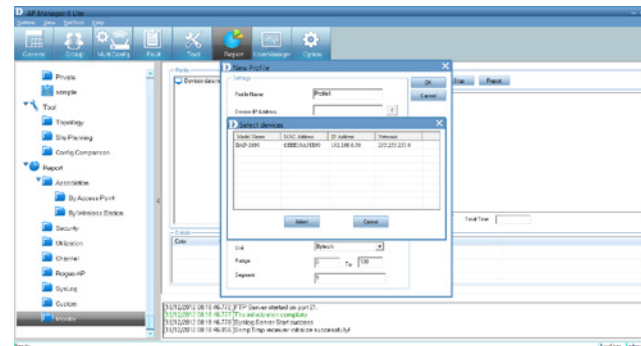
Device IP Address - Click the arrow to access it.

Option - Click the arrow to access it.

Public Community String - Automatically generated.

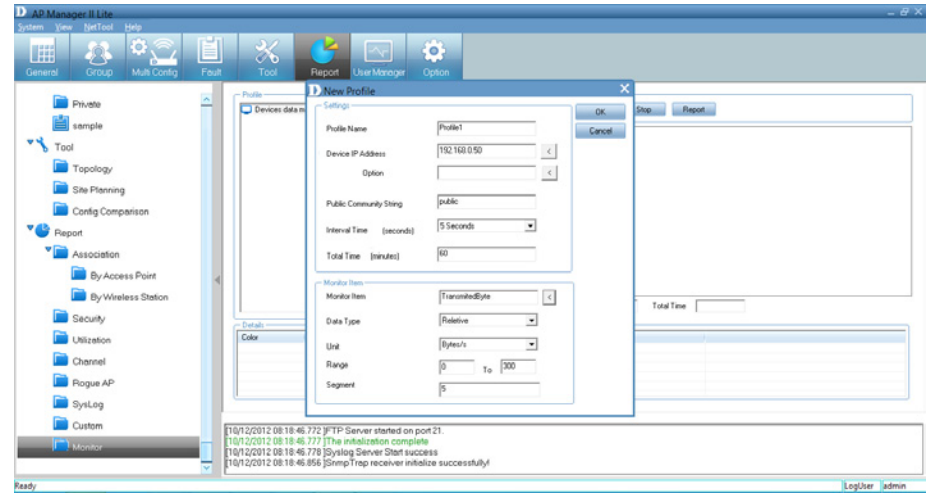
Interval Time - Select from the drop-down list.

Total Time - Enter a value in minutes.

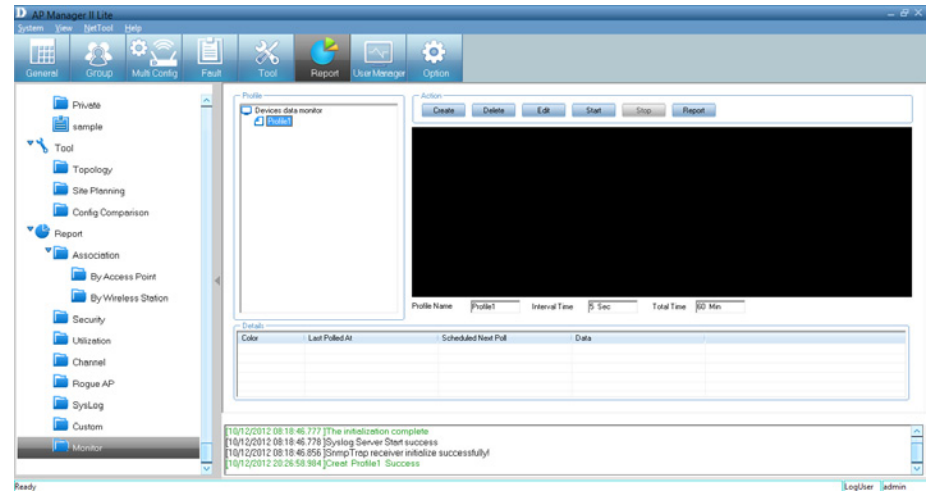


Section 4 - Configuration

Once all the information is entered into the fields provided, click **OK**.

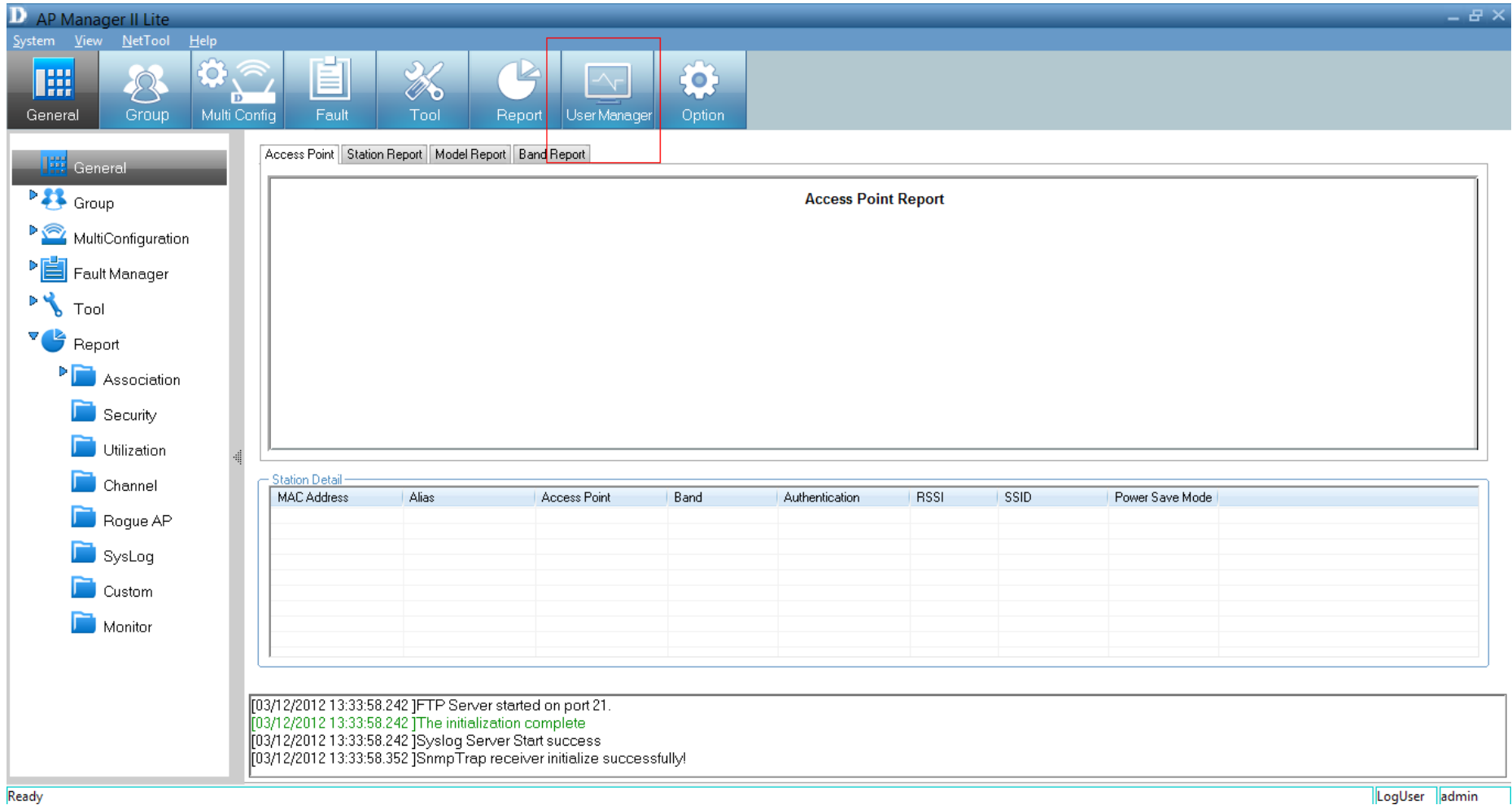


The access point monitors the profile you just created.

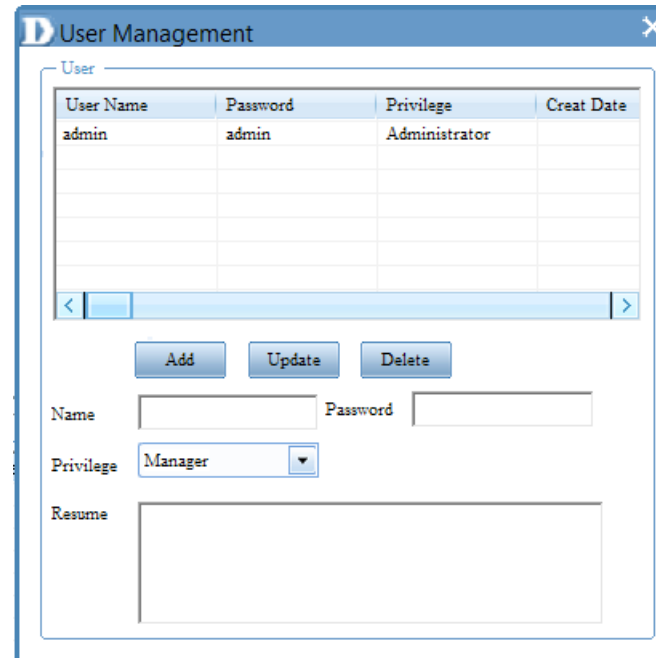


User Manager

The *AP Manager II Lite* allows you to manage user profiles. To manage users, click the **User Manager** icon at the top of the toolbar.



This brings up the *User Management* pane. This shows the current **User(s)**, **Privilege** and account **Creation Date**.



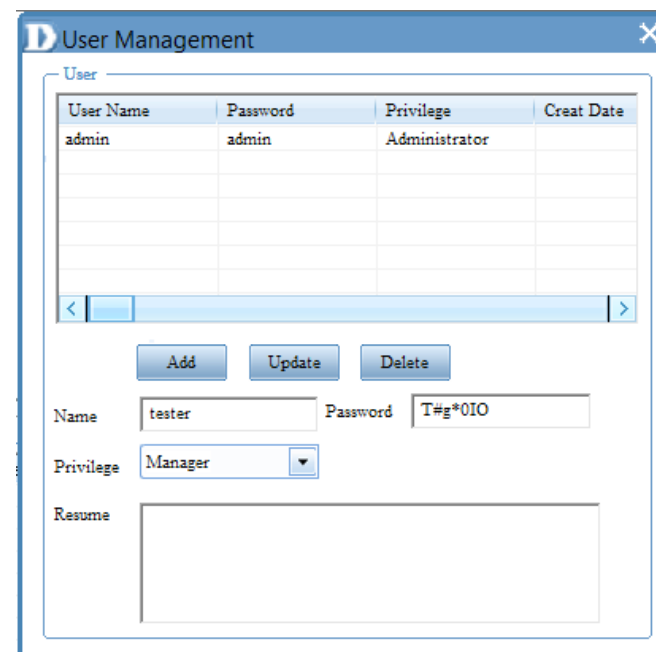
The screenshot shows the 'User Management' window with a table of users. The table has columns for User Name, Password, Privilege, and Creat Date. The first row shows 'admin' with password 'admin' and privilege 'Administrator'. Below the table are buttons for 'Add', 'Update', and 'Delete'. The form fields are: Name (empty), Password (empty), Privilege (Manager), and Resume (empty).

User Name	Password	Privilege	Creat Date
admin	admin	Administrator	

To create a new user, enter a **Name**, **Password** and **Privilege** rights from the drop-down menu. Click the **Add** button.

Explanation of privilege levels:

- **Administrator:** Owns all the rights of the *AP Manager II Lite*.
- **Manager:** Owns all the rights except user manager.
- **Guest:** Can only view the information.



The screenshot shows the 'User Management' window with the same table as above. The form fields are: Name (tester), Password (T#g*0IO), Privilege (Manager), and Resume (empty).

User Name	Password	Privilege	Creat Date
admin	admin	Administrator	

The new details now populate the *User Management* table.

The screenshot shows a web interface titled "User Management" with a close button in the top right corner. Below the title is a sub-header "User" and a table with the following data:

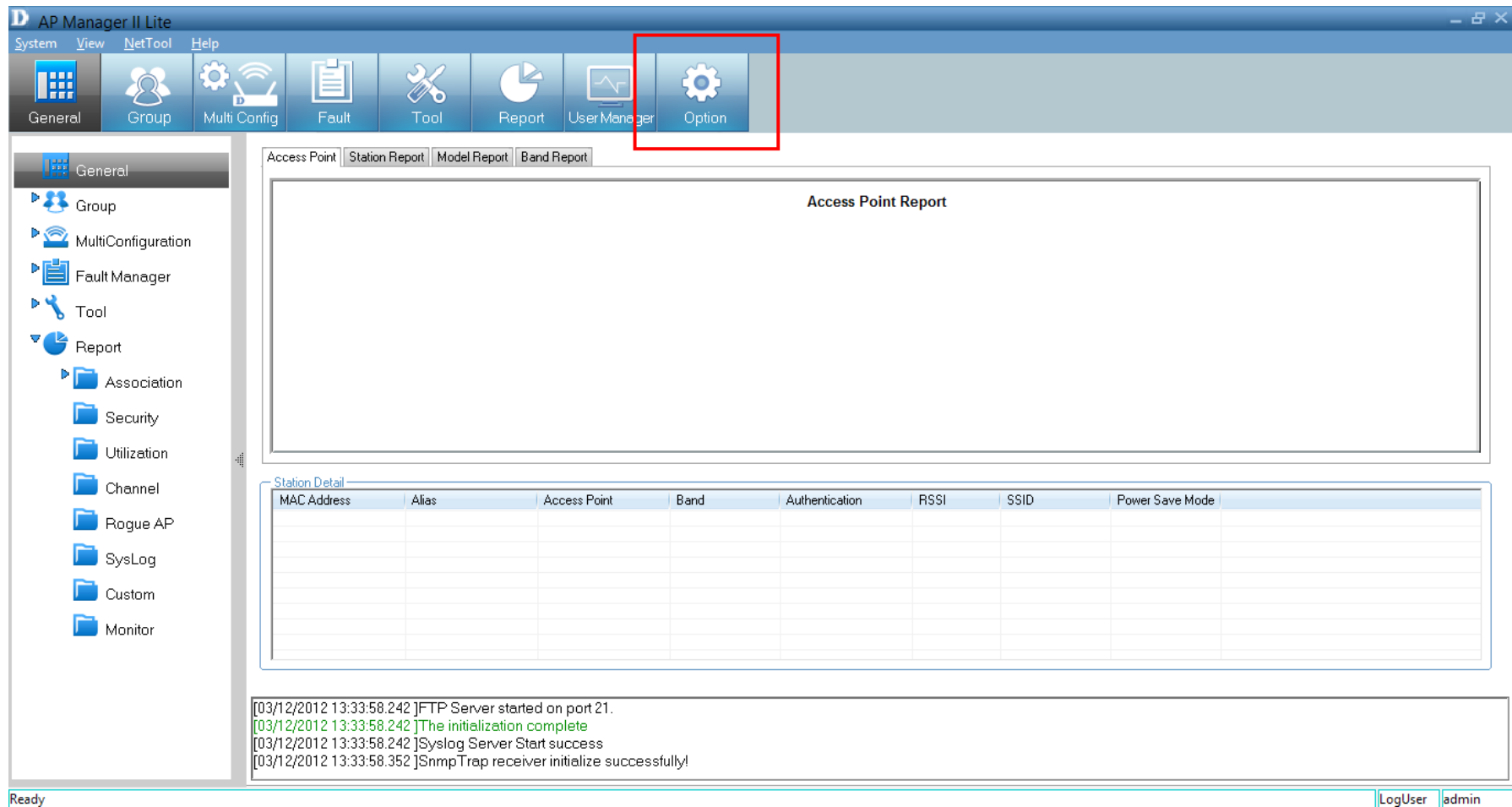
User Name	Password	Privilege	Creat Date
admin	admin	Administrator	
tester	T#g*0IO	Manager	2012-12-10

Below the table is a pagination bar with left and right arrows. Underneath are three buttons: "Add", "Update", and "Delete". Below these buttons are form fields for "Name" (containing "tester"), "Password" (containing "T#g*0IO"), and "Privilege" (a dropdown menu showing "Manager"). At the bottom is a "Resume" label and a large empty text area.

To delete a user, click the **Delete** button.

Options

Users can change the software operation environment of the *AP Manager II Lite*. To configure the system environment, click **Options** in the main toolbar.



Section 4 - Configuration

The *Options* configuration window has four tabs - *General*, *Module*, *Database Maintenance* and *Advanced*. The *General* section consists of *Logon Settings*, *SNMP Settings*, *Polling Settings* and *Discover*.

Logon Settings - Select whether to enter a user name and password or select a specific user to use the system.

SNMP Settings - Select the *Public/Private Community String*, the *Port number* and the *SNMP Response TimeOut*.

Polling Settings - Select to enable or disable the *Polling type* and the *Interval Period*.

Discover - Enter a value for the *Discovery Retry* and *TimeOut* duration.

Click **Apply**, then **OK** when you are finished with the configuration. Click **Cancel** if you wish not to make any changes.

The screenshot shows the 'Options' configuration window with the 'General' tab selected. The window is titled 'D Options' and has a close button in the top right corner. The 'General' tab is active, and the 'Logon Setting' section is expanded. It contains two radio buttons: 'To use the system, user should input name and password' (selected) and 'Please select the user to use the system'. Below this is a table with columns 'User Name', 'Privilege', 'Creat Date', and 'Resume'. The 'admin' user is listed with 'Administra...' as the privilege. The 'SNMP Setting' section has input fields for 'Public Community String' (public), 'Port' (161), 'Private Community String' (private), and 'SNMP Response TimeOut' (20, with a range of 5-60 Seconds). The 'Polling Setting' section has radio buttons for 'Polling type' (Disable and Enable, with Enable selected) and an 'Interval time' field (30, with a range of 10-60 Seconds). The 'Discover' section has 'Retry' (1) and 'TimeOut' (5, with a range of 5-60 Seconds) fields. At the bottom right, there are three buttons: 'Ok' (with a green checkmark), 'Cancel' (with a red X), and 'Apply' (with a grey checkmark).

User Name	Privilege	Creat Date	Resume
admin	Administra...		

The *Module* is divided into two sections: *Select firmware file for model* and *Rogue AP*.

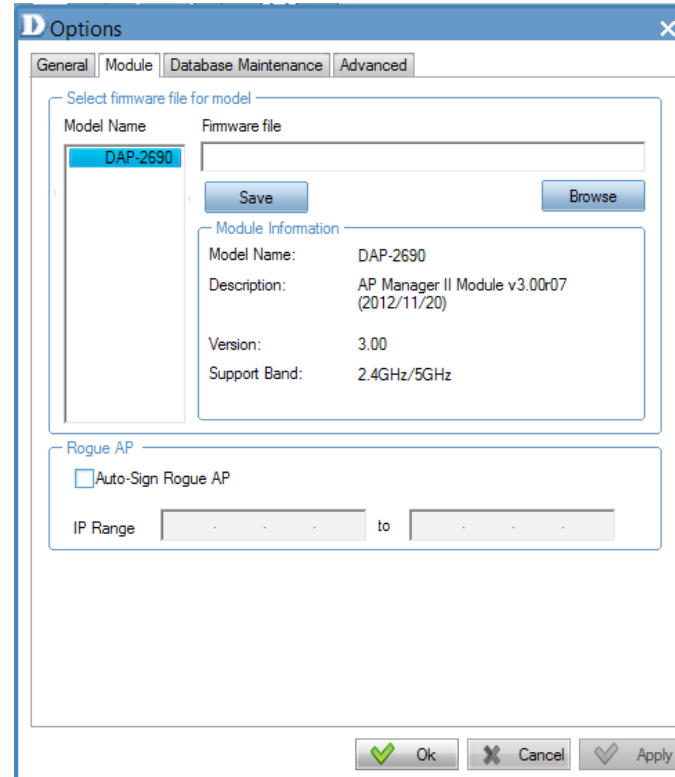
Model Name - Details automatically provided.

Firmware File - Click the **Browse** button to find the new/updated firmware. Click **Save** when complete.

Module Information - This displays the current information.

Rogue AP - This can be auto-signed. Click the checkbox next to *Auto-Sign Rogue AP* and enter an *IP Range*.

Click **Apply**, then **OK** when you are finished with the configuration. Click **Cancel** if you wish not to make any changes.



The *Database Maintenance* allows users to configure the database according to their needs. Data is available for *Fault Data*, *Wireless Station Data*, *System Log Data*, *Utilization Data* and *SysLog Data*.

Data is further segmented into *Notice by Records* and *Clear Rule*.

Under *Notice By Record*, enter a value in the field provided.

Under *Clear Rule*, there are three main options.:

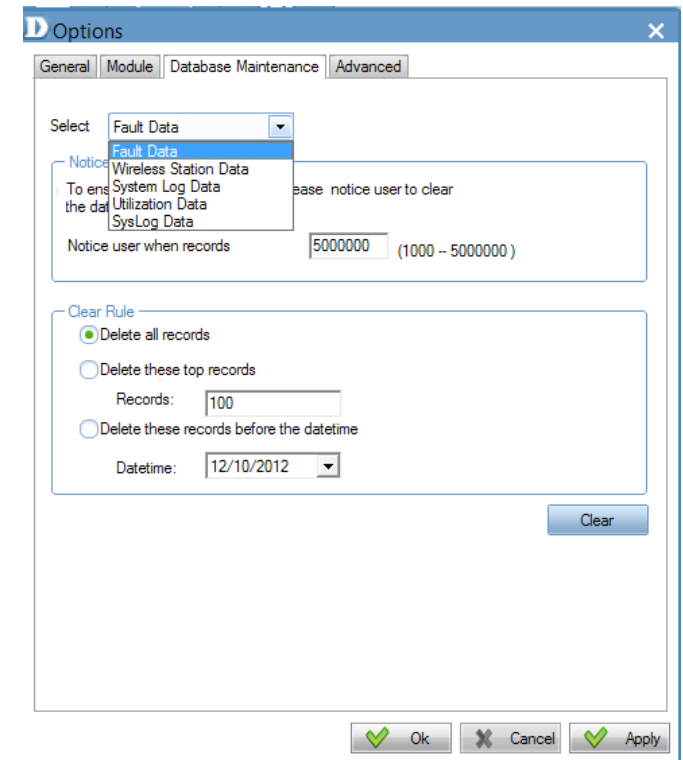
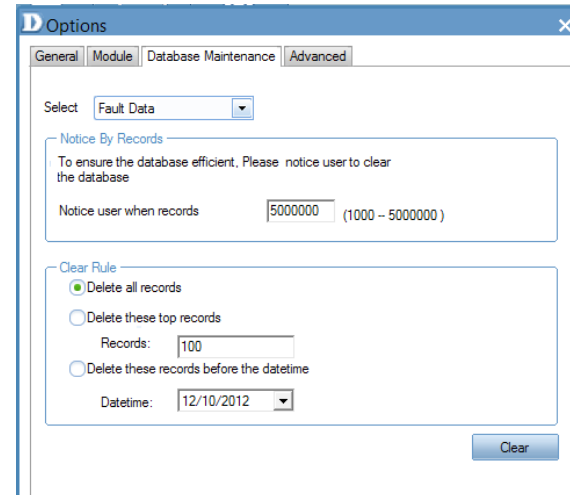
Delete all records - Click to clear records.

Delete these top records - Enter a value accordingly.

Delete these records before the datetime - Enter the calendar date.

Click **Clear** if you wish to start over.

Click **Apply**, then **OK** when you are finished with the configuration. Click **Cancel** if you wish not to make any changes.



The *Advanced* tab is divided into two sections; *TimeOut Settings* and *FTP Server Settings*.

TimeOut Settings

Under *TimeOut Settings*, enter a value in the field provided for the following settings:

Set Timeout(s)

Reboot Timeout(s)

Configuration Flash Update Time(s)

F/W Download Time(s)

F/W Flash Update Time(s)

Time Tolerance Time(s)

Under *FTP Server*, there are two main options.:

Enable Local FTP Server -

Enable Remote FTP Server - Enter Remote IP Address

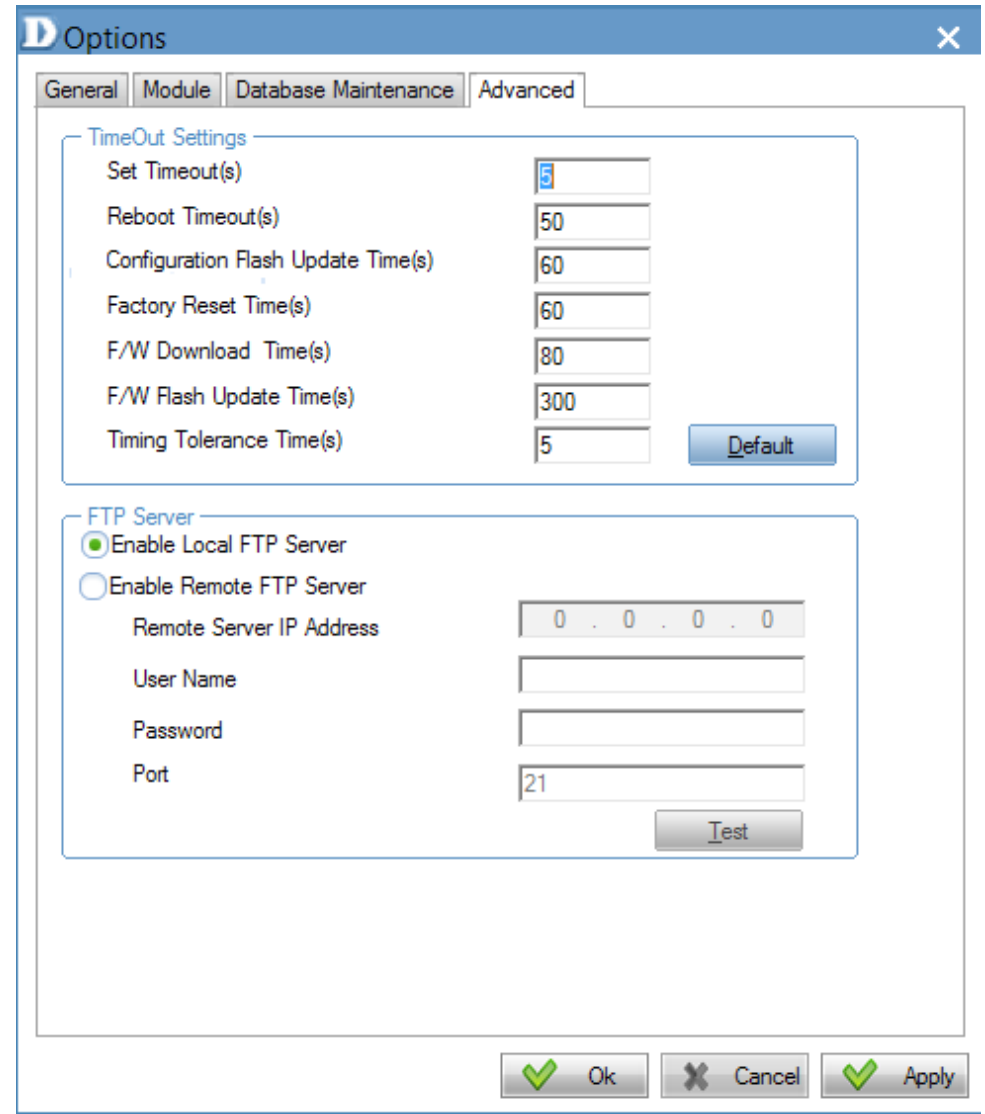
Username

Password

Port

Click **Test** to see its functionality.

Click **Apply**, then **OK** when you are finished with the configuration. Click **Cancel** if you do not want to make changes.



D Options

General | Module | Database Maintenance | **Advanced**

TimeOut Settings

Set Timeout(s)	5
Reboot Timeout(s)	50
Configuration Flash Update Time(s)	60
Factory Reset Time(s)	60
F/W Download Time(s)	80
F/W Flash Update Time(s)	300
Timing Tolerance Time(s)	5

Default

FTP Server

Enable Local FTP Server

Enable Remote FTP Server

Remote Server IP Address: 0 . 0 . 0 . 0

User Name: _____

Password: _____

Port: 21

Test

Ok Apply