



Newbridge WaveStation 2812

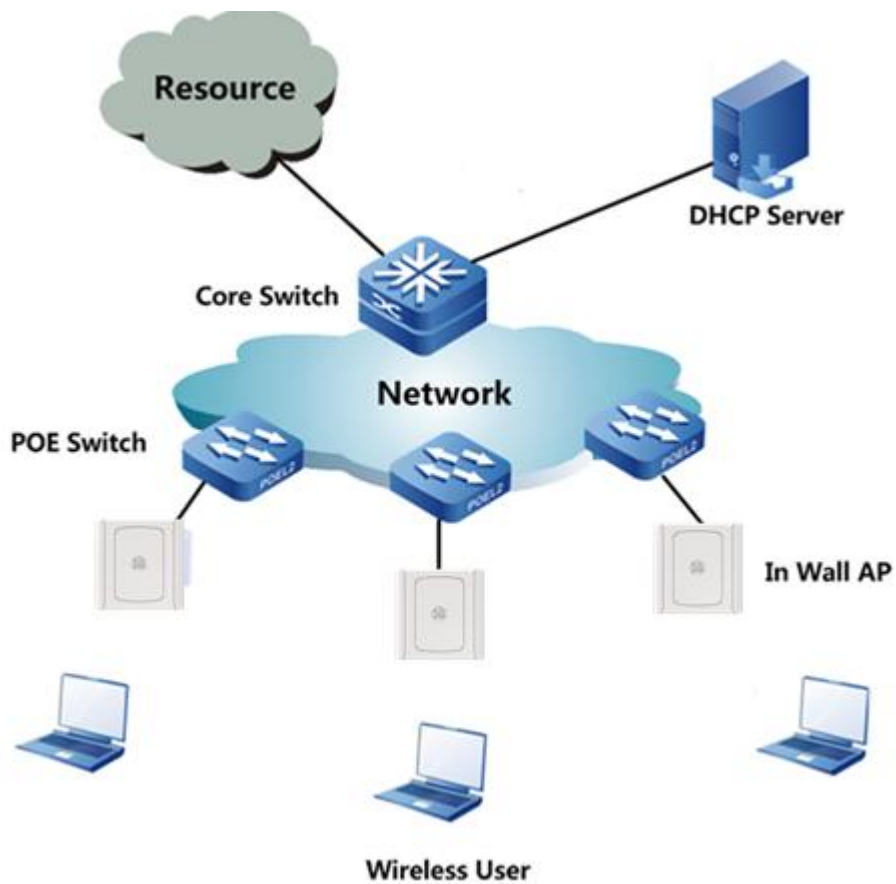
Operational Manual

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Typical Deployment Guide

1 Typical Diagram



2 Components

DHCP Server: To allocate IP address for each wireless user

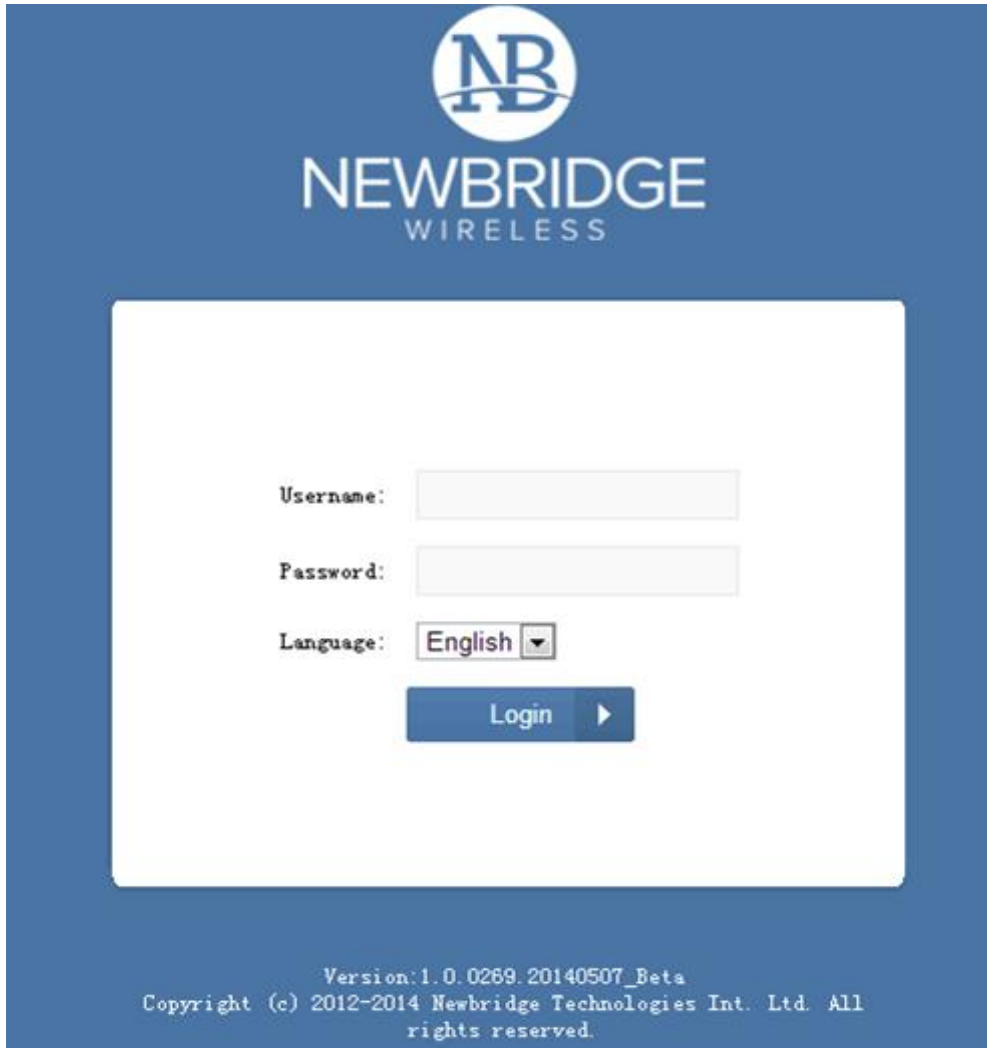
Core Switch: To forward traffic

POE Switch: To forward traffic and provide power supply to AP

In Wall AP: To bridge wired and wireless network

3 Deployment Procedure

- a. Login to AP web GUI,
Default IP address of AP is 192.168.1.2/24
Default user name and password are admin



The image shows the login interface of the Newbridge Wireless AP web GUI. It features a blue header with the Newbridge Wireless logo and name. Below the header is a white login box containing the following fields:

- Username:** A text input field.
- Password:** A text input field.
- Language:** A dropdown menu currently set to "English".
- Login:** A blue button with a right-pointing arrow.

At the bottom of the page, the following text is displayed:

Version: 1.0.0269.20140507_Beta
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- b. The default IP address of AP is 192.168.1.2/24, to click the notepad icon under Edit column to change it

192.168.1.2/edit_interface.html?id=1

Edit VLAN Interface

IP :	<input checked="" type="radio"/> Static <input type="radio"/> DHCP <input type="radio"/> None		
IP Address :	<input type="text" value="192.168.1.2"/>	Primary DNS :	<input type="text"/>
Netmask :	<input type="text" value="255.255.255.0"/>	Secondary DNS :	<input type="text"/>
Gateway IP :	<input type="text"/>		
MTU:	<input type="text" value="1500"/>		
DHCP Server:	<input type="checkbox"/>		

Apply

Reset

- c. AP default running on 802.11 g/n modes, change the desire mode else let it default.

Basic Settings

Wireless Mode :	<input type="text" value="Access Point"/>
Region Code :	<input type="text" value="Malaysia"/>
IEEE 802.11 Mode :	<input type="text" value="802.11gn"/>
Channel Width :	<input type="text" value="20 MHz"/>
Channel Shifting :	<input type="text" value="Disable"/>
Channel :	<input type="text" value="auto"/>
Tx Power :	<input type="text" value="20"/>
Max TX Rate :	<input type="text" value="MCS 15 - 130 [300]"/>

Advanced Settings

WMM Settings

Apply

- d. Go to SSID menu

Wireless Settings

Wireless1	Wireless2	Wireless3	Wireless4
Wireless Availability : <input checked="" type="radio"/> Enable <input type="radio"/> Disabled Hide SSID : <input type="radio"/> Enable <input checked="" type="radio"/> Disabled SSID : <input type="text" value="Newbridge"/> VLAN : <input type="text" value="1"/> Mac Filter : <input type="text" value="Disable"/>			

- e. There's a default SSID "Newbridge" always there, you can just modify the "Newbridge" or choose to add a new SSID.
- f. Override the default SSID to edit the SSID

g. Edit WLAN settings

Wireless Settings ▲

Wireless1

Wireless2

Wireless3

Wireless4

Wireless Availability : ☒ Enable ☐ Disabled

Hide SSID : ☐ Enable ☒ Disabled

SSID :

VLAN : ▼

Mac Filter : ▼

▼

Wireless Availability: Enable or disable SSID

Hide SSID: Broadcast or not broadcast the SSID





SSID: SSID name

VLAN: VLAN ID that the SSID binded

Mac Filter: Enable or disable Mac Filter

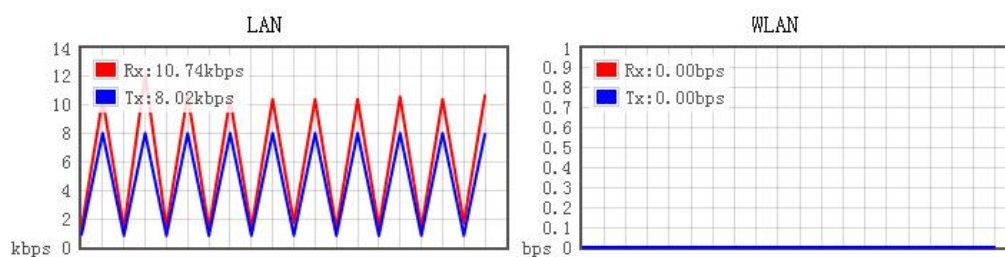
- h. **To support multiple SSID, the port of POE switch connected to in wall AP required to allow all vlans that binded to different SSID, as well as the port connected to DHCP server**
- i. **Ensure the layer 2 connectivity between AP and switch**
- j. **AP is plug and play so that just ensure it's powered by POE switch**
- k. Go to WLAN Status and WLAN Clients menu to check their status

Status

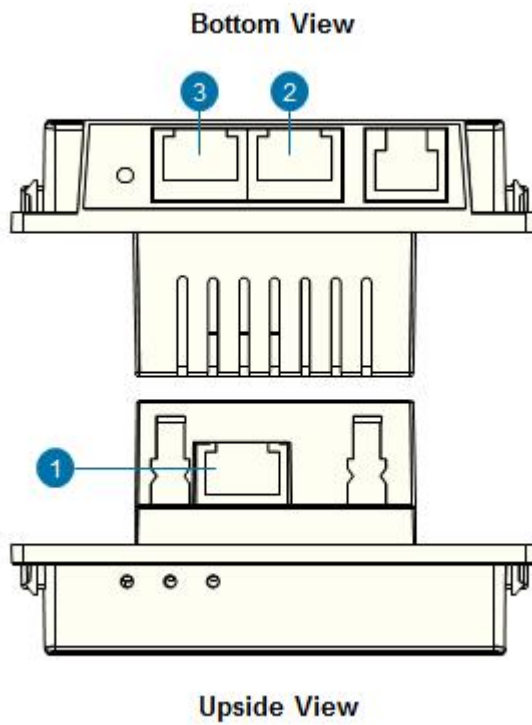
WIRELESS	NETWORK	SYSTEM
Radio		
Wireless Mode :	Access Point	Radio Mode : 11gn
Channel/Frequency :	11 / 2462	Tx Power : 20 dBm
Channel Width :	20 MHz	Tx Busy : 1
Region Code :	Malaysia	Rx Busy : 19
Max Rate :	144.4 Mbps	Total Busy : 22
TDCA :	Disable	Spectral Mode : Disable
Wireless1  [Up]		
SSID :	Newbrige	BSSID : FC:AD:0F:01:2A:68
Security :	NONE	Assoc Number : 0
Wireless2  [Down]		
Wireless3  [Down]		
Wireless4  [Down]		

Monitor

[Throughput](#) | [Interfaces](#) | [ARP](#) | [STA Stats](#) | [Routes](#) | [Log](#)



4 VLAN Configuration



No	Port Description
1	Eth0
2	Eth1 with PSE function
3	Eth2

- a. Go to Network and VLAN Menu and Click Add Button

MAIN
RADIO
WIRELESS
NETWORK
SERVICES
SYSTEM

Network Role

Network Mode : Bridge

Auto IP Aliasing : vlan1

VLAN

ID	Describe	STP	Untagged Port	Tagged Port	Edit	Delete
1	vlan1	Disable	eth0 eth1 eth2 wlan1			

Add

- b. Define the VLAN ID and click Apply button

New VLAN

VLAN ID: (Range:1-4094)

Apply

- c. Click Edit on the VLAN ID 10

VLAN

ID	Describe	STP	Untagged Port	Tagged Port	Edit	Delete
1	vlan1	Disable	eth0 eth1 eth2 wlan1			
10	vlan10	Disable				

Add

- d. Assign port eth1 and eth2 to VLAN 10 and click Apply button

Edit VLAN

VLAN ID:	<input type="text" value="10"/>		
VLAN Description :	<input type="text" value="vlan10"/>		
STP:	<input type="checkbox"/>		
Port :	Untagged Port	Tagged Port	No Member
eth0:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
eth1:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
eth2:	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
wlan1:	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

- e. Click Apply button

VLAN

ID	Describe	STP	Untagged Port	Tagged Port	Edit	Delete
1	vlan1	Disable	eth0 wlan1			
10	vlan10	Disable	eth1 eth2			
<input type="button" value="Add"/>						

VLAN Interface

Static Routes




Traffic Shaping

- f. Click Save button to activate the changes

Configuration contains changes. Save these changes?

- g. From the VLAN table, port eth1 and eth2 belongs to VLAN 10

VLAN

ID	Describe	STP	Untagged Port	Tagged Port	Edit	Delete
1	vlan1	Disable	eth0 wlan1			
10	vlan10	Disable	eth1 eth2			
<div>Add</div>						

VLAN Interface

5 Enable POE function on Eth1 port

- a. Go to System->Location, tick PSE Enable function and click Apply button

MAIN	RADIO	WIRELESS	NETWORK	SERVICES	SYSTEM
------	-------	----------	---------	----------	--------

Device

Ping Watchdog

Device Description : Newbridge WaveStation
 Language : English
 Timezone : (GMT) Western Europe Tim
 Enable Startup Date : ☐
 Startup Date : 2013-03-01

Ping Watchdog : ☐
 IP Address :
 Web URL :
 Startup Delay : seconds
 Ping Interval : seconds
 Failed Tries To Reboot :

System Accounts

Location

Misc

Latitude :
 Longitude :

PSE Enable : ☒

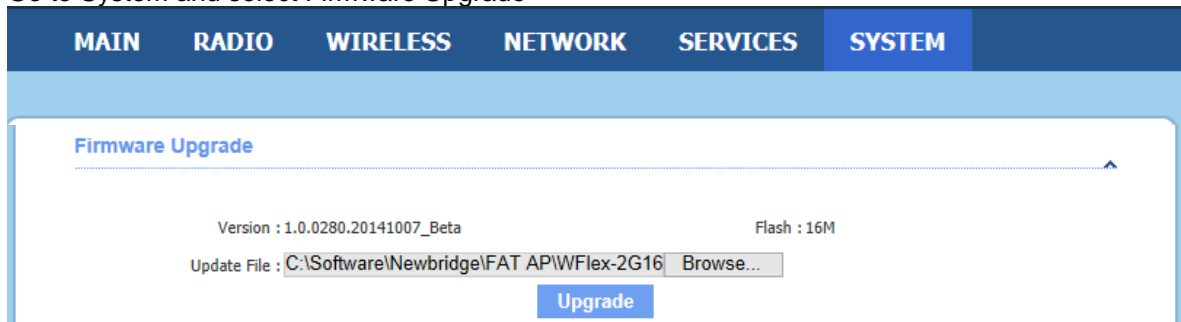
Apply

- b. Click Save button to activate the changes

Configuration contains changes. Save these changes?

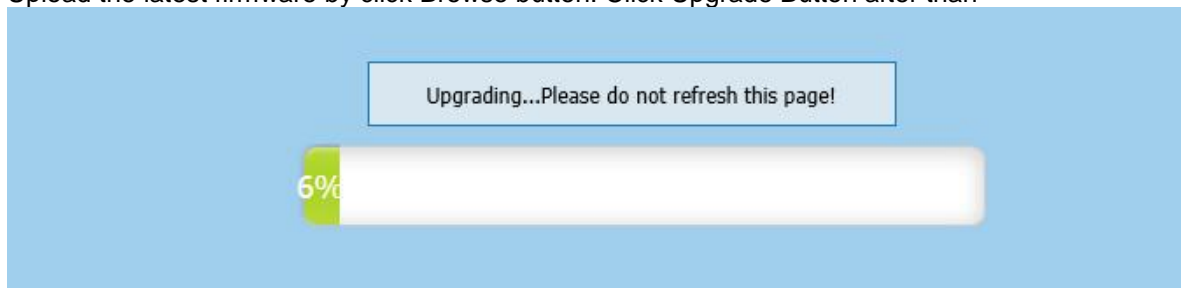
6 Firmware Upgrade

- a. Go to System and select Firmware Upgrade



The screenshot shows the 'Firmware Upgrade' page in the Newbridge Wireless web interface. The top navigation bar includes 'MAIN', 'RADIO', 'WIRELESS', 'NETWORK', 'SERVICES', and 'SYSTEM', with 'SYSTEM' being the active tab. The page title is 'Firmware Upgrade'. It displays the current version as '1.0.0280.20141007_Beta' and the flash size as '16M'. The 'Update File' field contains the path 'C:\Software\Newbridge\FAT AP\WFlex-2G16', followed by a 'Browse...' button. Below this is an 'Upgrade' button.

- b. Upload the latest firmware by click Browse button. Click Upgrade Button after than



The screenshot shows the firmware upgrade progress bar. A message box at the top says 'Upgrading...Please do not refresh this page!'. Below it is a progress bar that is 6% full, indicated by a green segment and the text '6%'.

- c. Wait for the progress until 100%. It will auto back to the default login page. Please notice firmware version highlighted inside the Red box.



The screenshot shows the Newbridge Wireless login page. The page has a blue background with the Newbridge Wireless logo at the top. Below the logo is a white login box containing fields for 'Username', 'Password', and 'Language' (set to 'English'). A 'Login' button is at the bottom of the box. At the very bottom of the page, a red box highlights the text 'Version: 1.0.0288' and 'Copyright (c) 2012-2014 Newbridge Wireless, Inc. All rights reserved'.

FCC Warning:

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.