

# Quick Installation Guide

WHG402

Secure WLAN Controller

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## **FCC Caution**

This equipment has been tested and proven to comply with the limits for a class A 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.

## **CE Caution**

The device has been tested and passed the requirements of the following standards, and hence fulfills the EMC and safety requirements within the CE marking requirement.

- ▶ EMC: EN 55032:2012 + AC:2013 Class A, EN 61000-3-2:2014 Class A, EN 61000-3-3:2013 including the followings:
    - EN 61000-4-2, EN 61000-4-3, EN 61000-4-4,
    - EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11
- Safety: EN 60950-1: 2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013

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## Preface

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This Quick Installation Guide provides instructions and reference material for getting started with the 4ipnet WHG402 Secure WLAN Controller. This guide will also show how to connect 4ipnet WHG402 to other network equipment.

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## Package Contents

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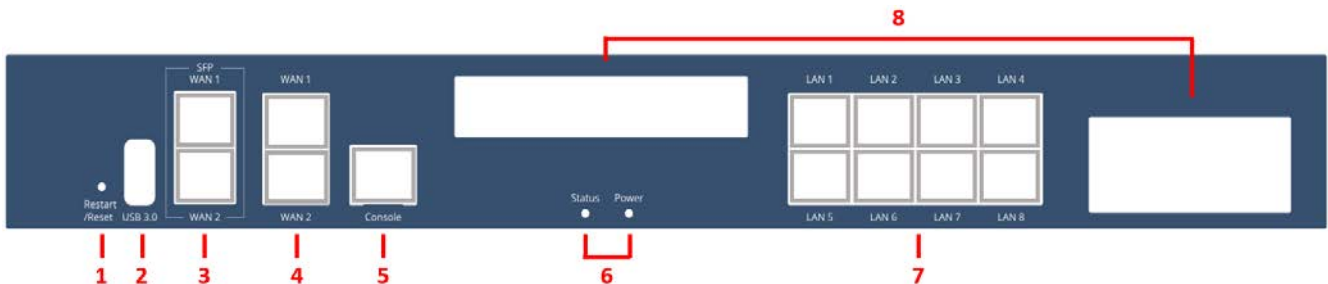
1. WHG402 x 1
2. Quick Installation Guide (QIG) x 1
3. Console Cable x 1
4. Power Cord x 1



*It is highly recommended to use all the supplies in the package instead of substituting any components by other suppliers to guarantee best performance.*

## System Overview

### Front Panel



1. **Restart / Reset:** Press and hold the Reset button for about 5 seconds (typically 3-8 seconds) and the system will restart. Press and hold the Reset button for more than 10 seconds to reset the system to its factory default configuration.
2. **USB:** Reserved for future use.
3. **WAN Ports (SFP):** Two SFP WAN ports (WAN1 / WAN2) are connected to the external network such as the ADSL Router from your ISP.
4. **WAN Ports (RJ45):** Two 10/100/1000 Base-T WAN ports (WAN1 / WAN2) are connected to the external network, such as the ADSL Router from your ISP.
5. **Console:** The system can be configured via a RJ-45 console port. The administrator can use a terminal emulation program such as Microsoft's Hyper Terminal to login to the configuration console interface to change admin password or monitor system status, etc.
6. **LED Indicators:** There are two kinds of LED, **Status** and **Power**, to indicate different statuses of the system.
7. **LAN Ports (RJ45):** Eight 10/100/1000 Base-T Ethernet ports for LAN connections (LAN1~LAN8).
8. **Heat Vent:** Do not block the heat vent. Leave enough open space for ventilation.

### Rear Panel



9. **Device Cooling Fan:** Do not block the cooling fans. Leave enough open space for ventilation.
10. **Power Supply Socket:** Connecting the power cord to the built-in power supply.

## Hardware Installation

Please follow the following steps to install WHG402:



1. Connect the power cord to the power socket on the rear panel.
2. Connect an Ethernet cable to the WAN1 Port on the front panel. Connect the other end of the Ethernet cable to an xDSL/cable modem, or a switch/hub of an internal network. The LED of this port should be ON to indicate a proper connection. WAN2 can be connected for load balancing or failover purpose when needed.
3. Connect an Ethernet cable to any LAN Port on the front panel. Connect the other end of the Ethernet cable to an administrator PC for configuring the system, an AP for extending wireless coverage, a switch for connecting more wired clients, or a client PC. The LED of this LAN port should be ON to indicate a proper connection.

Note: When HA (High Availability) is enabled, LAN1 port is used for HA communication. Therefore, please avoid using this port under the situation.

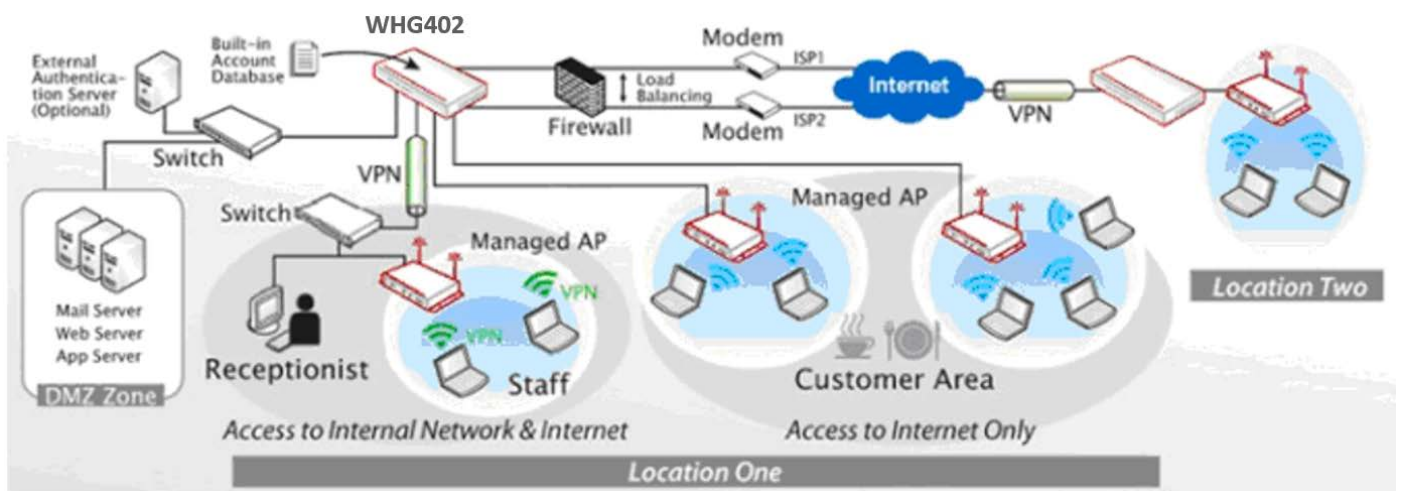
## Getting Started

### < System Concept >

The 4ipnet WHG402 Secure WLAN Controller in Gigabit Ethernet with built-in local accounts, On-Demand accounts, is an ideal security solution for larger-scale WLAN deployments, including WISP, enterprises, campuses, hotels, airport terminals, and MDUs/MTUs. The WHG402 integrates “secure access control”, “visitor account provisioning”, “flexible accounting and billing”, and “centralized WLAN management” into one box to provide simplified manageability and instant mobility. With more powerful hardware, WHG402 is capable of centrally managing access points to cover a wider service area in a larger network.

### Secure Business Networking

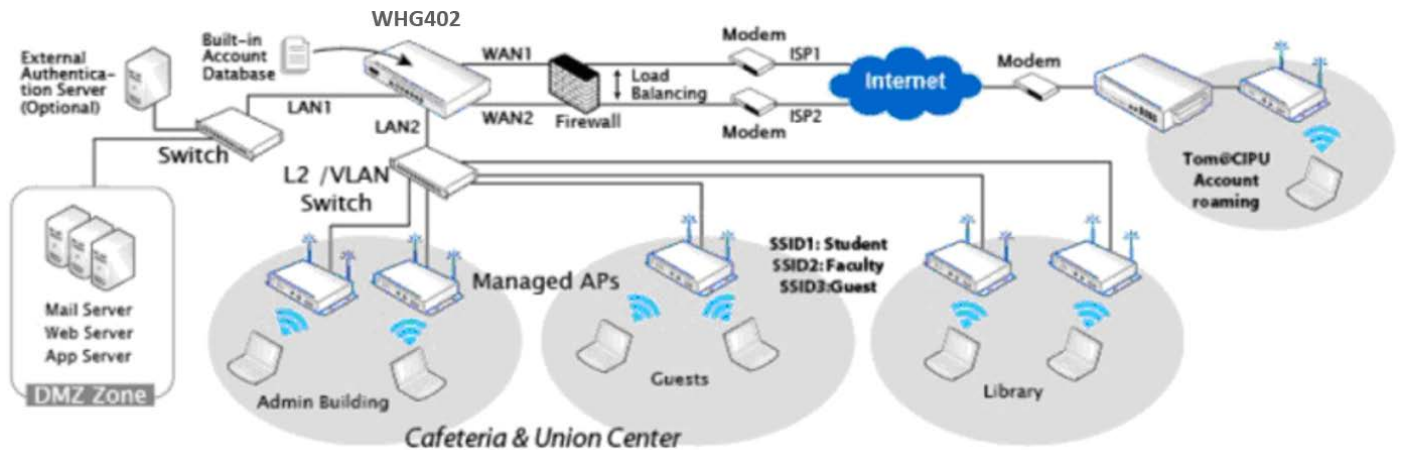
WHG402 is suitable for business in managing their wired and wireless network access uniformly. The network access of users from different departments and the access of guests can be segregated in different Service Zones. When needed, WHG402’s Local, Site-to-Site and Remote VPN tunnels can be used to further secure the information flows for business. Mobile workers on the road or home-based teleworkers can securely access the office network through remote VPN tunnels.



**【WHG402 in a Business Headquarter】**

## College Dormitories, Apartments or Hotels Networking

For college dormitories, apartments or hotels who want to cater for their tenants' Internet access needs, WHG402 makes it easy to manage new tenant registrations and share bandwidth equally among tenants. Also, it is convenient to set up WHG402 to offer wireless Internet service at large events, such as conventions, trade shows, and student spring break gatherings.



**【An example of managed network in a Campus environment】**

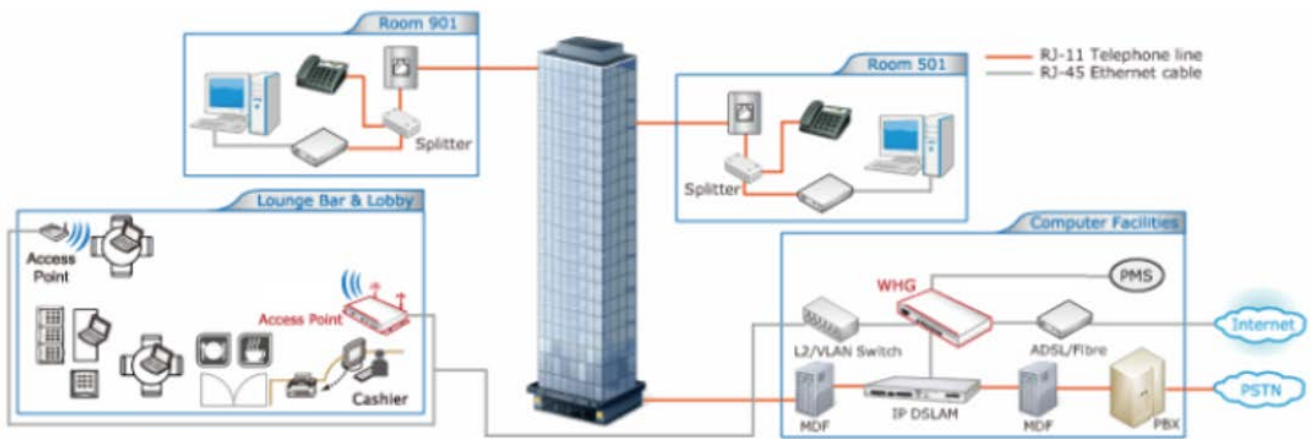
## Telcos or Wireless ISP (WISP)'s Large Hotspot Deployment

For Telcos or large hotspot operators, WHG402 brings in a convenient and economical way to deploy distributed hotspot services. While most of the operators prefer to use external RADIUS servers as authentication database, WHG402 in this architecture can play the role of a central RADIUS-NAS. For quick deployment, WHG402 supports two authentication methods: Web UAM and 802.1X. It is capable of supporting customized web UAM pages uploaded locally as well as external web UAM pages residing on external web servers. Furthermore, the concept of Service Zones of WHG402 allows one Controller to manage multiple franchised hotspots simultaneously.



**Hotel with Property Management System (PMS)**

For hotels using Property Management System (PMS) such as Micros Fidelio/Opera, WHG402 even enables Internet access charges to be incorporated into the room bill. Moreover, customers are able to purchase Internet service in room anytime or at the front counter. With a single account, a hotel guest can log on the Internet in room through a wired Ethernet port or enjoy wireless access throughout the hotel property. Before the account expires or the quota purchased reaches its limit, the guest who wants to surf the Internet in his/her room does not need to retype the password. WHG402 stands for the most cost-effective and easy-to-setup Internet Access Controller for hotels. Not only can WHG402 manage and bill both wireless and in-room wired Internet services for properties that have adopted modern IP network infrastructure, but it works for those who only utilize traditional phone lines coupled with DSLAM and DSL modem equipment to deliver Internet to each room.



**【WHG402 in a Hotel – Capable of integrating with DSLAM and PMS】**

In summary, the feature-rich WHG402 supports multiple business models of Internet Access Services - be it for managing wireless or wired clients. It can be configured to fit for private corporations, government agencies, academic campuses, multi-tenant units (MTU), hotels, WISP or telco’s hotspot operations. The 4ipnet WHG-series products aim to offer the best price-performance among all access controllers on nowadays market.

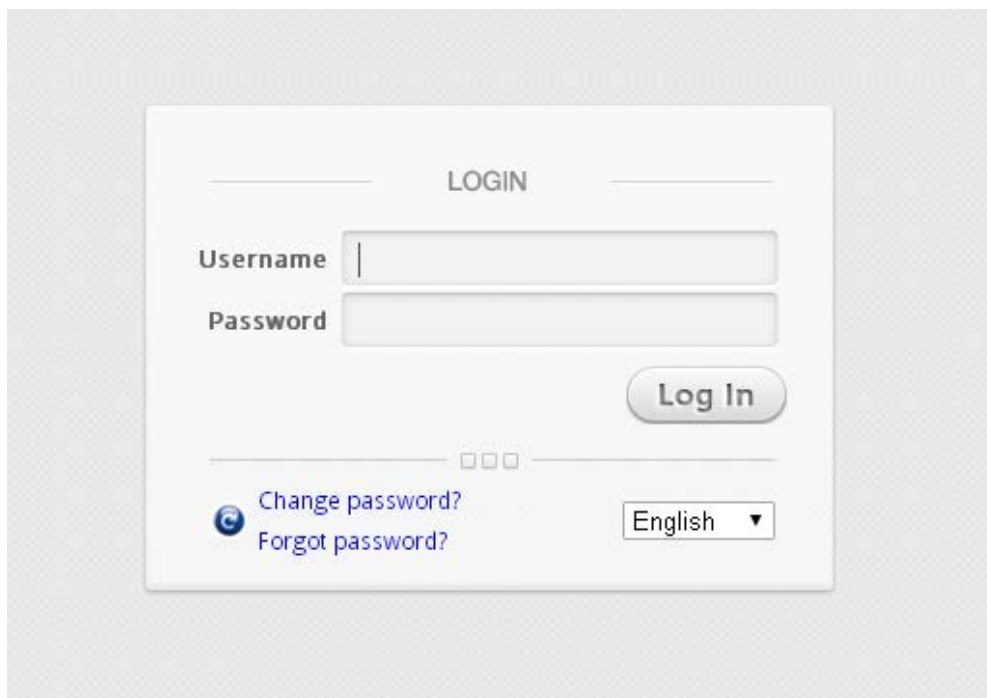
## < Web Management Interface >

4ipnet WHG402 supports web-based management interface. Upon the completion of hardware installation, WHG402 can be configured via web browsers with JavaScript enabled such as Internet Explorer version 9.0 and above or Firefox.

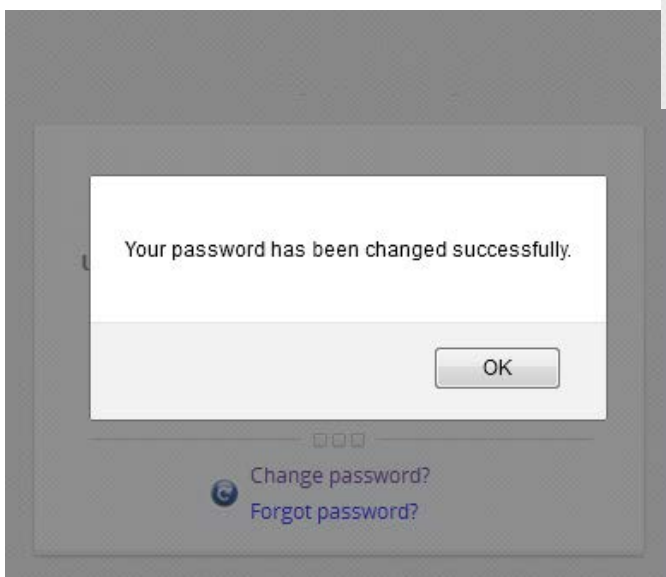
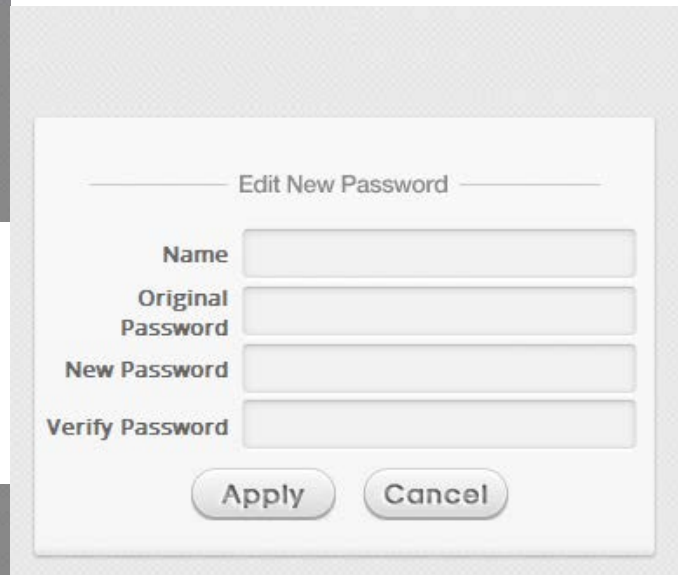
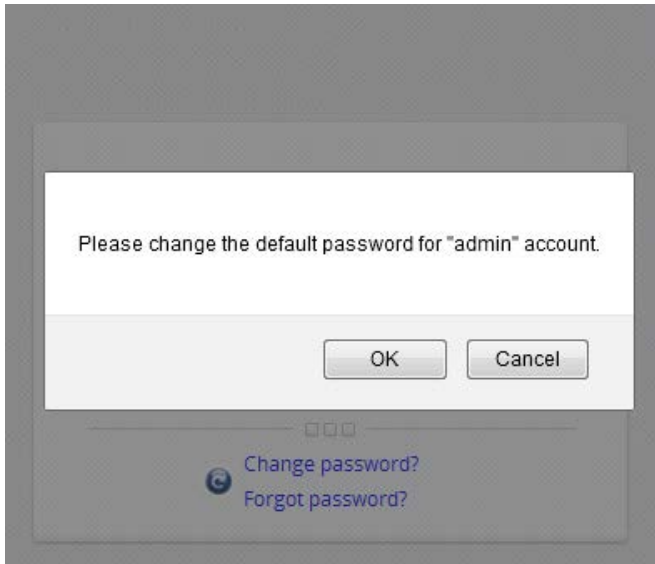
1. To access the web management interface, connect a PC to one of the LAN ports, and then launch a browser. **Make sure you have set DHCP in TCP/IP of your PC to get an IP address dynamically.**
2. Next, enter the gateway IP address of WHG402 default Service Zone in the address field. The default gateway IP address is **“http://192.168.1.254”** (“https” is used for a secured connection).



3. The administrator login page will appear. Enter **“admin”**, the default username, and **“admin”**, the default password, in the User Name and Password fields. Click **Login** to log in.



4. After a successful login, the system prompts for the administrator to change password to enforce system security. The password needs to be at least 6 characters long and include at least one alphabet and one number.



5. When the password has been successfully changed, the main welcome page of the administrator interface will appear.

## Welcome to System Main Menu



This Administrative Web Interface allows you to set various networking parameters, to customize network services, to manage user accounts and to monitor user status.

Functions are separated into the following main categories:  
[System](#) , [Users](#) , [Devices](#) , [Network](#) , [Utilities](#) , and [Status](#) .

For a quick overview of the system, please refer to the [Dashboard](#).  
For shortcut links to the Dashboard, you may click the 4ipnet Logo on the top-left, or click the '[Dashboard](#)' icon on the top-right.

The '[Star](#)' icon on the top right is a [Setup Wizard](#) that provides a quick step-by-step guide on setting up your system.

For help with your system configuration, click the '[?](#)' Icon for Online Help.



*If you can't get the login screen, the reasons may be: (1) The PC is set incorrectly so that the PC can't obtain the IP address automatically from the LAN port; (2) The IP address and the default gateway are not under the same network segment. Please use default IP address such as 192.168.1.xx in your network and then try it again. For the configuration on PC, please refer to **WHG User's Manual**.*

# Common Settings

## < Setup Wizard >

WHG402 provides a **Setup Wizard** for quick configuration. To quickly configure WHG402 by using the **Setup Wizard**, click on the **Setup Wizard** button on the top right corner to start the configuration process.



### Step 1: General

- **Time Zone** drop-down list box to set up the system time.
- Click **Next** to continue.



### Step 2: WAN1 Interface

- Select a proper type of Internet connection for WAN1 interface from the following three available connections: **Static**, **Dynamic**, or **PPPoE**. Your ISP or network administrator can advise on the connection type available to you. Below depicts an example of **Dynamic**.
- Click **Next** to continue.



### Step 3: Local User Account (Optional)

New local accounts can be created and added into the database via this optional function. If local user accounts are not required, click **Skip** to go directly to **Step 4**. However, it is recommended to create at least one local user account in order to verify the system's readiness upon completion of this **Setup Wizard**.

- Enter the **Username** (e.g. **testuser**), **Password** (e.g. **testuser**) to create a new local account.
- Click **Next** to continue.
- More local accounts can be added by clicking the **Back** button in **Step 4**.



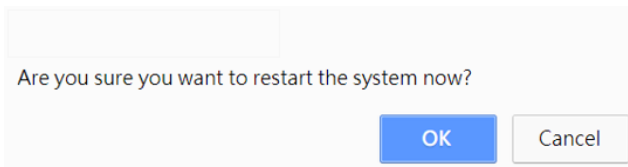
### WHG402 Secure WLAN Controller ENGLISH

#### Step 4: Confirm and Restart WHG402

- Click **Finish** to save current settings and restart the system.



- A confirmation dialog box will then appear. Click **OK** to continue.



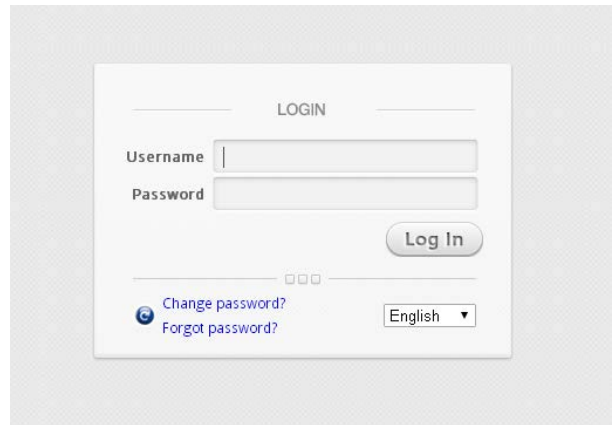
- A **Confirm and Restart** message will appear on the screen during the restarting process. Please do not interrupt the system until the Administrator Login Page appears.



➤ **Note:**

The system is trying to locate a DNS server at this stage. Therefore, a longer startup time is required if the configured DNS cannot be found.

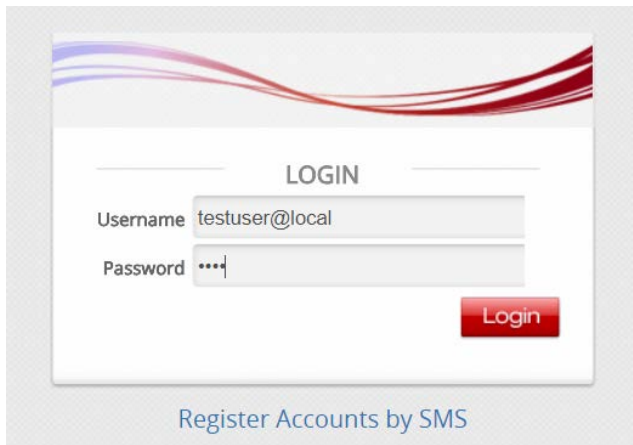
- When the following Administrator Login Page appears, it means the restart process is now completed.



## < User Login >

To verify whether the configuration of the new local user account(s) created via the **Setup Wizard** has been completed successfully:

1. Connect a client device (e.g. laptop, PC) to any LAN Ports. The device will obtain an IP address automatically via DHCP
2. Open a web browser on a client device and access any URL, the default **User Login Page** will appear.
3. Enter the Username and Password of a local user account previously generated via Setup Wizard (e.g. “**testuser@local**” as the *Username* and “**testuser**” as the *Password*); then click **Login**.



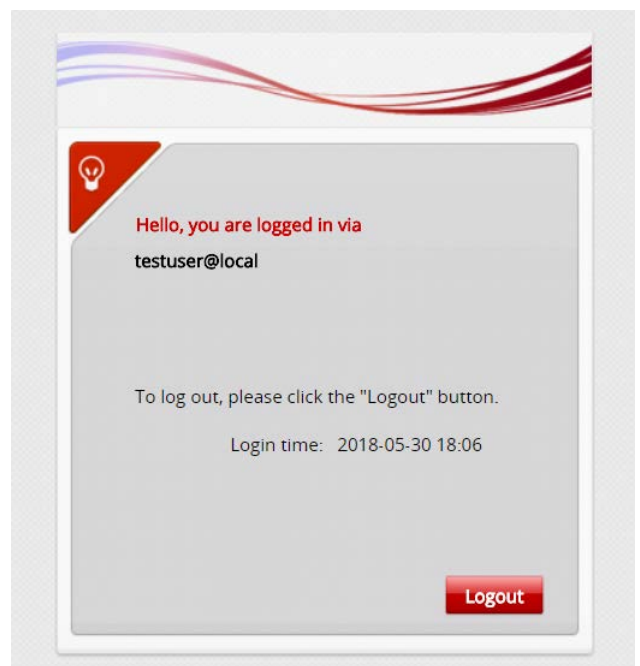
### ► Note:

1. WHG402 supports multiple authentication options including built-in local user database and external authentication database (e.g. RADIUS). The system will automatically identify which authentication option is used from the full username entered.
2. The format of a full (valid) username is **userid@postfix**, where “**userid**” is the user ID and “**postfix**” is the name of the selected authentication option.
3. **Exception:** The postfix can be omitted only when the default authentication option is used. For example, “**LOCAL**” is the default authentication option at this system; therefore, you may enter either “**testuser**” or “**testuser@local**” in the *Username* field.

### **Congratulations!**

The Login Success Page will appear after a client has successfully logged into WHG402 and has been authenticated by the system.

The appearance of Login Success page means that WHG402 has been installed and configured properly.



## < Service Zone & AP Management >

4ipnet WHG402 has introduced an important new concept called “**Service Zone**”. For how to set up Service Zones, please refer to the ***User’s Manual***.

WHG402 can centrally manage multiple access points (APs). For how to set up the “**AP Management**” feature, please refer to the “**AP Management**” section of the User’s Manual.

***For further configuration and information,  
please refer to the User’s Manual.***

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