



Installing Neutron Series ezMaster™

Before you begin

For ezMaster to manage an AP or Switch, the device must be able to communicate with the ezMaster server. Make sure that the ezMaster server; EWS AP and EWS Switch can all be reachable via HTTP/HTTPS from outside your internal network.

Firewall Configuration

Depending on how your network is designed, you may need to open ports on your firewall.

The following **outbound** ports MUST be opened in the firewall at the site where the ezMaster server is located in order for ezMaster to register with the ezReg server.

Port	Description
TCP 80	HTTP port, ezReg communication
UDP 53	DNS port, ezReg communication

The following **inbound** ports MUST be opened in the firewall at the site where the ezMaster server is located in order for remote access points to communicate with the ezMaster server.

Port	Description
UDP 1234	Custom port, CAPWAP protocol
TCP 80 (default)	HTTP port, Captive Portal, port can be defined by user

The following **outbound** ports MUST be opened in the firewall at the remote site where the AP/Switch is deployed in order to communicate with ezMaster.

Port	Description
UDP 1234	Custom port, CAPWAP protocol
TCP 80	HTTP port, ezReg communication
UDP 53	DNS port, ezReg communication
TCP 80 (default)	HTTP port, Captive Portal, port can be defined by user

System Requirements

Recommended environment for managing up to 500 APs

CPU: Intel® Core™ i3 3.6 GHz dual-core or above

RAM: 4GB minimum

HDD: 500 GB (actual requirement is dependent on log size)

OS: Microsoft® Windows® 7 or later + VMware® Player 7 (or similar virtualization products)

Recommended environment for managing up to 1,000+ APs

CPU: Intel® Core™ i5 3.2 GHz quad-core or above

RAM: 4 GB minimum

HDD: 500 GB (actual requirement is dependent on log size)

OS: Microsoft® Windows® 7 or later + VMware® Player 7 (or similar virtualization products)

Browser Requirements

Internet Explorer 10 or better

Firefox 34.0 or better

Chrome 31.0 or better

Safari 8.0 or better

Network Topology Requirements

At sites where APs are deployed: A DHCP-enabled network for APs to obtain IP address

ezMaster Image Installation Instructions

The instructions below will guide you through the process of installing ezMaster VM.

EzMaster VM is distributed as an Open Virtualization Appliance (OVA), which should be compatible with these virtual machine products.

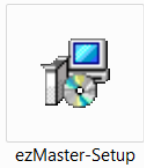
I. Getting the ezMaster Virtual Machine Image

The ezMaster VM file can be downloaded at EnGenius' website.

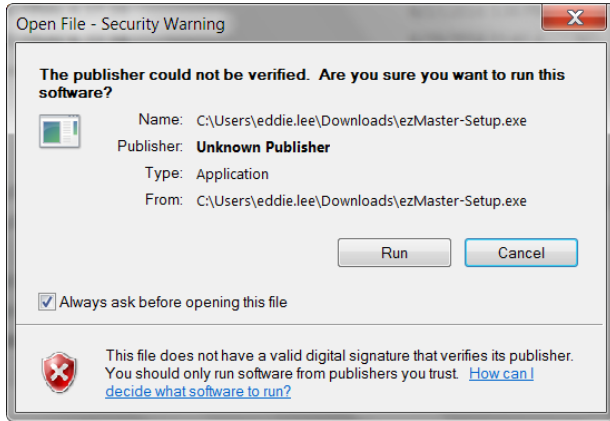
Installing ezMaster

A. Follow these steps to install ezMaster.

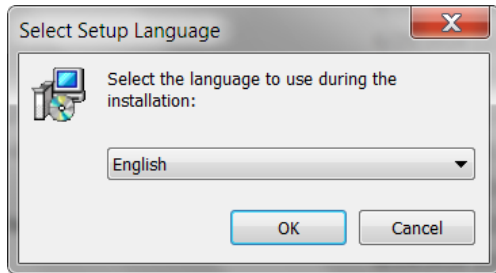
1. Download the install file "ezMaster-Setup." Double-click on the icon to start the installation process.



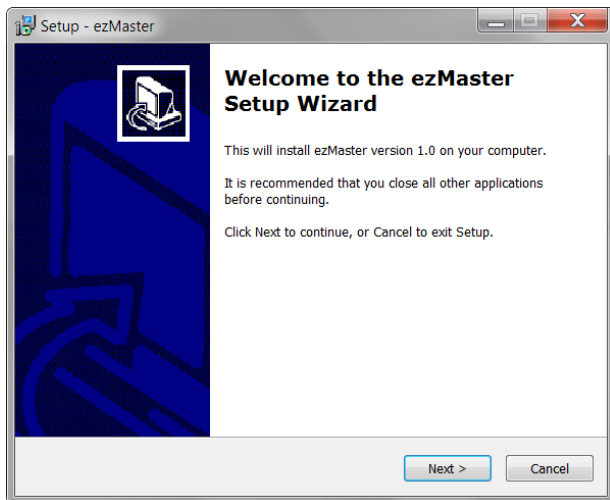
2. When the Open File - Security Warning dialog box appears, click **Run**.



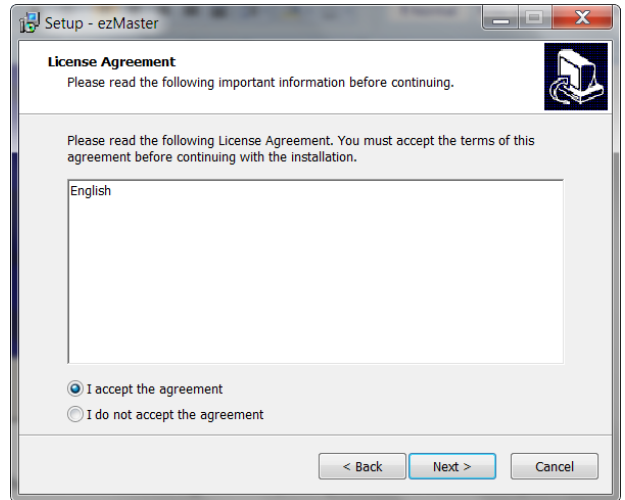
3. Choose the language you wish to use during the installation process.



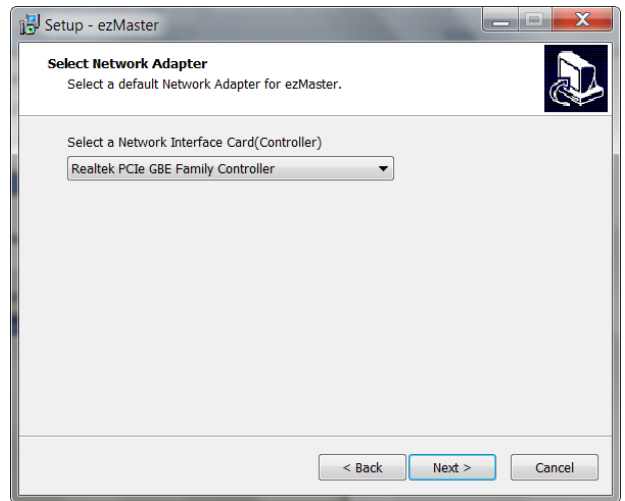
4. Click on **Next** to continue.



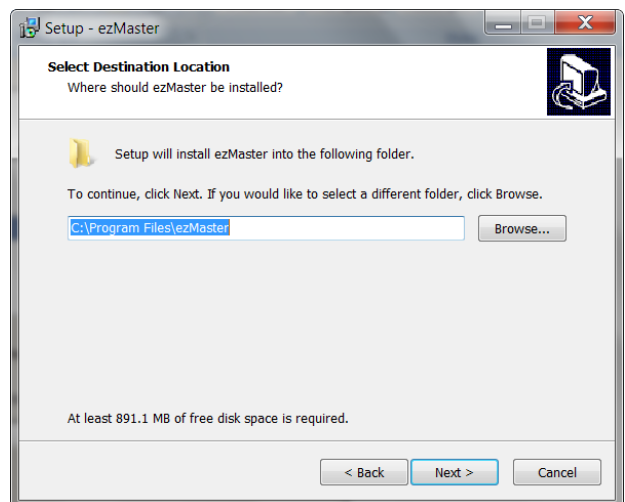
5. After you read the End-User License Agreement (EULA), check the box that says *I accept the agreement* and click **Next**.



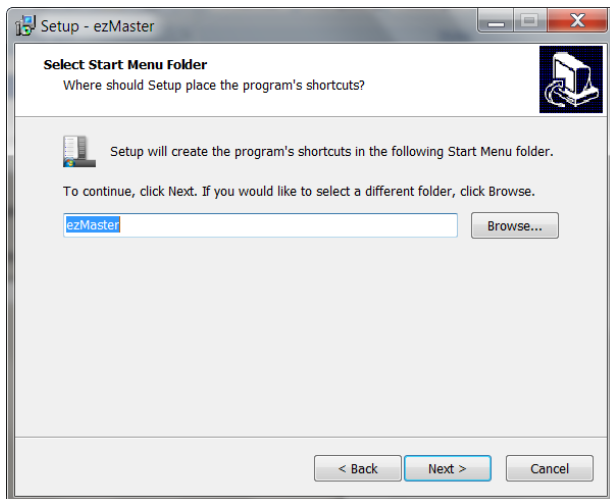
6. Configure the default network adapter for ezMaster from the dropdown list. Select the wired network adapter that your computer uses to connect to the Internet (WAN). Click **Next** to continue.



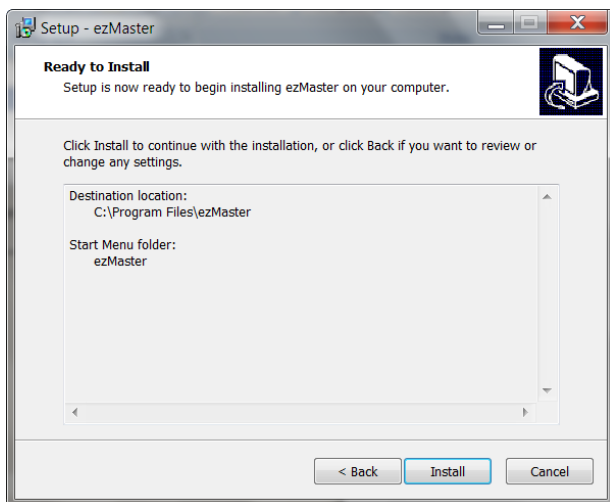
7. Click **Browse...** if you wish to install ezMaster in a different folder. Click **Next** to continue.



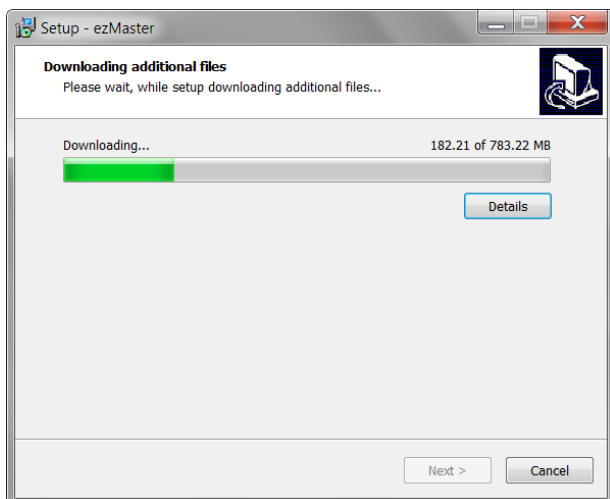
8. Click **Next**.



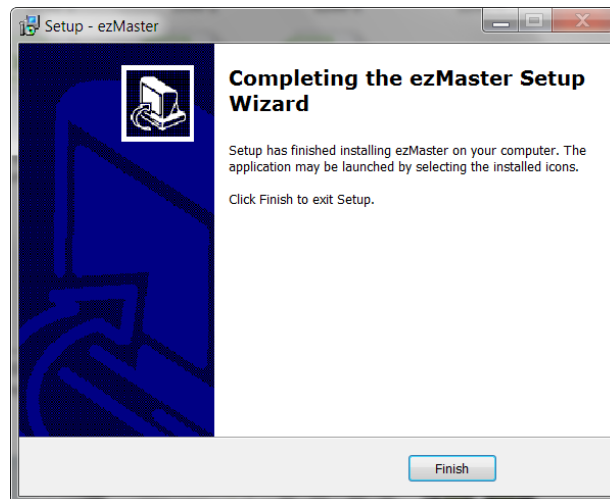
9. On this screen, you will see a summary of the installation. Click **Install**.



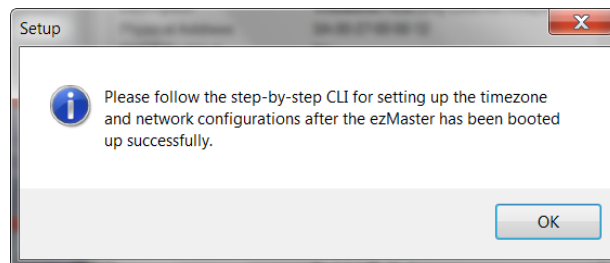
10. The setup wizard will now start downloading and installing ezMaster to your hard drive. This will take some time to complete, depending on your network connection speed.



11. Once setup is complete, the following screen will appear. Click **Finish** to exit the setup wizard and launch ezMaster.



12. Click **OK** to continue.

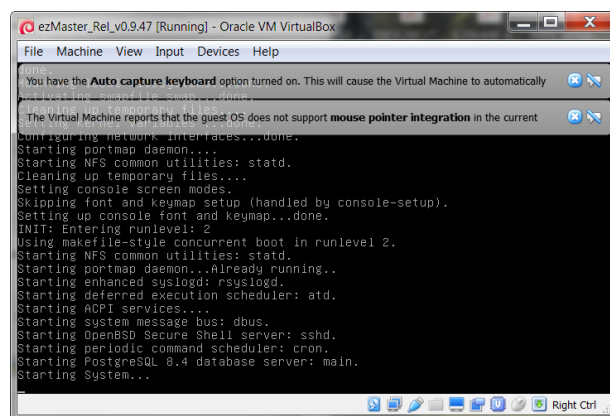


B. Setting up ezMaster Server

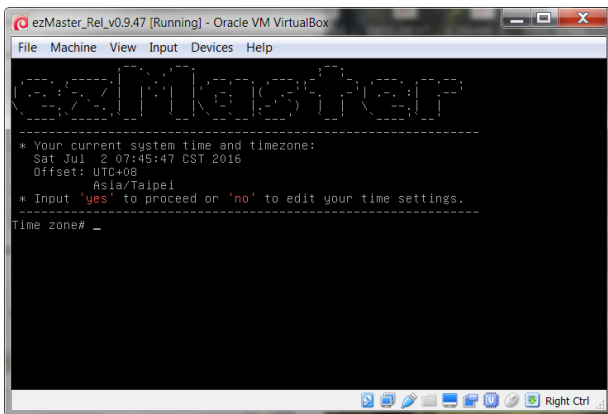
1. Once the installation script finishes running, you will be prompted to enter the login and password for ezMaster.

System login: *admin*

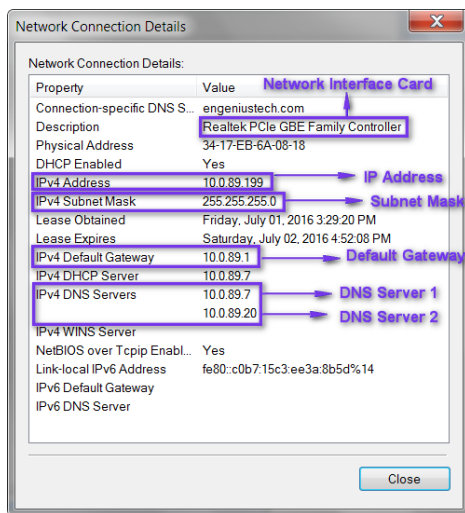
Password: *password*



- Your current system time and time zone will be displayed. Enter no if you wish to configure ezMaster time settings, or enter **yes** to continue.

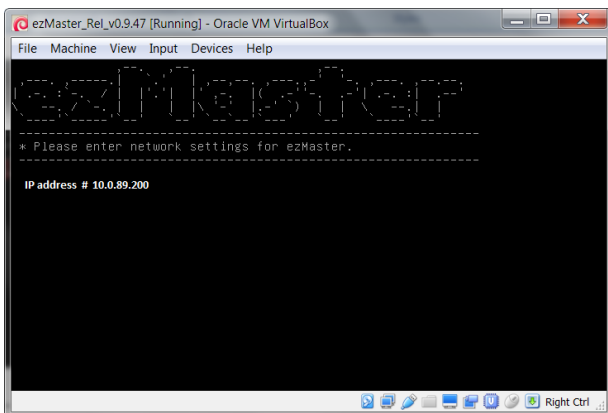


- You will now be prompted to enter network settings for your ezMaster server. You can check your network adapter from *Network Adapter Properties*.

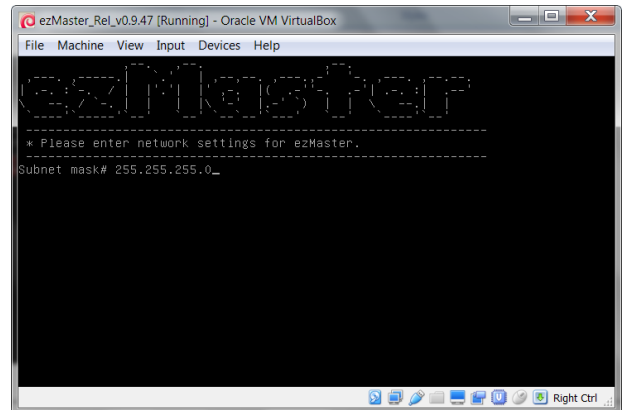


Note: Network settings below are for reference only and will vary according to your network environment.

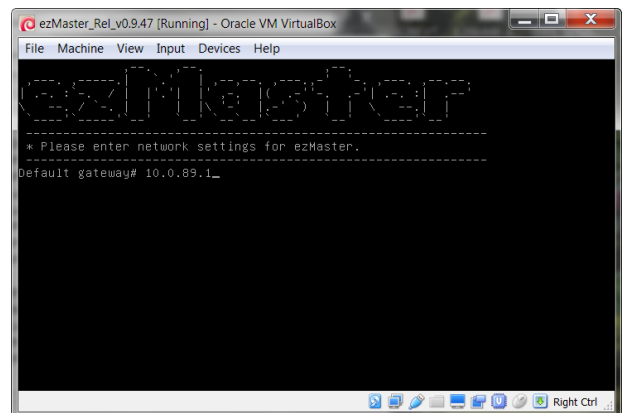
- Enter ezMaster Server IP Address. Note that the IP Address must be an unused IP address. For example, the LAN Adapter IP is 10.0.89.199 so an unused IP Address (10.0.89.200) is chosen to be used as ezMaster's server IP address.



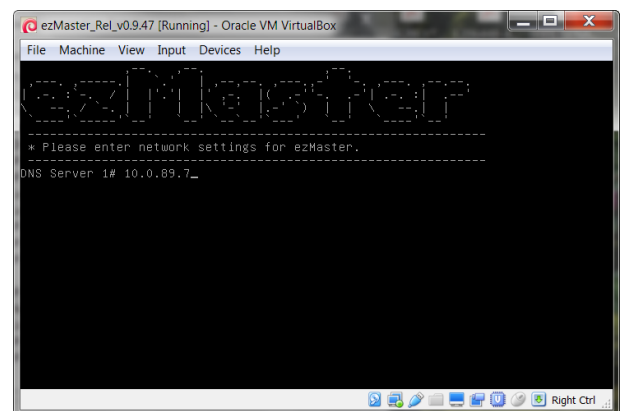
- Enter the subnet mask.



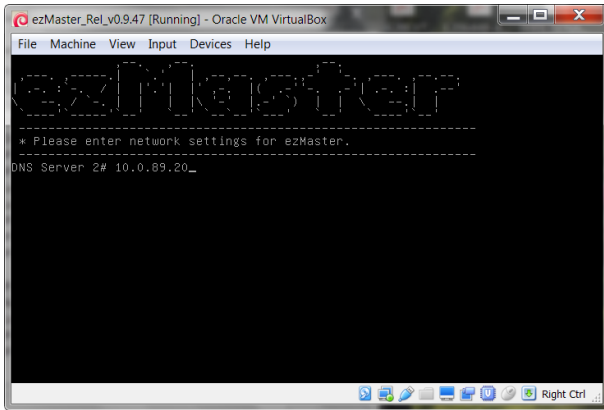
- Enter the default gateway.



- Enter DNS Server 1. Press Enter if you wish to skip this and ezMaster will automatically assign DNS Server 1: 8.8.8.8.



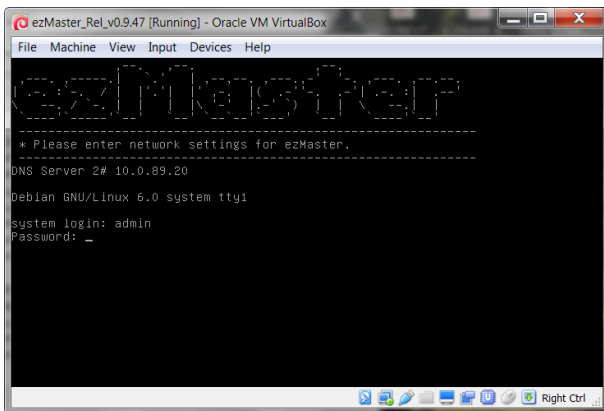
- e. Enter DNS Server 2. Press Enter if you wish to skip this and ezMaster will automatically assign DNS Server 2: 0.0.0.0.



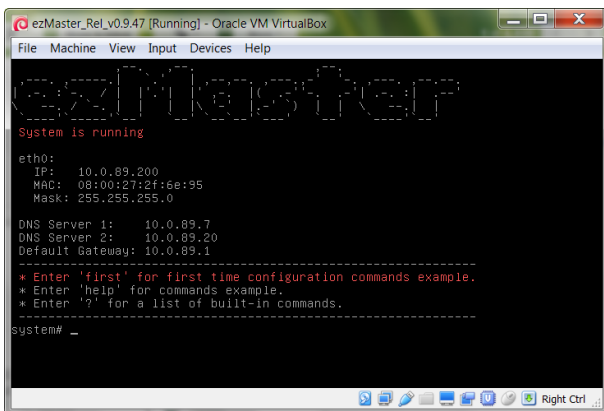
- f. Once network settings have been completed, you'll be prompted to enter the login and password.

System login: *admin*

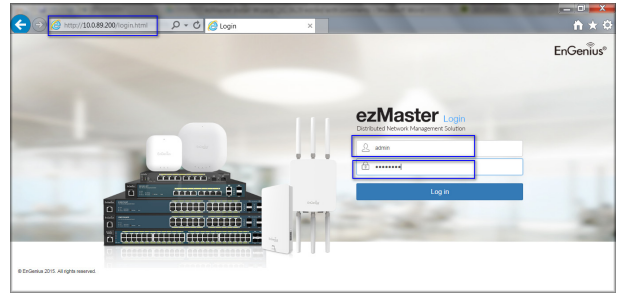
Password: *password*



- g. The CLI wizard will display a summary of network settings configured.



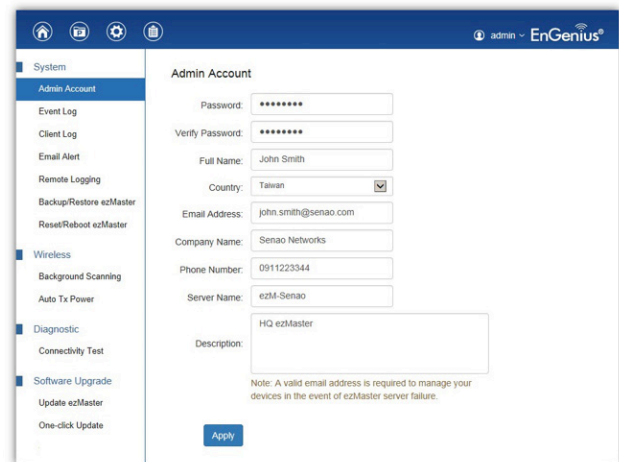
- 4. You have completed installing ezMaster. Open a web browser and type the IP address of (referring to Ste 3a) the ezMaster server. Once the login screen appears, enter the username and password to log in.



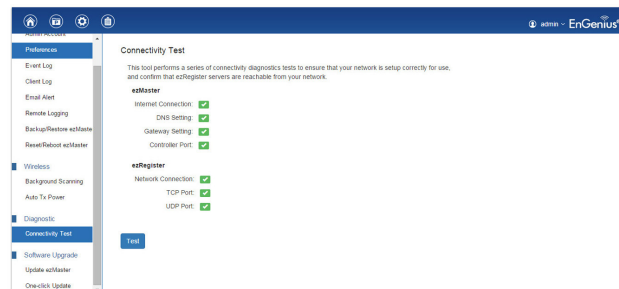
Registering ezMaster to the ezReg Server

In order to manage remote devices using ezMaster, you must first register ezMaster to the ezRegistration server. You may skip this section if you are managing only local devices or if you are manually redirecting each AP to ezMaster.

1. Under **Admin Account**, fill in the fields and click **Apply** to register your ezMaster to the ezReg server. Take note that a valid email address is required for you to unregister your devices in the event of an ezMaster server failure.



2. Under **Connectivity Test**, click **Test** to ensure that your network is setup correctly for use and confirm that ezRegister servers are reachable from your network.



Getting Started with ezMaster

Before ezMaster is able to manage a Neutron device, the Access Point/Switch must be running with the required firmware version. All Neutron devices will need to be running firmware version **c.1.7.x or later**. Refer to the AP/Switch user manual for detailed instructions on firmware upgrading.

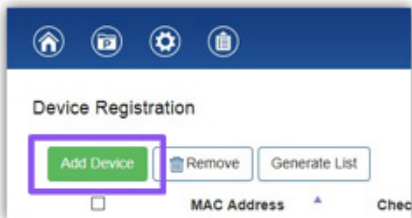
Adding Devices to ezMaster Device Inventory

Before managing a remote AP/Switch, you must first bind the AP to ezMaster's Device Inventory by 'registering' the device.

1. Once ezMaster has been registered with the ezRegistration server, you can start registering your APs and adding them to ezMaster's device inventory by clicking on the **Device Inventory** icon.



2. Next, click on the **Add Device** button.

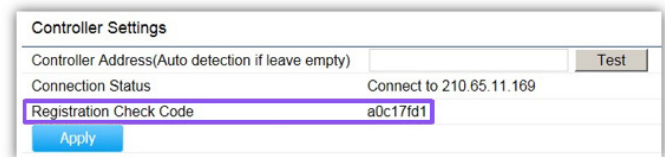


3. Enter the MAC Address, Check Code and Description of the device you want to register using a semi-colon (;) to separate each field. eg. **MAC Address;Check Code;Description**

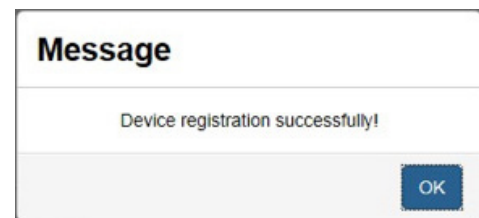
To register more than one device at the same time, enter the information of one device per row by pressing Enter. Click the **Register** button once you are done.



Note: The 'check code' of the AP can be found on the device label at the bottom of the AP. Or, access the AP's user interface and find it under the **Management > Controller Settings**. Contact your local dealer if you are having problems locating the check code.



4. The message below will be displayed upon successfully claiming an AP. Click on **OK** to proceed.



5. The registered AP will be listed in your Device Inventory.



Managing Neutron Devices using ezMaster

1. Make sure that your Neutron device is connected to a network with a DHCP server and can access the Internet.
2. Click on the **Project** icon to create a new project. A 'Project' is similar to a 'profile' which can be used to classify/represent different sites or floors of your deployment.



Managing Neutron Devices using ezMaster continued

- Click on **Create New Project** and enter a project name and description. Click on **Apply** when you are done.

- You'll be automatically redirected to the *Pending Approval* list after successfully creating a profile. The *Pending Approval* list will display a list of AP/Switches in your local network (same network as ezMaster) and also remote AP/Switches claimed by ezMaster.

Device Type	Model Name	MAC Address	Device Name	IP Address	Firmware Version
<input type="checkbox"/>	AP	EWS310AP	88 DC 96 01 98 95	EWS310AP	10.0.92.37 v2.0.191-c1.4.12
<input type="checkbox"/>	AP	EWS310AP	88 DC 96 21 FF F3	10F_B	192.168.1.1 v2.0.182-c1.4.6
<input type="checkbox"/>	Switch	EWS5912FP	88 DC 96 10 FE 57	EWS5912FP	10.0.92.25 v1.05.13-c1.4.12
<input type="checkbox"/>	Switch	EWS5912FP	00 13 32 33 88 86	EWS5912FP	10.0.92.70 v1.05.10-c1.4.2

- Select the AP(s) you wish to add to your profile by selecting the checkbox and click on the **Add** button.

Device Type	Model Name	MAC Address	Device Name	IP Address	Firmware Version
<input checked="" type="checkbox"/>	AP	EWS310AP	88 DC 96 01 98 95	EWS310AP	10.0.92.37 v2.0.191-c1.4.12
<input type="checkbox"/>	AP	EWS310AP	88 DC 96 21 FF F3	10F_B	192.168.1.1 v2.0.182-c1.4.6
<input type="checkbox"/>	Switch	EWS5912FP	88 DC 96 10 FE 57	EWS5912FP	10.0.92.25 v1.05.13-c1.4.12
<input type="checkbox"/>	Switch	EWS5912FP	00 13 32 33 88 86	EWS5912FP	10.0.92.70 v1.05.10-c1.4.2

- You'll be automatically redirected to the device page. Once the AP is online (green), to configure your AP, click on the *Device Name* link of your AP to bring up the configuration menu.

Important: In order to manage an EWS Switch, the Controller State of the EWS Switch must be set to *Disabled* in the EWS Switch web interface. A Switch with Controller State *Enabled* will not be discovered by ezMaster.

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