Hanwha Vision

WRN-1632(S) & WRN-816S

Network Configuration Manual

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Introduction

DHCP servers automatically assign IP addresses and other network parameters to devices on a network. This is often used to make it easier for network administrators to add or move devices on a network.

The WRN-1632(S) and WRN-816S series of recorders can utilize an onboard DHCP server to provide IP addresses to cameras connected to the recorder's onboard PoE switch as well as devices connected to an external PoE switch connected via Network Port 1. This guide was created to help the user understand how to configure the network interfaces on the unit to properly connect to attached cameras and prepare them for connection in Wisenet WAVE VMS.

Table of Contents

System Initialization

System Password

Wisenet WAVE WRN series recorder devices utilize the Ubuntu OS and are preconfigured with the "wave" user account. After powering on your WRN unit, you are required to set the Ubuntu password for the wave user account.

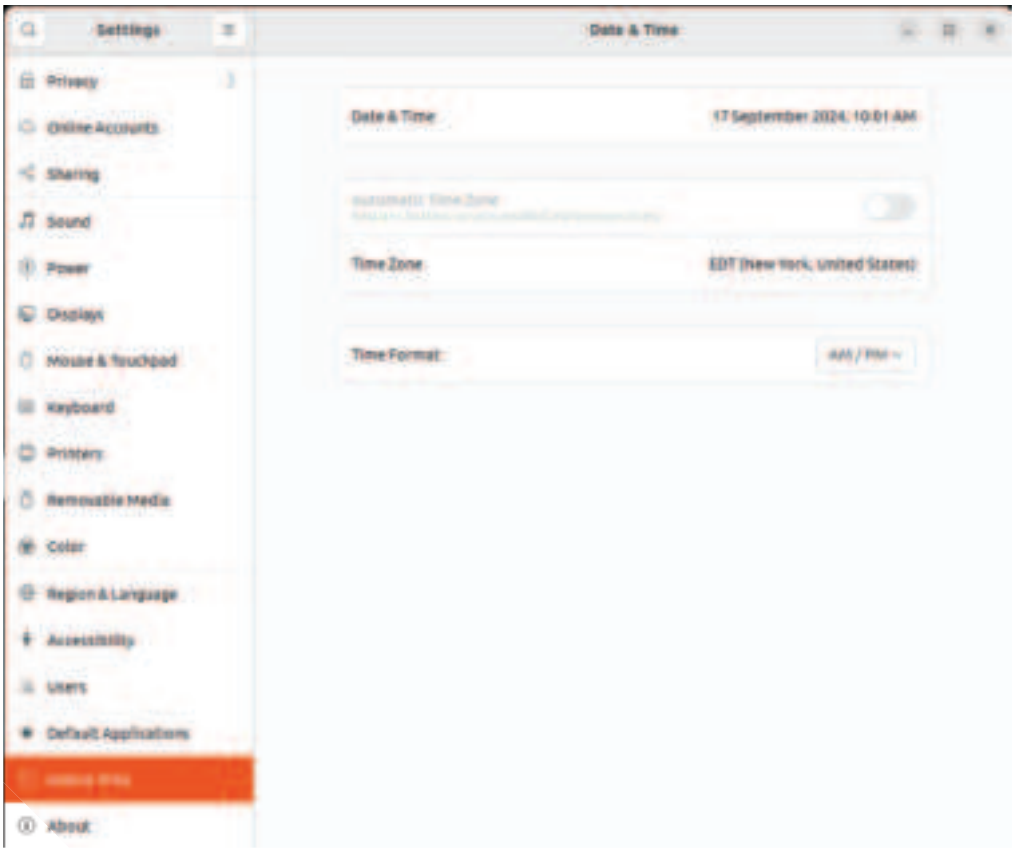
Input a secure password.

System Time and Language

Before recording begins it is important to ensure that the clock is set correctly.

1. Verify the time and date from the menu **Applications** > **Settings** > **Date and Time**.

2. If you have Internet access, you can select the **Automatic Date & Time** and **Automatic Time Zone options**, or manually adjust the clock as needed.



3. If you need to adjust the Language or keyboard, click on the **en1** drop down from the login screen or the main desktop, or via **Applications > Settings > Region & Language**.

Connecting Cameras

1. Connect cameras to your recorder via the onboard PoE switch or through an external PoE switch, or both.

2. When using an external PoE switch, plug the external switch into Network Port 1.

Utilizing the Onboard DHCP Server

To utilize the WRN recorder's onboard DHCP server, several steps must be followed. These steps include switching from the WRN Configuration Tool to the configuration of Ubuntu network settings.

1. Confirm that there are NO external DHCP servers operating on the network that connects to your WRN recorder's Network 1 Port. (If there is a conflict, Internet access for other devices on the network will be affected.)

2. Start the **WRN Configuration tool** from the side Favorite bar.

3. Enter the Ubuntu user password and click **OK**.

4. Click **Next** on the Welcome page.

5. Enable the **DHCP server for PoE Ports** and provide the **Start** and **End IP addresses**. In this case we will use 192.168.55 as the subnet

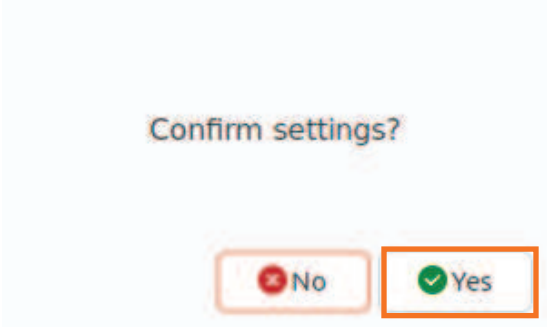
NOTE: The start and end IP addresses must be accessible by the Network 1 (Camera Network) subnet. We will need this information to input an IP address on the Camera Network interface (eth0).

IMPORTANT: Do not use a range that will interfere with the predefined Ethernet (eth0) interface 192.168.1.200 or 223.223.223.200 used for onboard PoE switch configuration.

6. Provide any changes to the DHCP server settings as per your requirements.

7. Once you have completed all the settings, click **Next**.

8. Click **Yes** to confirm your settings.



9. The PoE ports will now deliver power to the cameras allowing camera discovery to begin. Please wait for the initial scan to be completed.

10. Click the **Rescan** button if needed to begin a new scan if all cameras are not discovered.

11. Without closing the configuration tool, click on the **Network Icon** on the top right corner of the screen to open the Network settings menu.

12. Click on **Settings**

- Ethernet (eth0) (In Ubuntu) = Camera Network = Network 1 Port (as printed on unit)
- Ethernet (eth1) (In Ubuntu) = Coporate Network (Uplink) = Network 2 Port (as printed on unit)

13. Toggle the **Ethernet (eth0)** network port to the **OFF** position.

14. Click on the **Gear** icon for the Ethernet (eth0) interface to open network settings.

15. Click on the **IPv4** tab.

16. Set the IP address. Use an IP address outside of the range defined in the WRN Configuration Tool in **Step 5**. (For our example, we will use 192.168.55.100 to be outside of the defined range while remaining on the same subnet.)

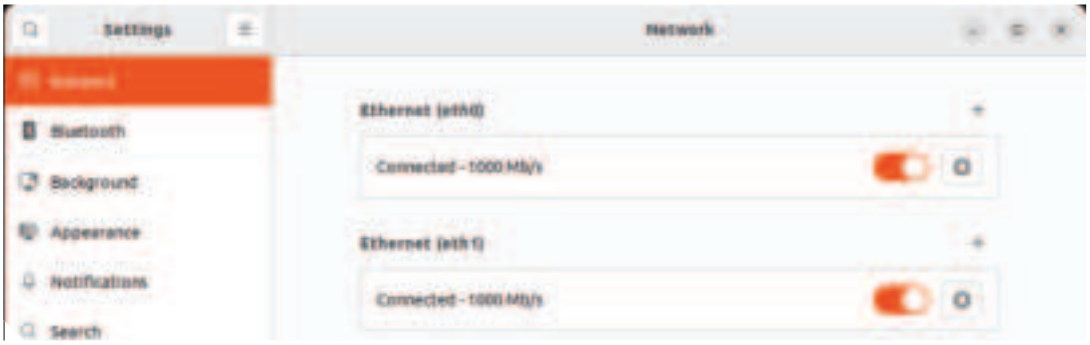
NOTE: If the configuration tool has assigned an IP address, in this case 192.168.55.1, it will need to be changed as addresses ending in ".1" are reserved for gateways.

IMPORTANT: Do not remove the 192.168.1.200 and 223.223.223.200 addresses as they are required to work with the PoE switch web interface, this is true even if you have a WRN-1632 without the PoE interface.

17. If 192.168.55.1 was not assigned, enter a static IP address to be on the same subnet as defined previously.

18. Click **Apply**.

19. Toggle Network 1 on your WRN recorder, **Ethernet (eth0)**, to the **ON** position.



20. If needed, repeat the above steps for the Ethernet (eth1) / Corporate / Network 2 to connect the other network interface to another network (ex: for remote viewing while keeping the camera's network isolated.

21. Return to the WRN Configuration Tool.

22. If the discovered cameras display a **Need Password** status:

a) Select one of the cameras indicating a **need password** status.

b) Enter a camera password.

c) Please refer to the Wisenet camera manual for more information on the required password complexity.

d) Verify camera password entered.

23. Click on **Set Password**.

24. If the camera status displays a **Not Connected** status, or the cameras have already been configured with a password:

a) Verify that the IP address of the camera is accessible.

b) Enter the camera's current password.

c) Click the **Connect** button.

d) After a few seconds, the selected camera status will change to **Connected**.

25. If the Camera status does not change to **Connected**, or the camers already have a configured password:

a) Click on a camera row.

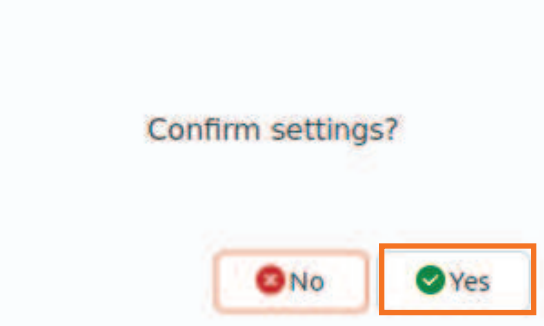
b) Enter the camera's password.

c) Click **Connect**.

26. If you wish to change the camera IP address mode/settings, click the **IP assign** button. (Wisenet cameras default to DHCP mode.)

27. Click **Next** to proceed.

28. Click **Yes** to confirm the settings.



29. Click **Next** on the final page to exit the WRN Configuration Tool.

30. Launch the Wisenet WAVE Client to run the New System Configuration.

NOTE: For best performance, it is recommended to enable the Hardware Video Decoding feature from the **WAVE Main Menu > Local Settings > Advanced > Use Hardware Video Decoding > Enable** if supported.

Utilizing an External DHCP Server

An external DHCP server connected to the WRN Camera Network will provide IP addresses to cameras connected to its onboard PoE switch and externally connected PoE switches.

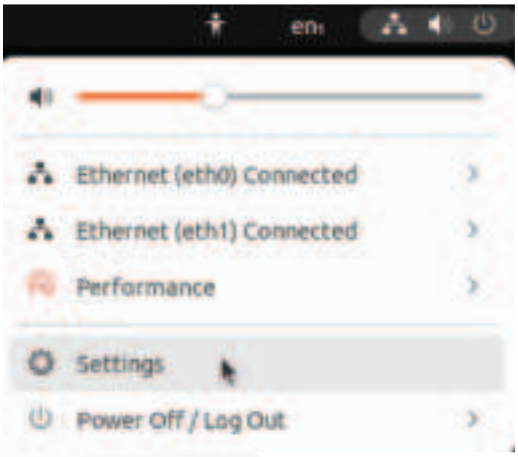
1. Confirm that there is an external DHCP server on the network that connects to the WRN unit's Network 1 Port.

2. Configure the WRN-1632(S) / WRN-816S Network Ports using the Ubuntu Network settings menu:

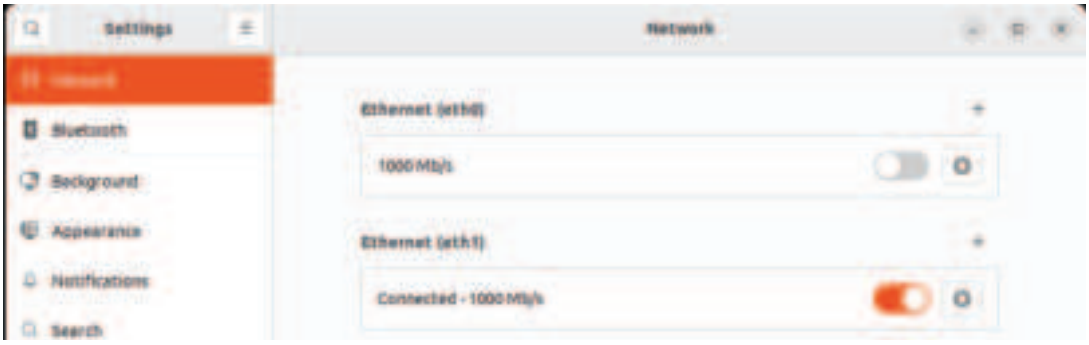
- Ethernet (eth0) (In Ubuntu) = Camera Network = Network 1 Port (as printed on unit)
- Ethernet (eth1) (In Ubuntu) = Coporate Network (Uplink) = Network 2 Port (as printed on unit)

3. From Ubuntu Desktop, click on **Network** Icon on the top right corner.

4. Click on **Settings**.



5. Toggle the **Ethernet (eth0)** network port to the **OFF** position.



6. Click on the **Gear** icon for the Ethernet (eth0) interface as shown in the picture above.

7. Click on the **IPv4** tab.

8. Use the following settings:

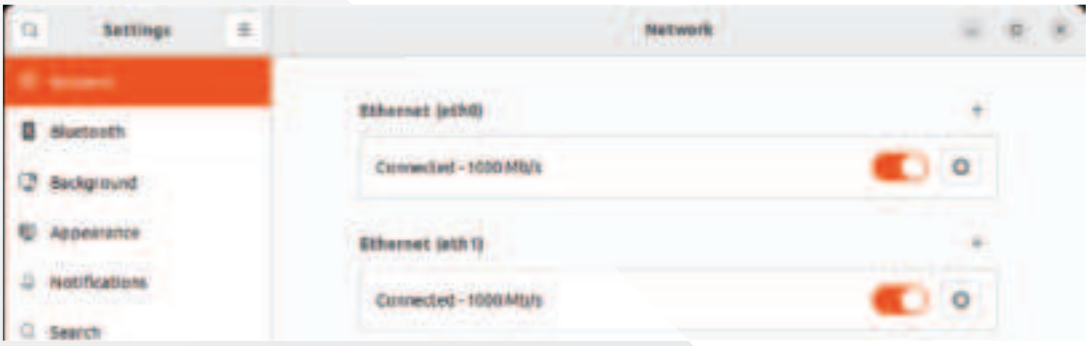
a) IPv4 Method to Automatic (DHCP)

b) DNS Automatic = ON

NOTE: Depending on your network configuration, you may enter a static IP address by setting the IPv4 Method to **Manual** and setting DNS and Routes to Automatic = off. This will allow you to enter a static IP address, subnet mask, default gateway, and DNS information.

9. Click **Apply**.

10. Toggle the **Ethernet (eth0)** network port to the **ON** position.



11. Start the **WRN Configuration tool** from the side Favorite bar.

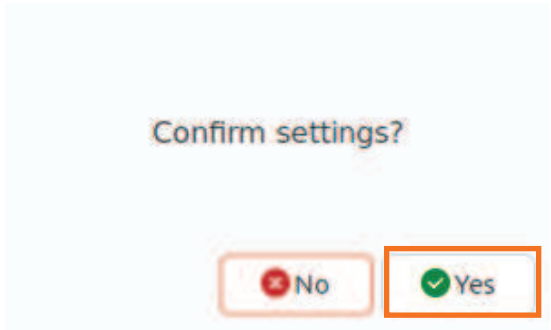
12. Enter the Ubuntu user password and click **OK**.

13. Click **Next** on the Welcome page.

14. Make sure the **Enable DHCP for PoE Ports** option is **Off**.

15. Click **Next**.

16. Click **Yes** to confirm your settings.



17. The PoE ports will be powered-on to deliver power to the cameras. Camera discovery will begin. Please wait for the initial scan to be completed.

18. Click the **Rescan** button if needed to begin a new scan if all cameras are not discovered.

19. If the discovered Wisenet cameras display a **Need Password** status:

a) Select one of the cameras with the "need password" status.

b) Enter a camera password. (Please refer to the Wisenet camera manual for more information on the required password complexity.)

c) Verify the password set.

d) Click on **Set Password**.

20. If the camera status displays a **Not Connected** status, or the cameras have already been configured with a password:

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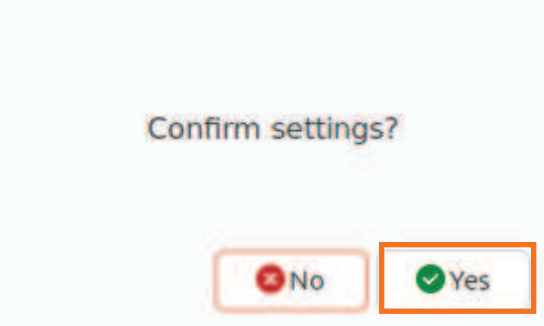
b) Enter the camera's password.

c) Click **Connect**.

23. If you wish to change the camera IP address mode/settings, click the **IP assign** button. (Wisenet cameras default to DHCP mode.)

24. Click **Next** to proceed.

25. Click **Yes** to confirm the settings.



26. Click **Next** on the final page to exit the WRN Configuration Tool.

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NOTE: For best performance, it is recommended to enable the Hardware Video Decoding feature from the **WAVE Main Menu > Local Settings > Advanced > Use Hardware Video Decoding > Enable** if supported.

WRN Configuration Tool: The Toggle PoE Power Feature

The WRN Configuration Tool now has the ability to toggle power to the WRN recorders onboard PoE switch should one or more cameras require a reboot. Clicking the **Toggle PoE Power** button in the WRN Configuration Tool will power cycle all devices connected to the WRN unit's onboard PoE switch.

If it is necessary to power cycle only a single device, it is recommended that you use the WRN webUI.

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