FirstStep.ai
IP Camera Configuration

Setup Guide

Camera: **Dahua IP Camera (various models)**

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1. Introduction

1.1 Purpose

The purpose of this installation is to set up a Dahua IP Camera for use with FirstStep.ai Image Capture application, and FirstStep.ai IoT application (NVIDIA Jetson Nano EDGE Device).

1.2 Outcomes

The outcome of this tutorial is to configure a Dahua camera with the following settings:

- Username: **admin**
- Password: **admin1234**
- Recovery Email Address**: <your email address>**
- A static IP address: **192.168.3.x**

1.3 Validation Testing

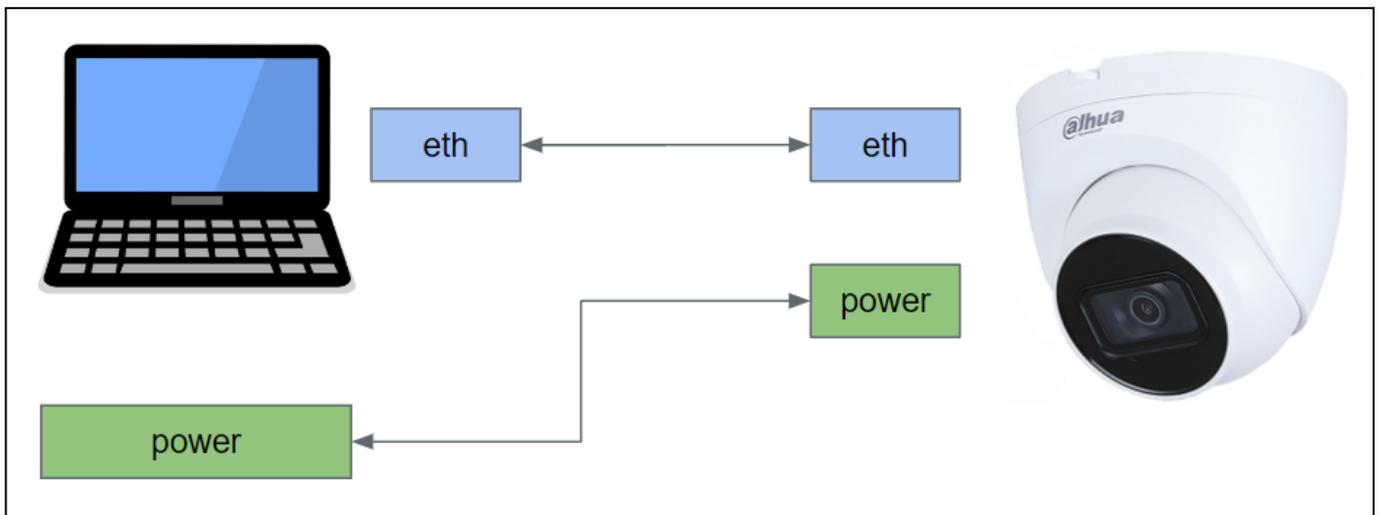We will validate this configuration by testing the RTSP stream using VLC Media Player.

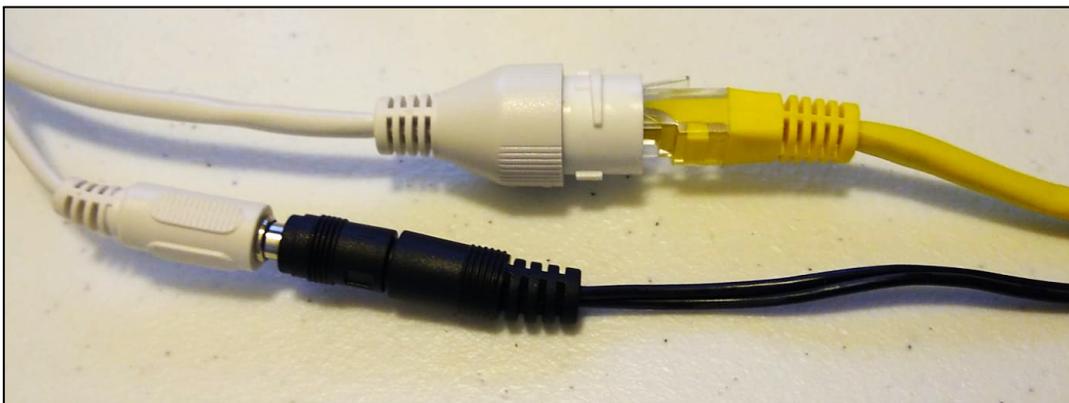## 2. Hardware Setup

2.1 Cable Connections

Connect Dahua camera as follows:

- Power to camera (12V)
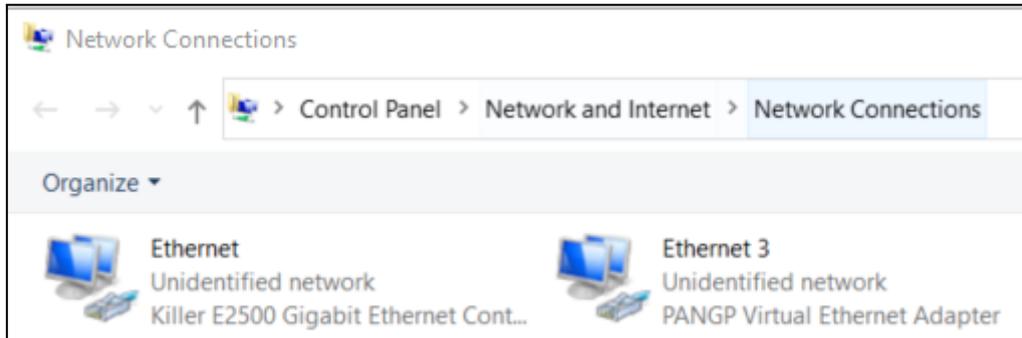- Ethernet Cable to your computer

Schematic:

Practically, the connectors should looks as follows:

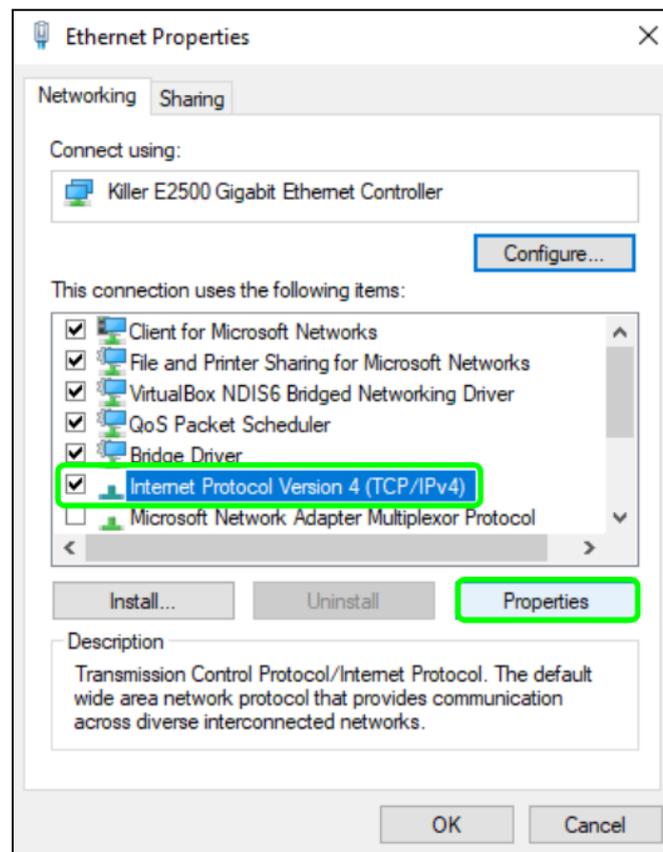## 2.2. Laptop Ethernet IP Address to Dahua default range

The default IP address of the Dahua camera is: **192.168.1.108**

Ensure that your ethernet port is configured to use the **192.168.1.x range** (either static or DHCP mode). To do this, open Network Connections.

Right click your ethernet gateway, and select Properties.
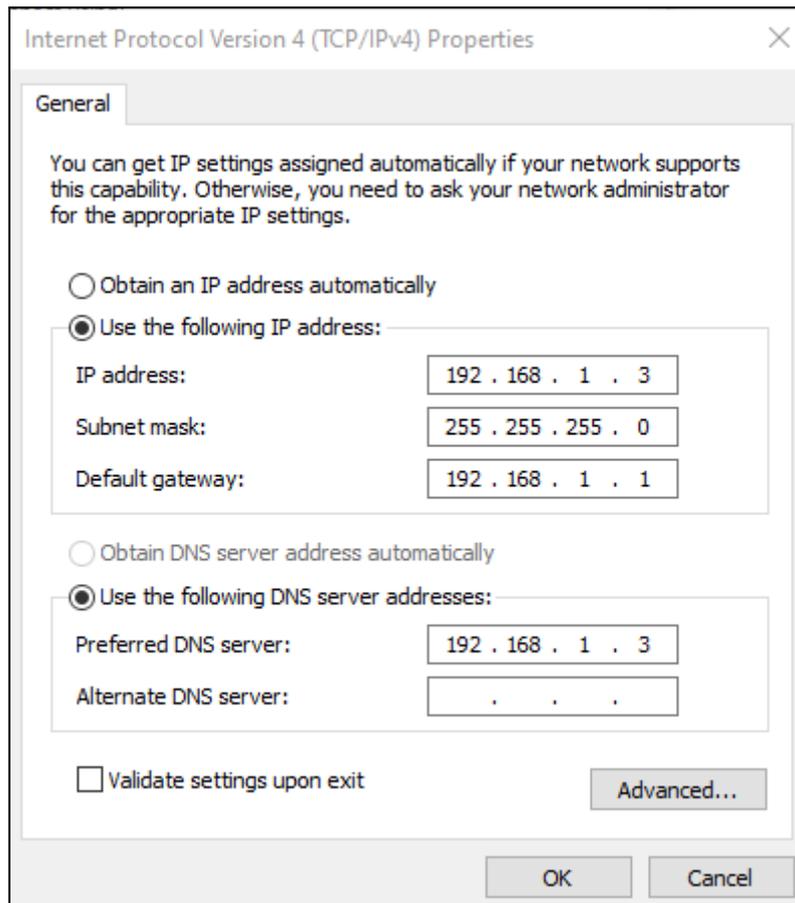
Select: Internet Protocol Version 4 (TCP/IPv4) > Properties

Configure your settings as follows:

- IP address: **192.168.1.3** (You can use any IP address except 192.168.1.108)
- Subnet mask: **255.255.255.0**
- Default gateway: **192.168.1.1**
- Preferred DNS server: **192.168.1.3**
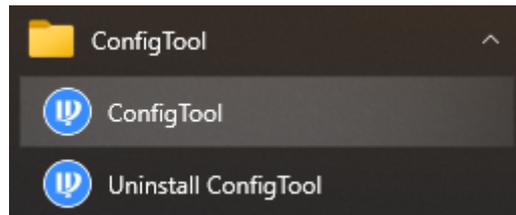- Validate settings upon exit: False
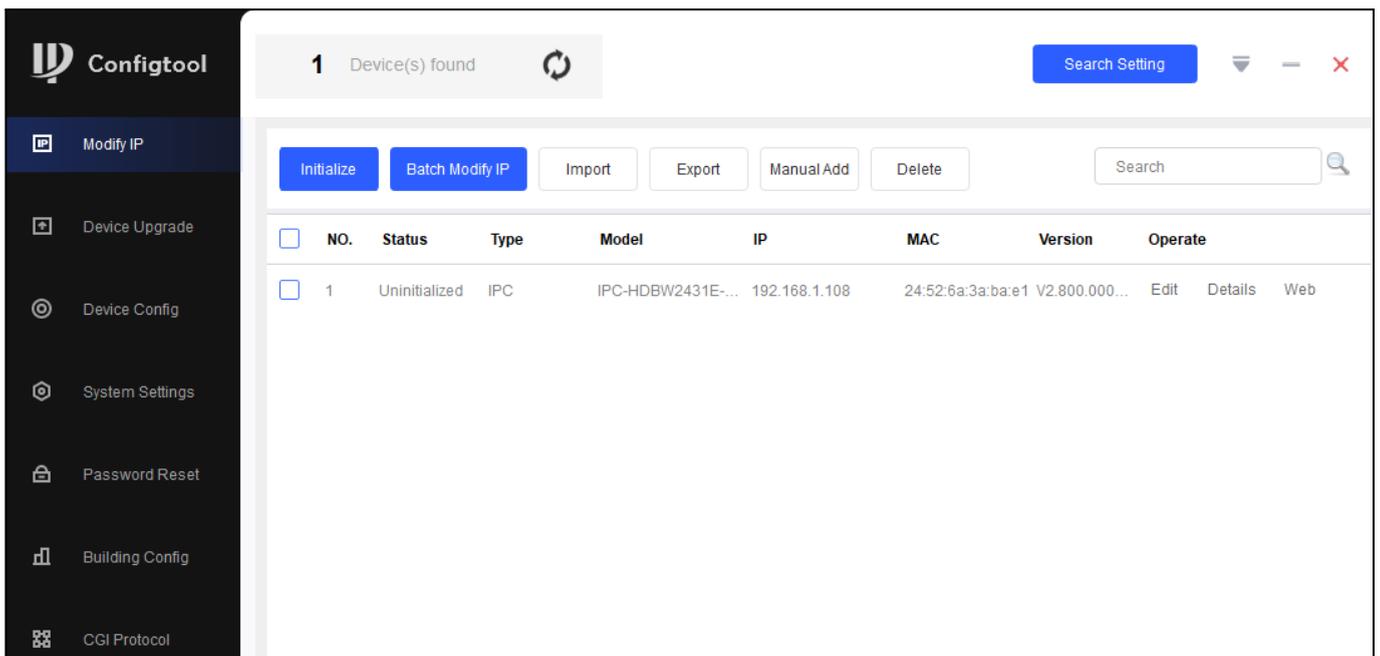
Then click OK.

2.3 Install Dahua Config Tool

Download and install Dahua ConfigTool (download link) on your computer.
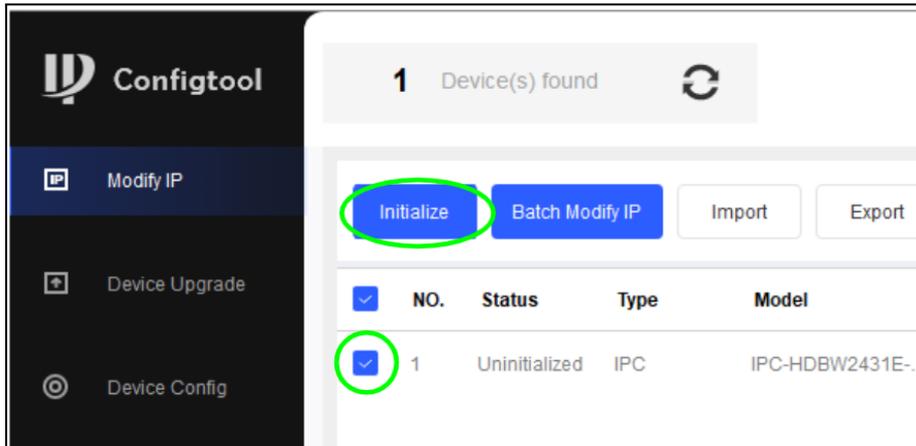
2.4 Initialize Camera

Open the **Dahua ConfigTool**.

After a few seconds your IP camera should appear in the list as "**Uninitialized**".
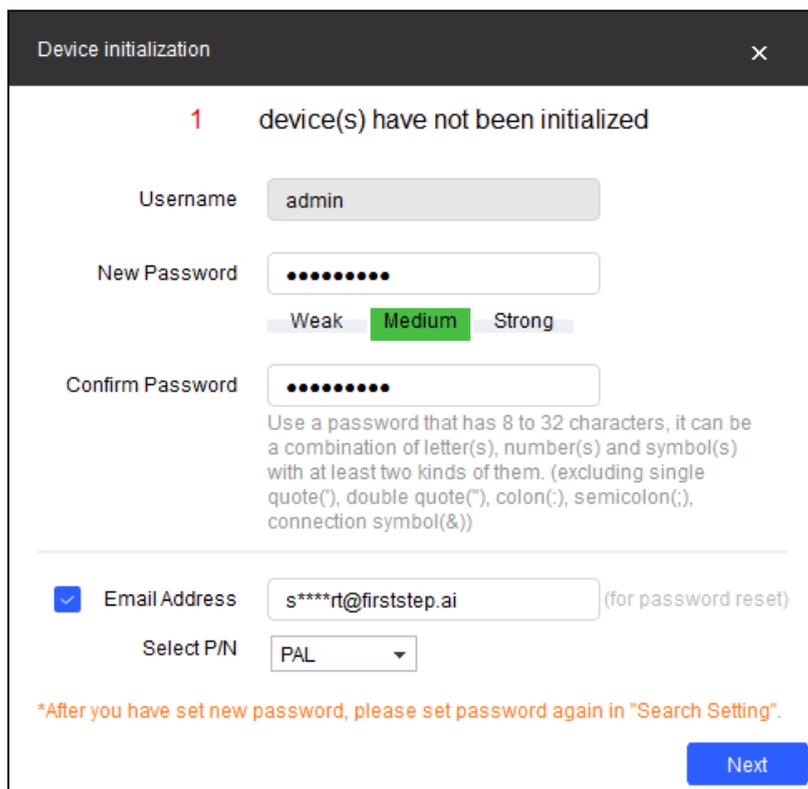
Check the box, and select Initialize.
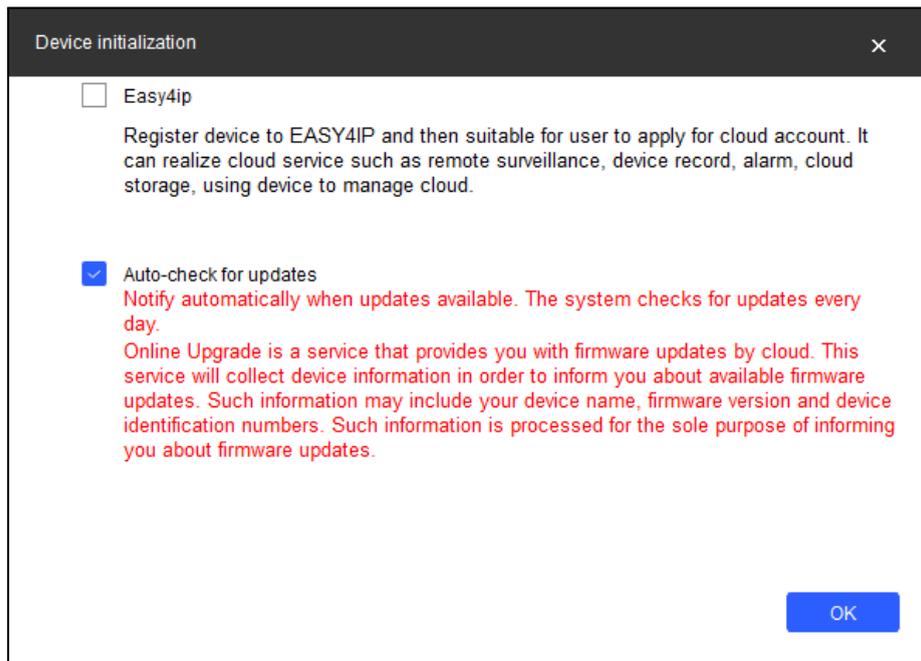

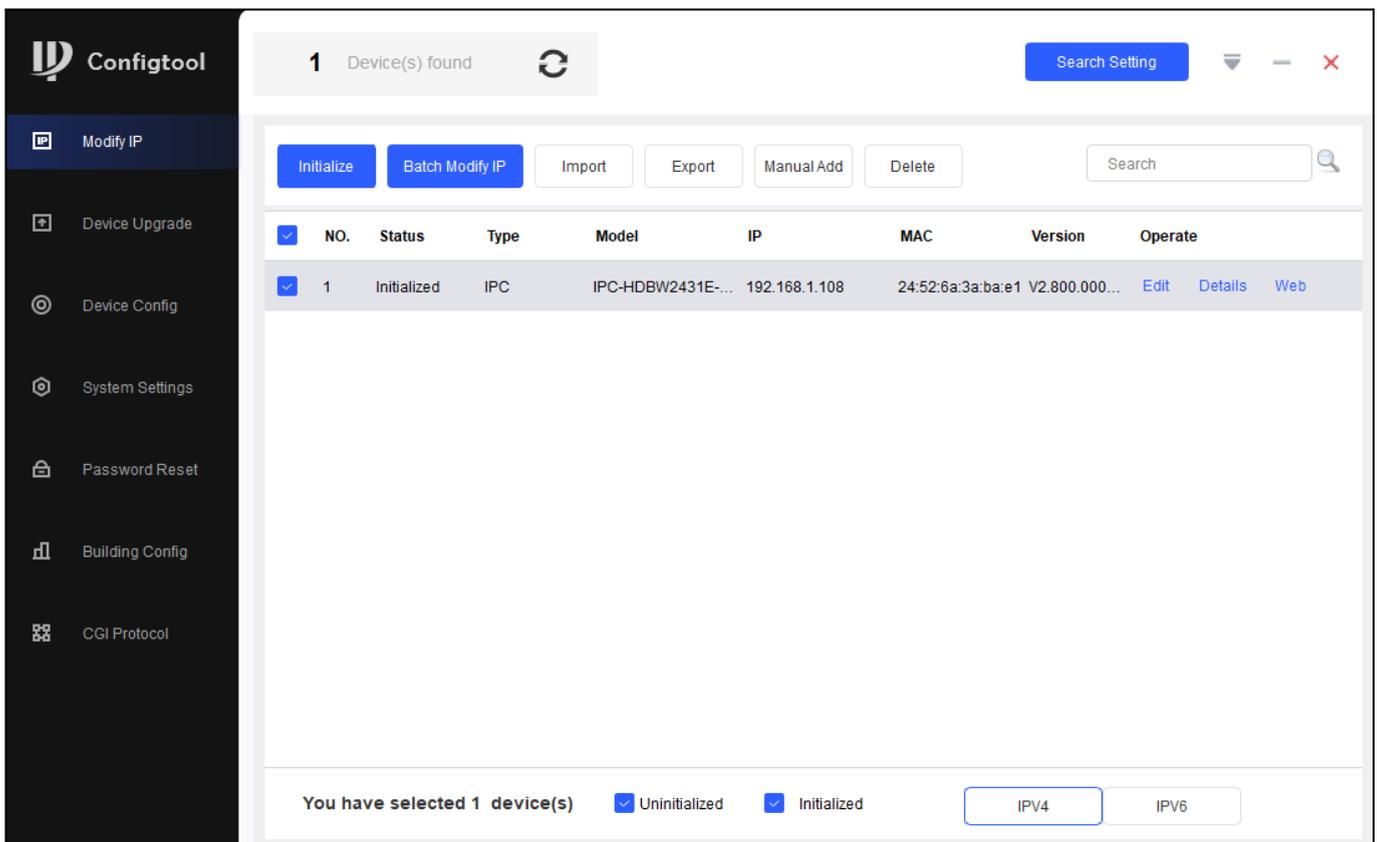Set the username and password as follows:

- Username: **admin**
- Password: **admin1234**
- Email Address: **<your email address>**

Optional: De-select "Easy4ip".

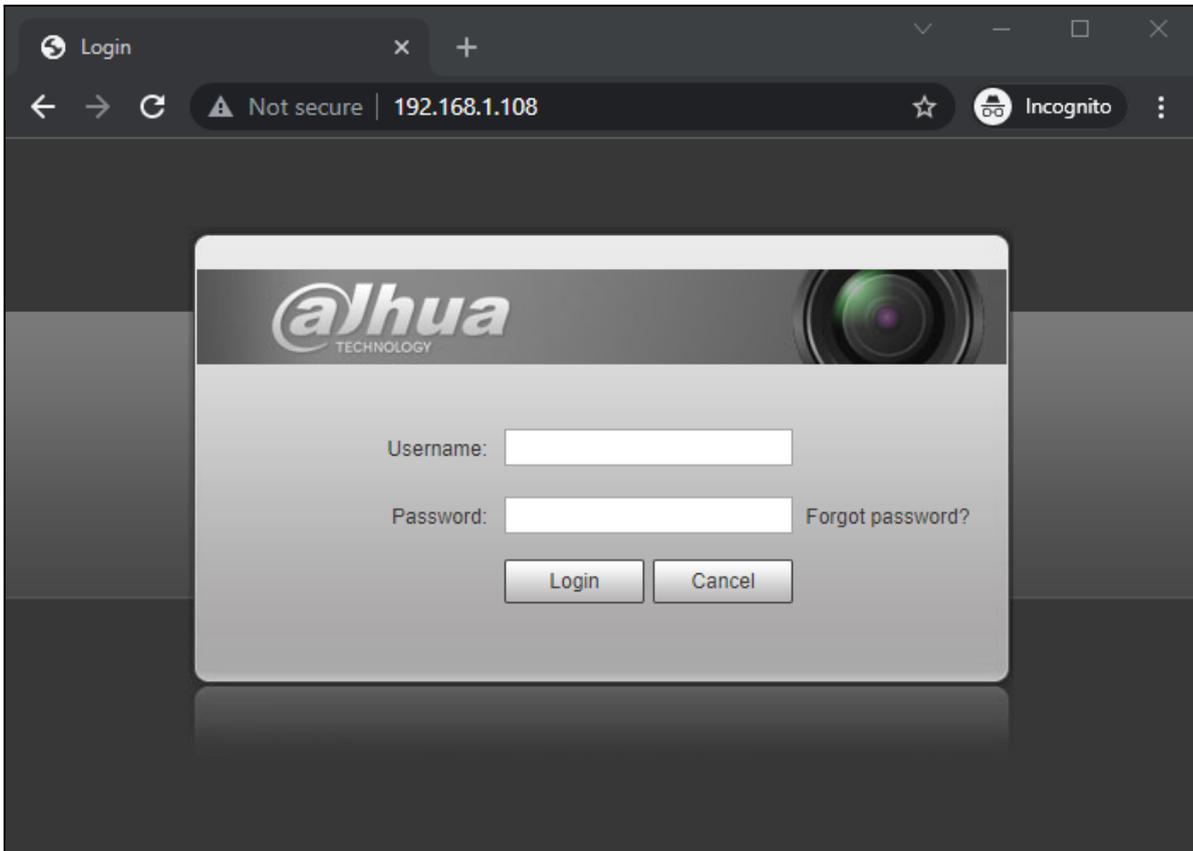Your device should now be listed as "**Initialized**".

Close the ConfigTool application.

2.4 Connect to Camera via web portal

Open a web browser (e.g. Chrome, Firefox)

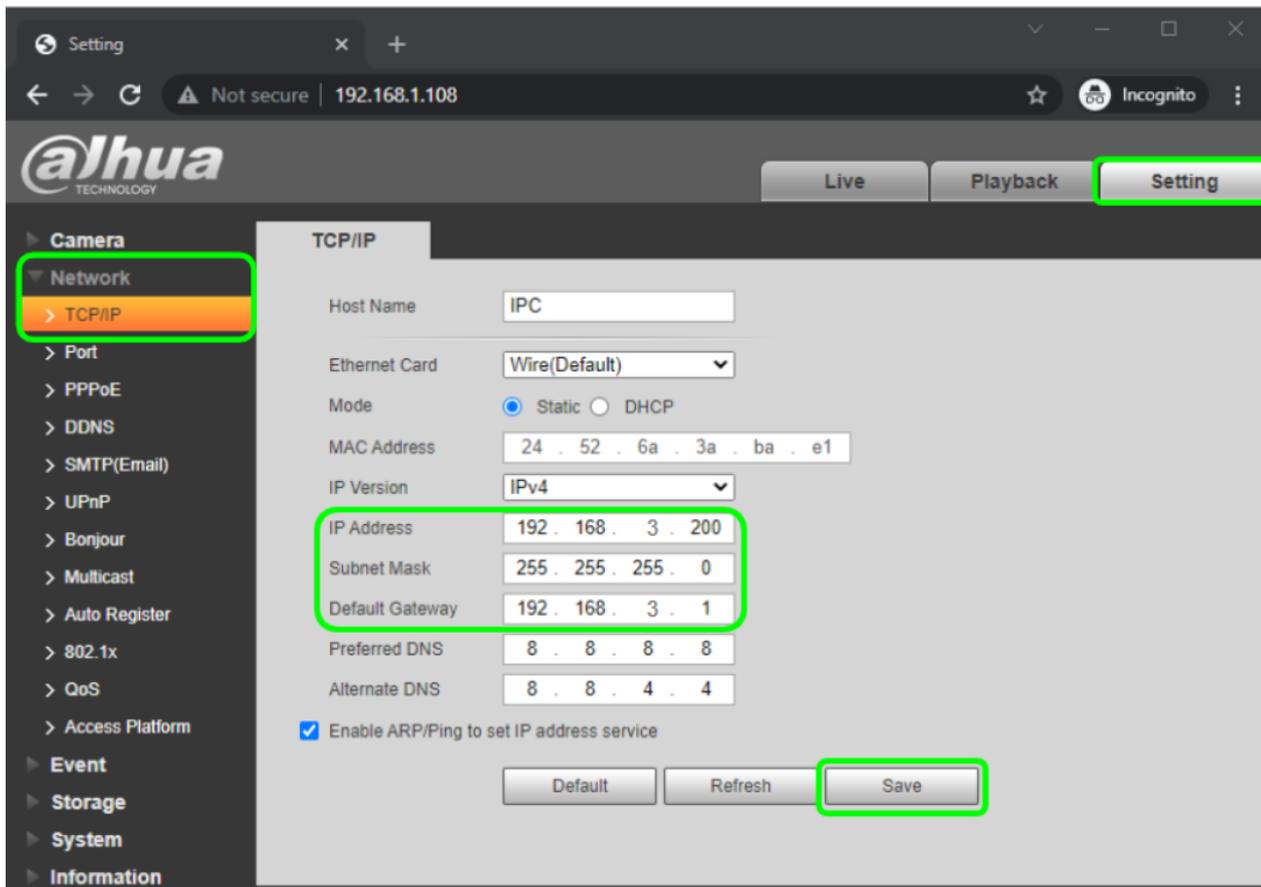Enter the default IP address into the URL bar: **192.168.1.108**

Now, login with the username and password set above (**admin** / **admin1234**).

2.4 Configure Camera IP address

Navigate to Settings > Network > TCP/IP and edit the IP fields as follows:

- IP Address: **192.168.3.20x** (e.g. 192.168.3.200, 192.168.3.201, 192.168.3.202)
- Subnet Mask: **255.255.255.0**
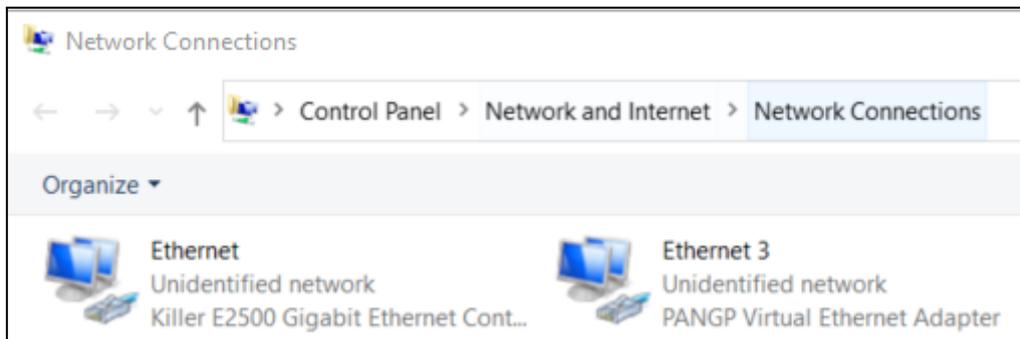- Gateway: **192.168.3.1**

Then click Save.

Important Note: Changing the IP address to the 192.168.3.x range means that you will no longer be able to access the IP camera via the Web interface while your Ethernet IP address is set to 192.168.1.x range. You will see the following error if you navigate to the 192.168.3.200 ip address in a web server.
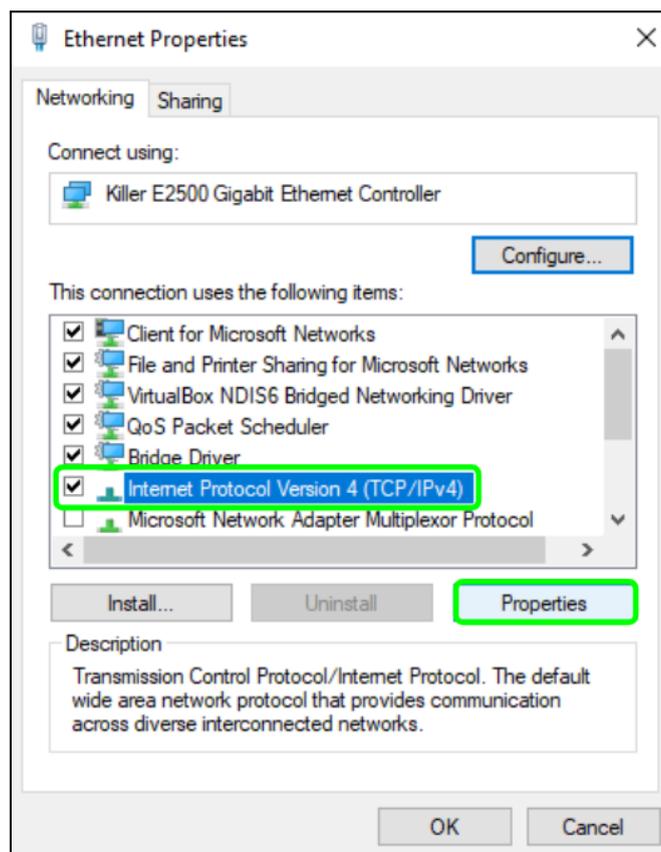
2.5. Set Laptop IP Range to new camera range

The IP address of the Dahua camera should now be: **192.168.3.200**

Open Network Connections.

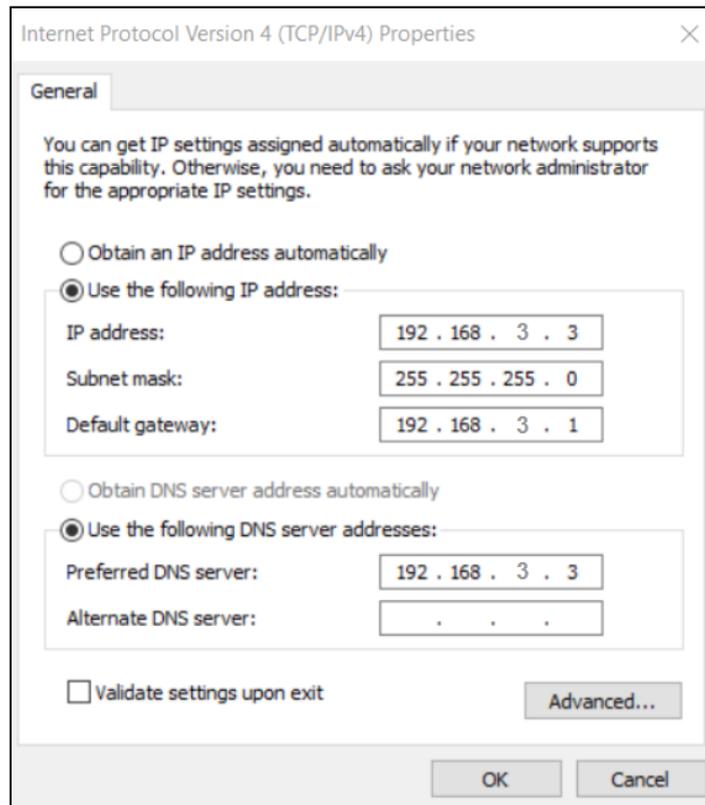Right click your ethernet gateway, and select Properties.

Select: Internet Protocol Version 4 (TCP/IPv4) > Properties



Configure your settings as follows:

- IP address: **192.168.3.3** (default FirstStep server IP address)
- Subnet mask: **255.255.255.0**
- Default gateway: **192.168.3.1**
- Preferred DNS server: **192.168.3.3**
- Validate settings upon exit: False

Then click OK.

2.6. Validate New Camera IP Address (Browser)

Open a web browser (e.g. Chrome, Firefox) and entering the camera's IP address into the URL bar (e.g. http://192.168.3.200/). You should see the Dahua admin portal login screen appear.
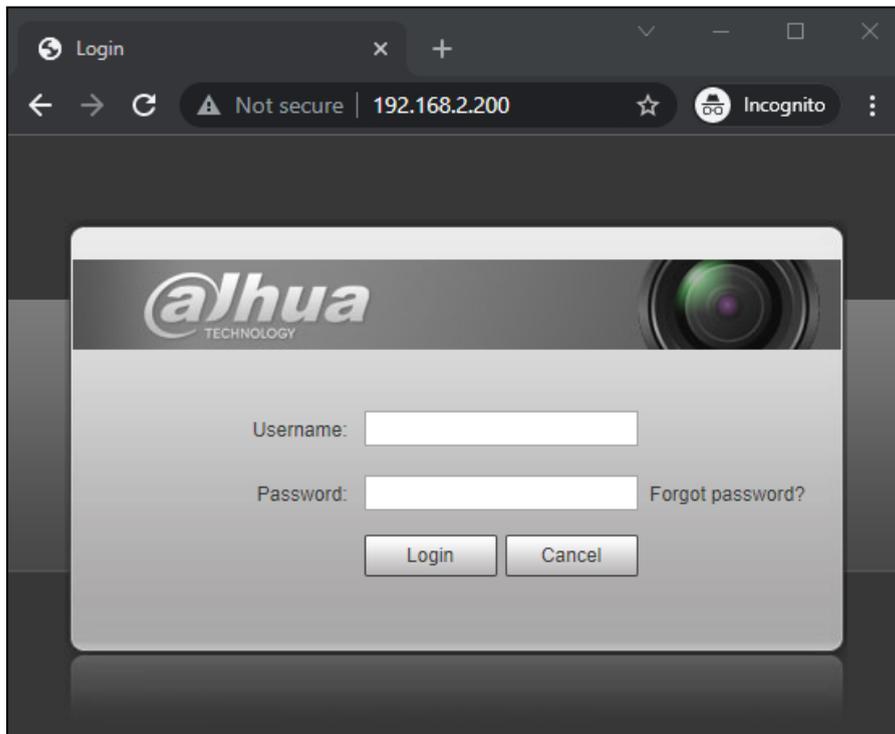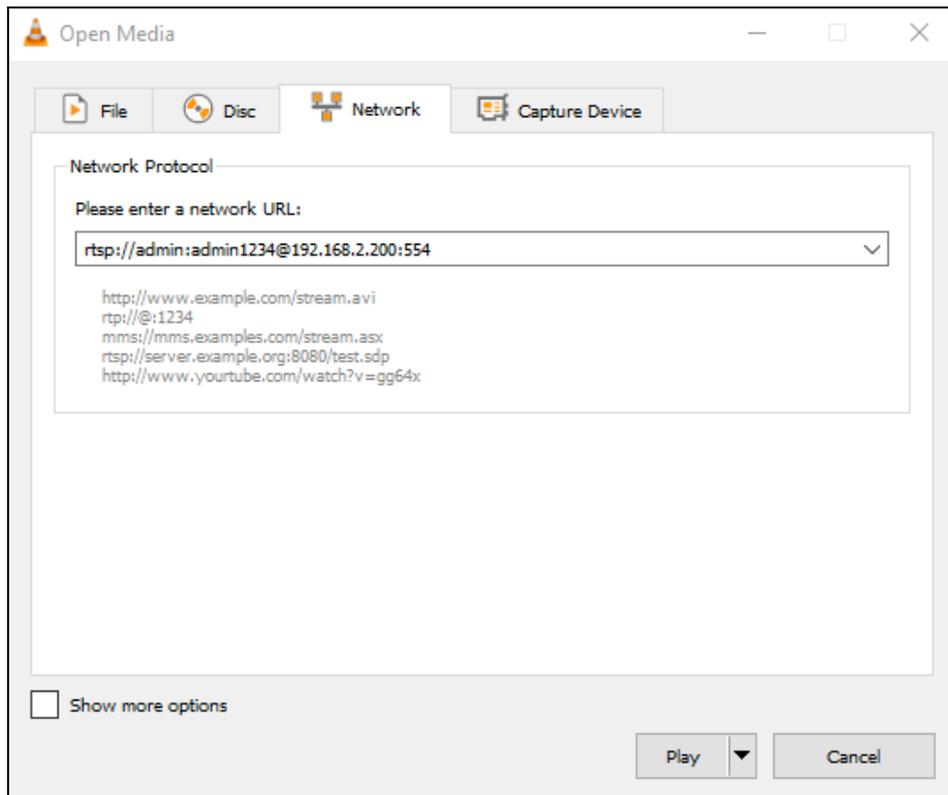
2.6. Validate New Camera IP Address with VLC
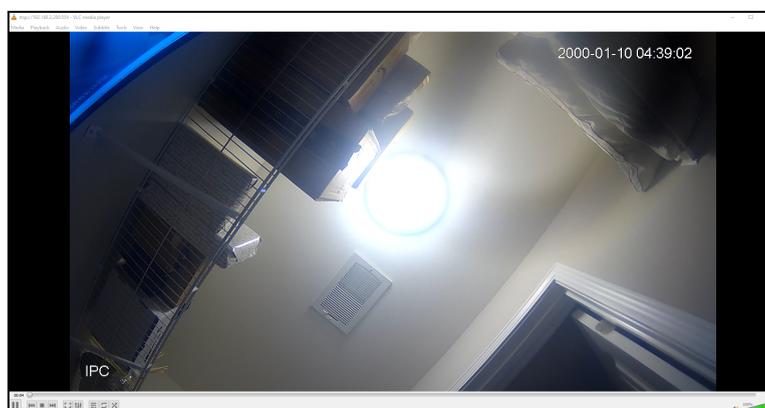
To validate the RTSP stream, install and open VLC Media Player (download link).

Click Media > Open Network Stream…, and enter the following URL:

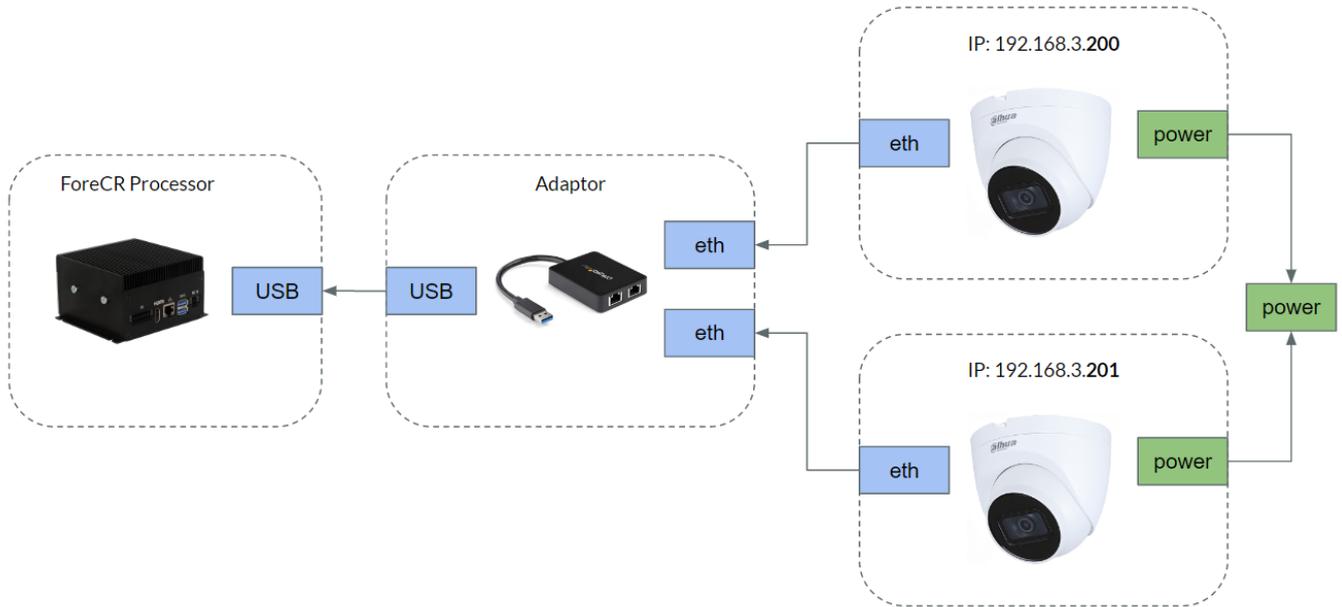- **rtsp://admin:admin1234@192.168.3.200:554**

The result should be a live stream from the IP camera:

2.7. Connecting Multiple Cameras

If you connect multiple cameras using a USB to Ethernet adaptor, we recommend the following setup:

Congratulations, your IP camera setup is now complete. You have completed this tutorial.

<u>Support</u>

For support this setting up your IP camera, contact: support@firststep.ai

Troubleshooting

Issue #1: Device does not appear in list

If your device does not appear, check power, and ethernet cables, and confirm that your computer ethernet range is set correctly. Then click the "refresh" icon.