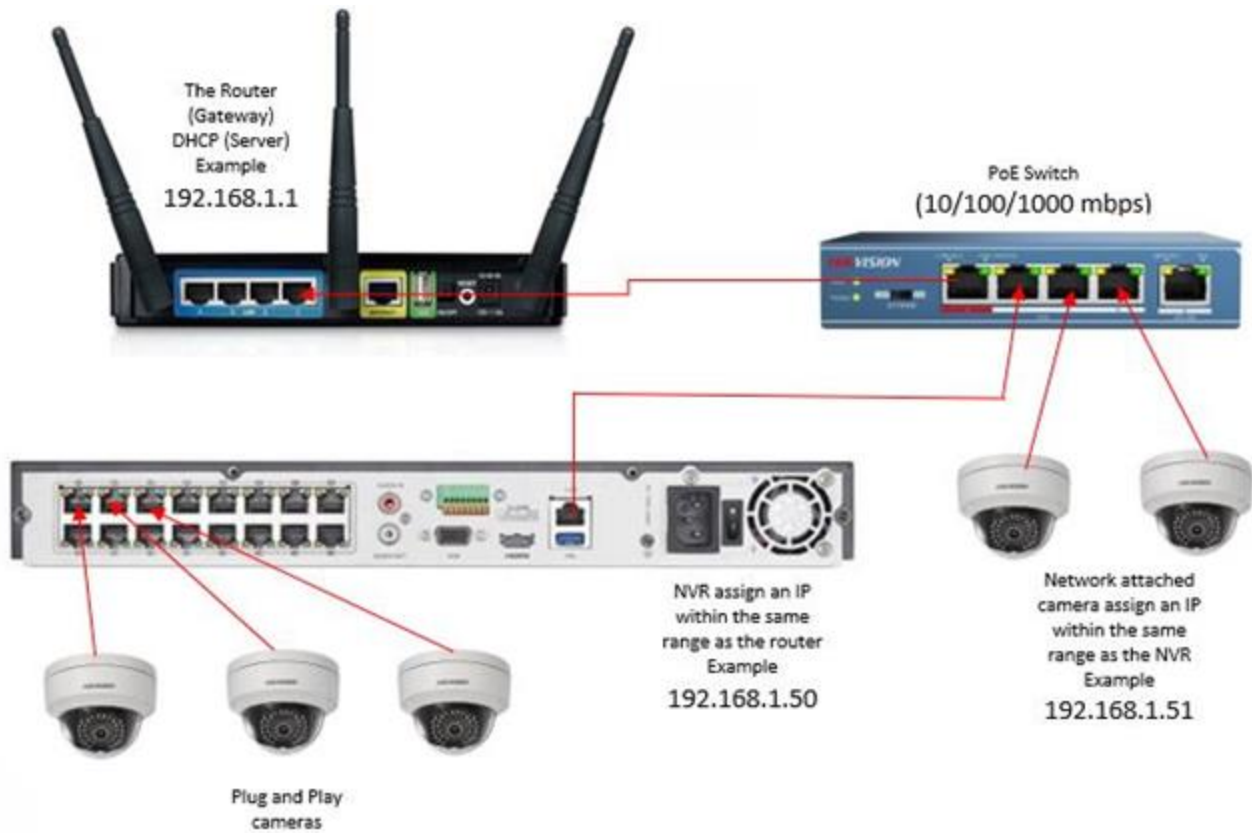


ADDING IPC TO RECORDERS USING EXTERNAL POE SWITCH

PRODUCTS: HIKVISION CAMERA AND NVR GUI3 & GUI4

TOPICS COVERED IN THIS KBA: How to manually connect a camera to an NVR using external PoE switch

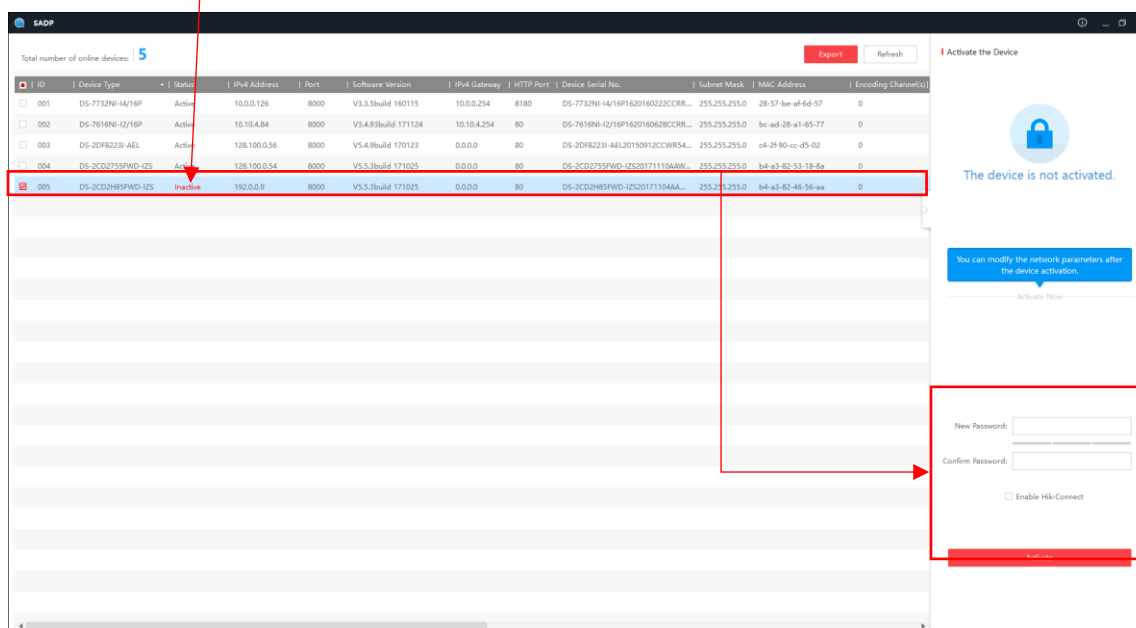
Typical network topology



Adding an IP Camera across a network connection we need to do the following:

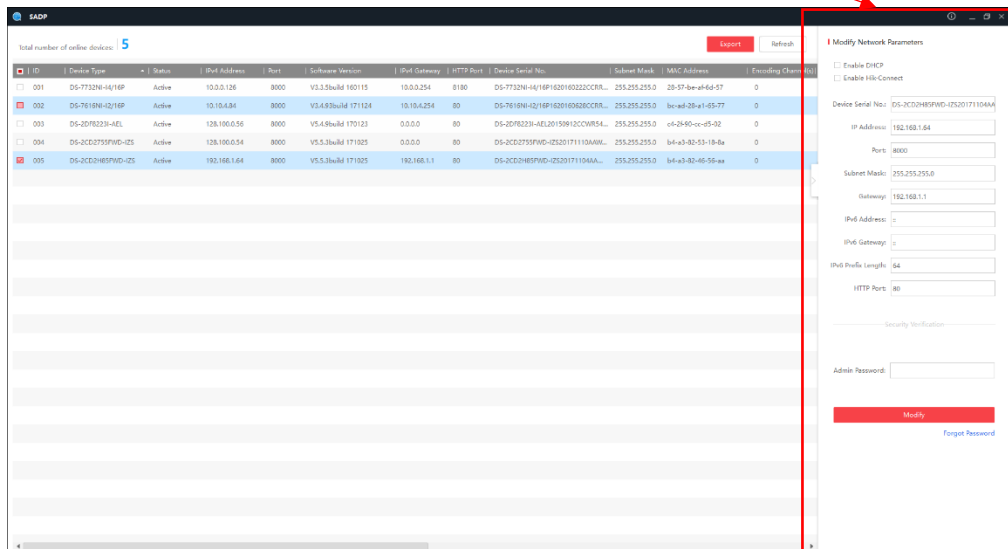
1. Activate IP camera

- I. To activate an IP camera a PC/Laptop is required. Both IP camera and PC/Laptop must be on the same network (IP Range). Plug your PC/Laptop and the camera into an unused port on the POE switch.
- II. Make sure you have the latest SADP software on your laptop, if not download the latest SADP software from Hikvision's website.
- III. Run SADP tool.
- IV. Select "Inactive" Device and set a complex password to activate the camera.





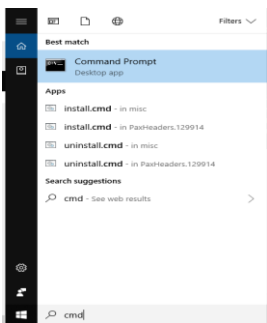
V. Once the device is Active you will be able to Modify Network Parameters (use ping test to find an available IP OR use the IP range your client has specified)



How to perform a Ping test

(Make sure to do ping test using the CMD to check if the IP/address is currently used or not.

From the start menu search CMD:



Type in ping (space) then the IP you want to test,

Ex1: Ping 192.168.1.2

As below the ping result shows reply (Time=<1ms TTL=128)

which means you can't use this IP address as it's been used by another network device.

```
C:\Users\>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:
Reply from 192.168.1.2: bytes=32 time=1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128
Reply from 192.168.1.2: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
```



Ex2: ping 192.168.1.10

As below the ping result shows no-reply (Destination host unreachable)

Which means you can use the IP address

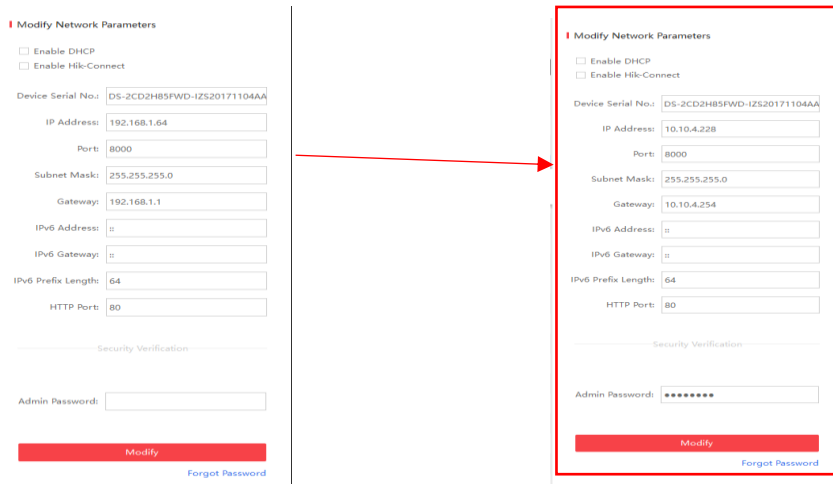
```
C:\Users\Amr>ping 192.168.1.10

Pinging 192.168.1.10 with 32 bytes of data:
Reply from 192.168.128.128: Destination host unreachable.
Reply from 192.168.78.3: Destination host unreachable.
Reply from 192.168.128.128: Destination host unreachable.
Reply from 192.168.128.128: Destination host unreachable.

Ping statistics for 192.168.1.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

VI. Enter the IP address details that you want this camera to have (**must be on the same network range as the NVR or it won't see them**), enter the password you activated the camera with and click modify

“it's recommended to put 0.0.0.0 to the gateway of the camera, to avoid communicating with the WAN network (router)



VII. The camera should now have the IP address you assigned

The screenshot displays the SADP (Smart Audio Device Protocol) interface. On the left, a table lists 5 online devices. The table has columns for ID, Device Type, Status, IPv4 Address, Port, Software Version, IPv4 Gateway, HTTP Port, Device Serial No., Subnet Mask, MAC Address, and Encoding Channel(s). A red arrow points to the IP address 10.10.4.228 in the 'IPv4 Address' column of the first row.

ID	Device Type	Status	IPv4 Address	Port	Software Version	IPv4 Gateway	HTTP Port	Device Serial No.	Subnet Mask	MAC Address	Encoding Channel(s)
001	DS-7732NI-I4/16P	Active	10.0.0.185	8000	V3.5build 160115	10.0.0.254	8180	DS-7732NI-I4/16P162016022CCRR...	255.255.255.0	28-57-be-af-6d-57	0
002	DS-7616NI-I2/16P	Active	10.10.4.84	8000	V3.4.9build 171124	10.10.4.254	80	DS-7616NI-I2/16P1620160629CCRR...	255.255.255.0	bc-ad-28-a1-65-77	0
003	DS-2DF8223I-AEL	Active	128.170.50.56	8000	V5.4.9build 170123	0.0.0.0	80	DS-2DF8223I-AEL20150912CCWR54...	255.255.255.0	e4-2f-90-cc-05-02	0
004	DS-2CD2755FWD-I2S	Active	128.170.50.54	8000	V5.5.3build 171025	0.0.0.0	80	DS-2CD2755FWD-I2S20171110AAW...	255.255.255.0	b4-a3-82-53-18-8a	0
005	DS-2CD2H85FWD-I2S	Active	10.10.4.228	8000	V5.5.3build 171025	10.10.4.254	80	DS-2CD2H85FWD-I2S20171104AA...	255.255.255.0	b4-a3-82-46-56-aa	0

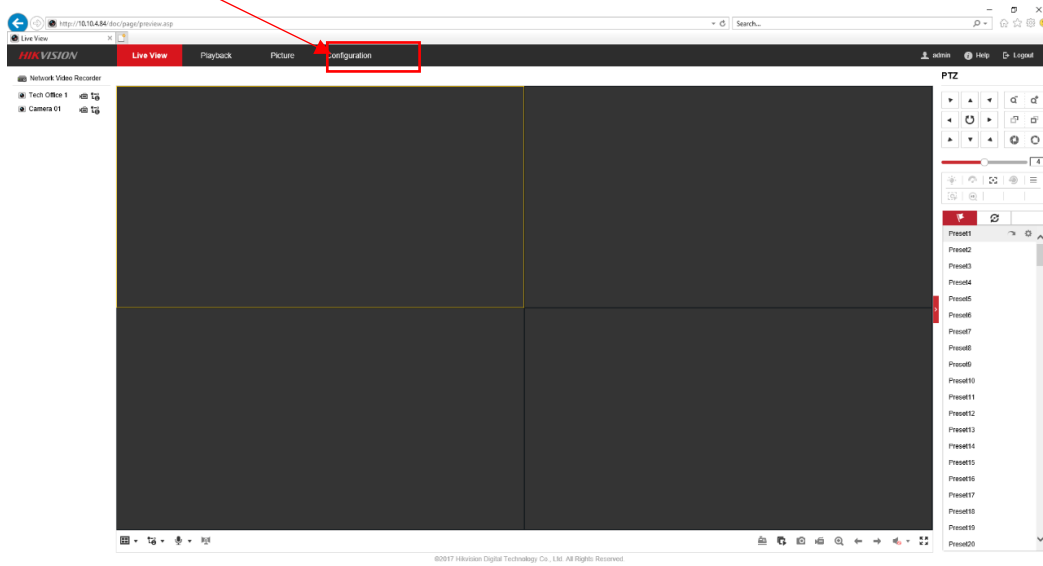
On the right side, the 'Modify Network Parameters' panel is visible. It includes checkboxes for 'Enable DHCP' and 'Enable HiQ-Connect'. Below these are input fields for 'Device Serial No.', 'IP Address' (10.10.4.228), 'Port' (8000), 'Subnet Mask' (255.255.255.0), 'Gateway' (10.10.4.254), 'IPv6 Address', 'IPv6 Gateway', 'IPv6 Prefix Length' (64), and 'HTTP Port' (80). There is also a 'Security Verification' section with an 'Admin Password' field and a 'Forgot Password' link. A red 'Modify' button is at the bottom of the panel.

2- Now you need to assign the cameras to the NVR, there are two ways to do it,

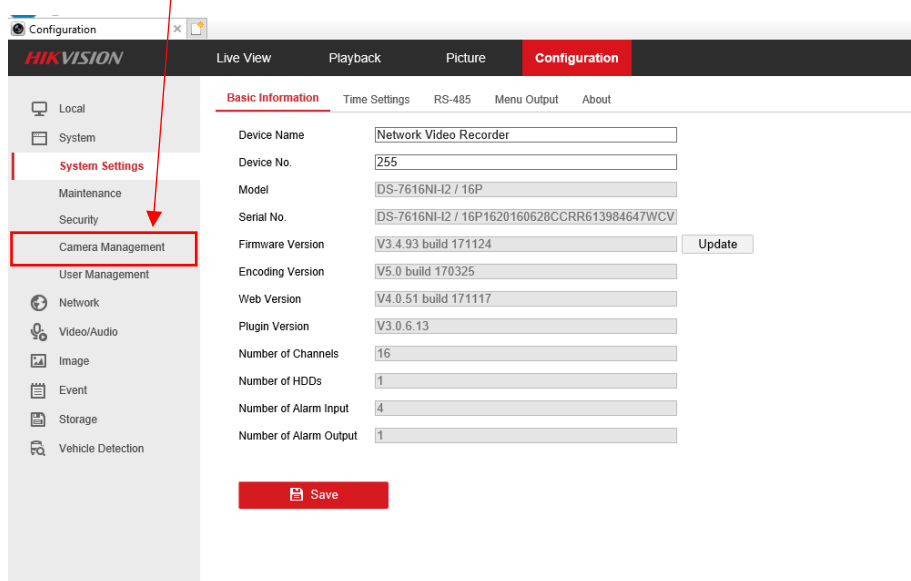
- Method 1) Web-Interface of the NVR
- Method 2a) Local-GUI of the NVR V3.X
- Method 2b) Local-GUI of the NVR V4.X

In this section of the KBA we going to discuss how to assign the cameras to the NVR using Method 1.

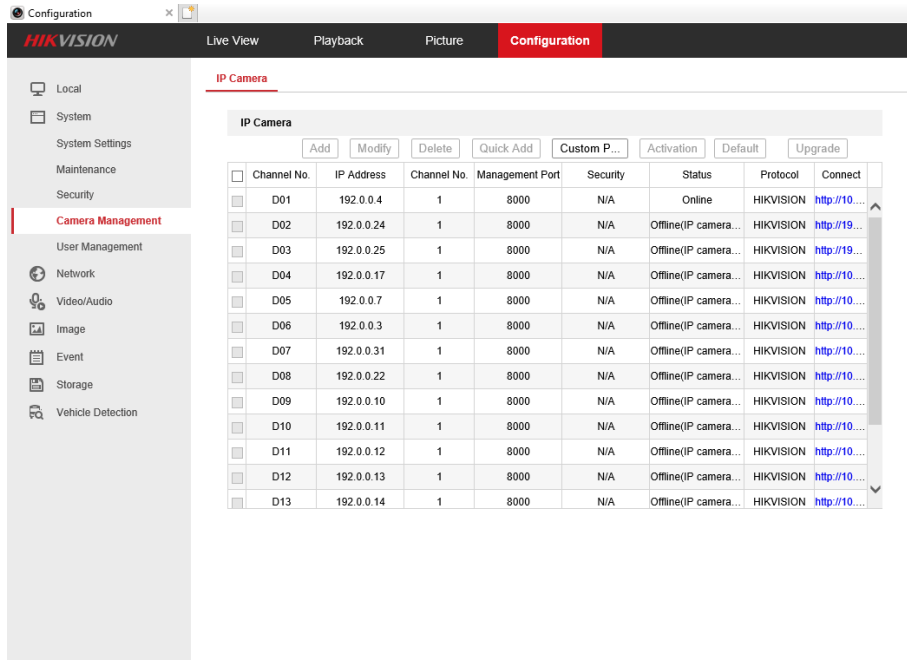
- Using Internet Explorer web browser enter the IP address of your NVR into the address bar
- Log into the NVR using the admin credentials.
- Select configuration



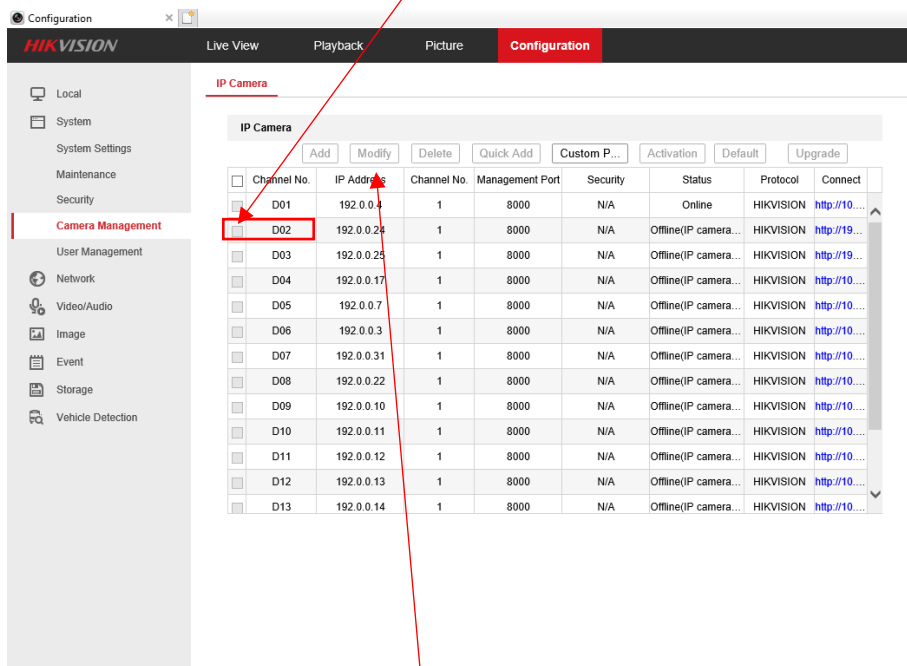
- Then select Camera Management



- You will be presented with the Camera Management screen as follows

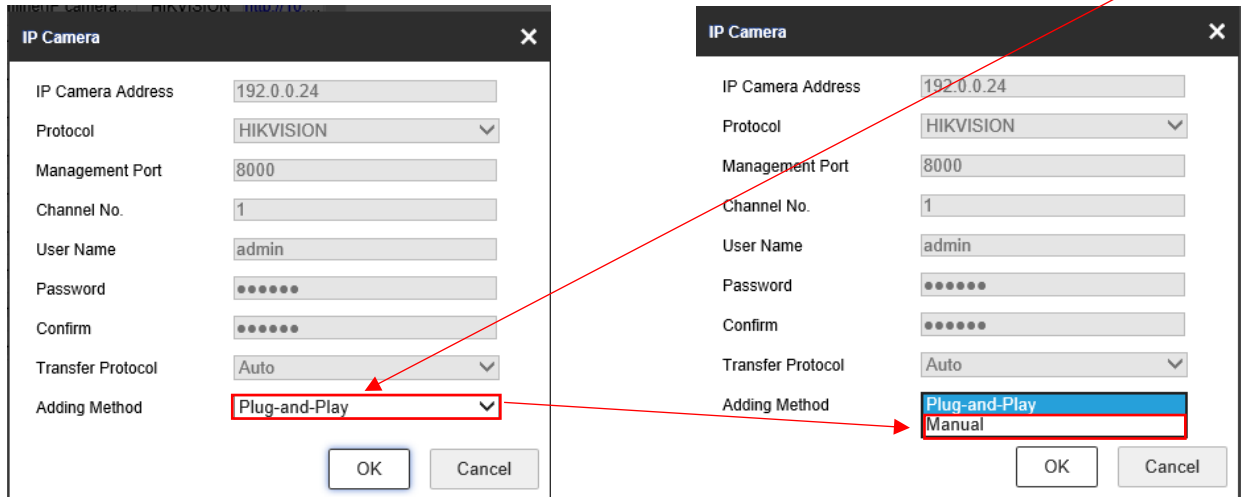


- Select the camera channel that you wish to modify (**NOTE: Once a network camera has been assigned this channel cannot be used for plug & play, for example cannot plug camera in o this PoE Port**)

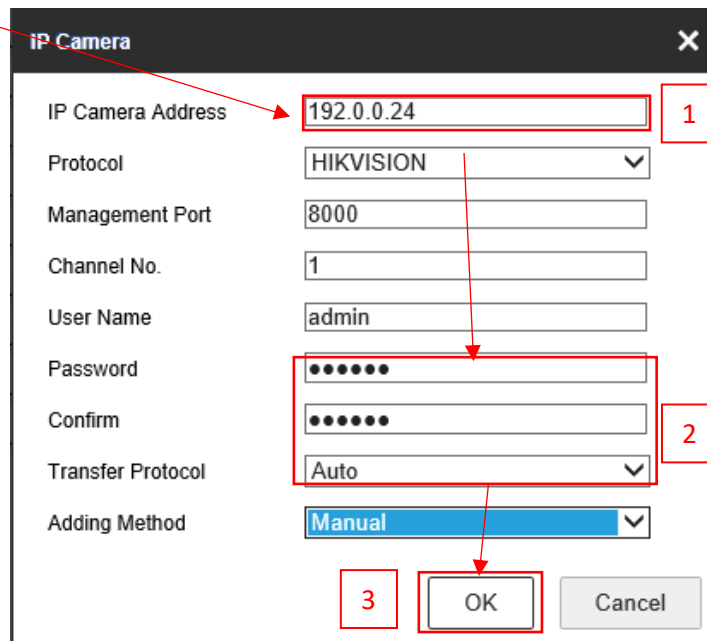


- Select Modify to enter the camera IP details

- You will have the following screen open and you will need to change the adding method to manual



- You will now be able to enter in the IP address details (1) and login credentials (2) for the camera you wish to add, once your details have been added click OK (3)



- Your camera will now be added but will show as being offline

<input type="checkbox"/>	D02	10.10.4.228	1	8000	N/A	Offline(IP camera...	HIKVISION
--------------------------	-----	-------------	---	------	-----	----------------------	-----------

- Select a different menu option and then select Camera Management again to update the camera status and it should now report that its online

<input type="checkbox"/>	D02	10.10.4.228	1	8000	Weak	Online	
--------------------------	-----	-------------	---	------	------	--------	--

- Repeat the process for all network cameras



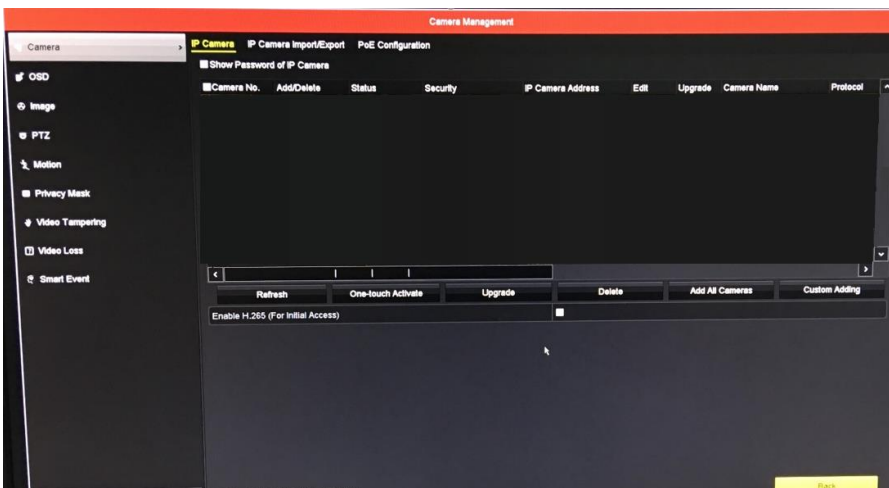
In this section of the KBA we going to discuss how to assign the cameras to the NVR using Method 2a.

- Log into the NVR and go to Camera Management,
- For unit which has Plug and Play Ports, you will see there are already channels in the list, these channels can't be deleted as it's corresponding to the PoE ports on the back.

Camera management for PoE recorder:



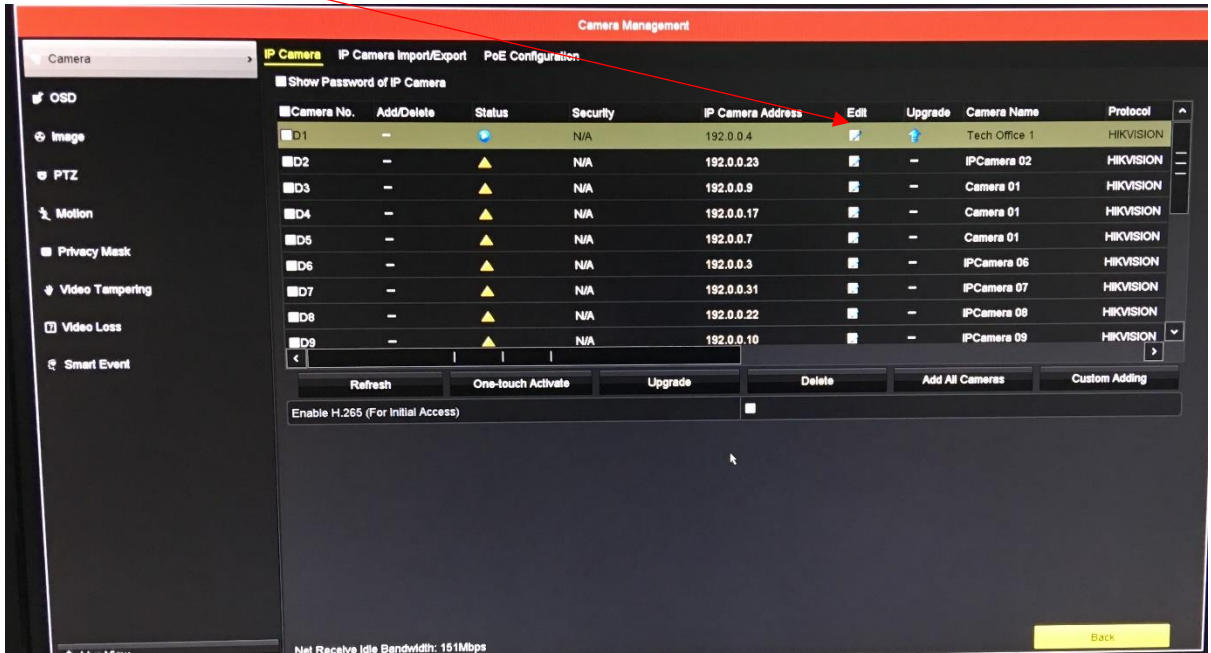
Camera management for Non-PoE recorder:



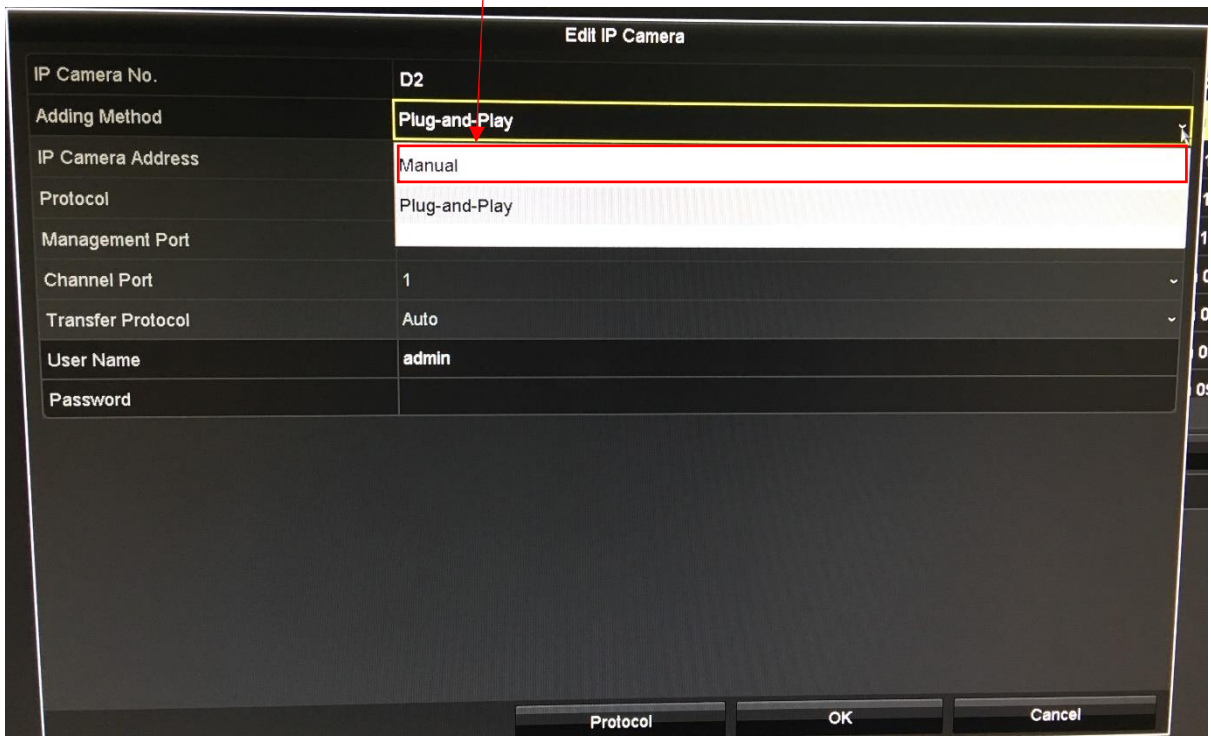
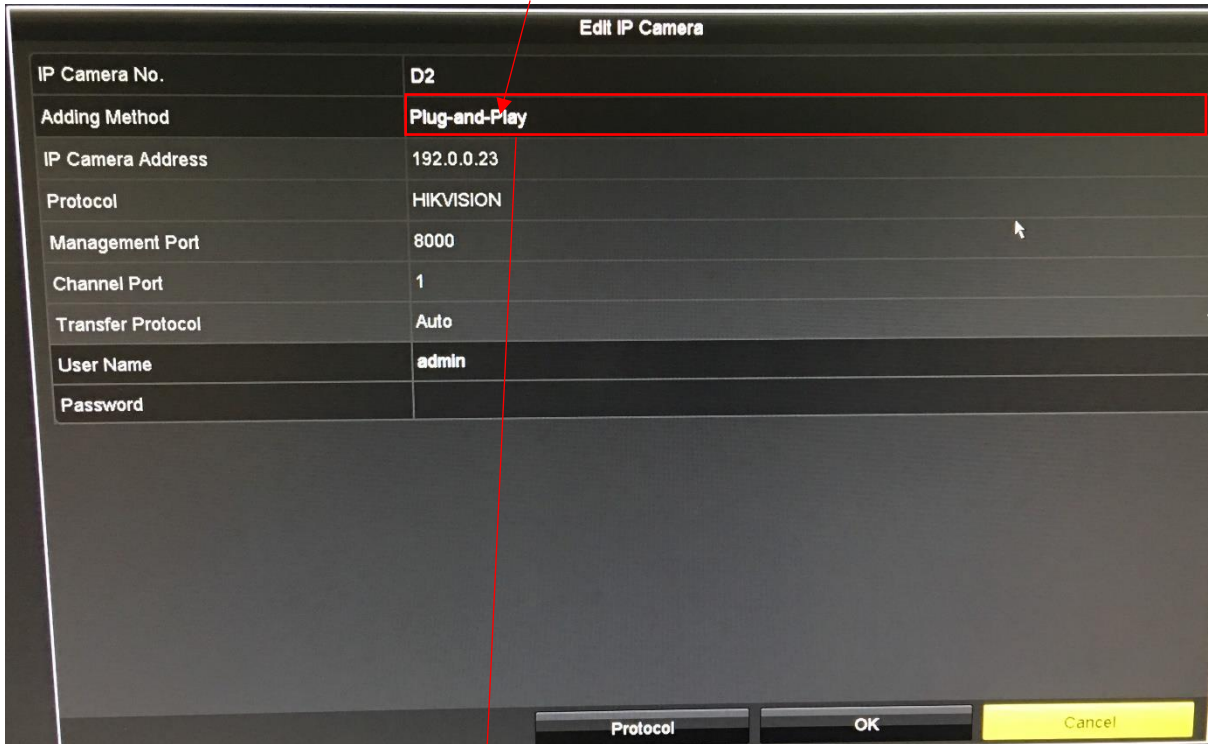


If your Recorder has Plug and Play ports, then all you will need follow the below procedure:

- i) Click the Edit button to change the channel from plug and play to Manual



Change the Adding Method to manual by clicking the drop-down box (**NOTE: Once a network camera has been assigned this channel cannot be used for plug & play, for example cannot plug camera into this PoE Port**)



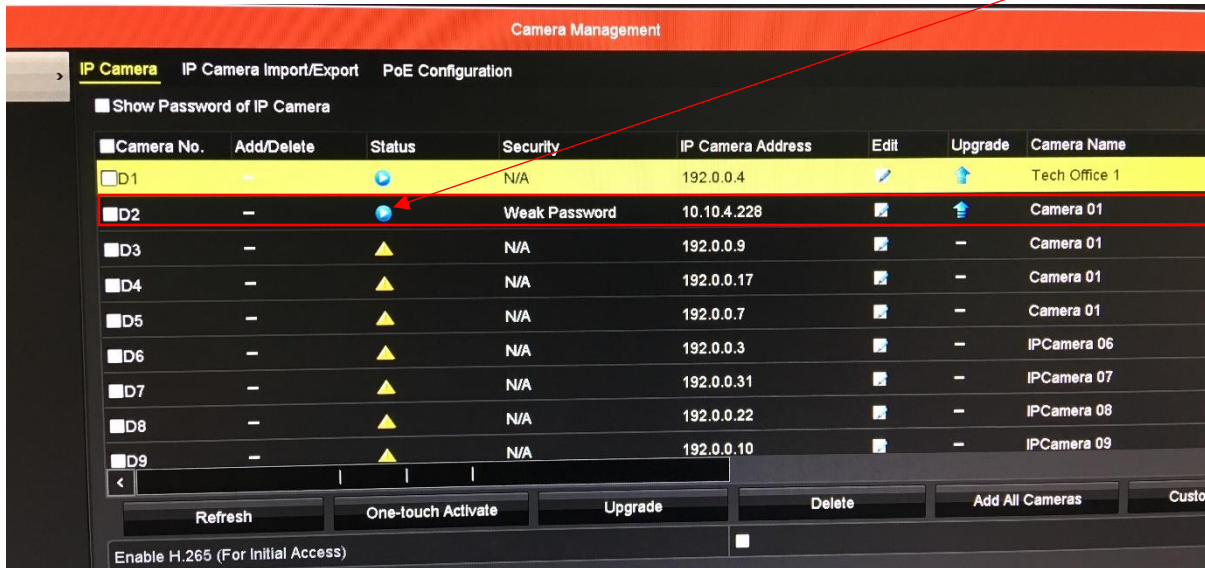
- iii) Enter the IP Address that you have assigned to the camera earlier and enter the password you used to activate the camera and click OK

Edit IP Camera	
IP Camera No.	D2
Adding Method	Manual
IP Camera Address	10.10.4.226
Protocol	HIKVISION
Management Port	8000
Channel Port	1
Transfer Protocol	Auto
User Name	admin
Password	*****

Protocol **OK** Cancel



iv) The camera will attempt to connect and once it does you will have the connected status symbol



v) Repeat the process for all network cameras

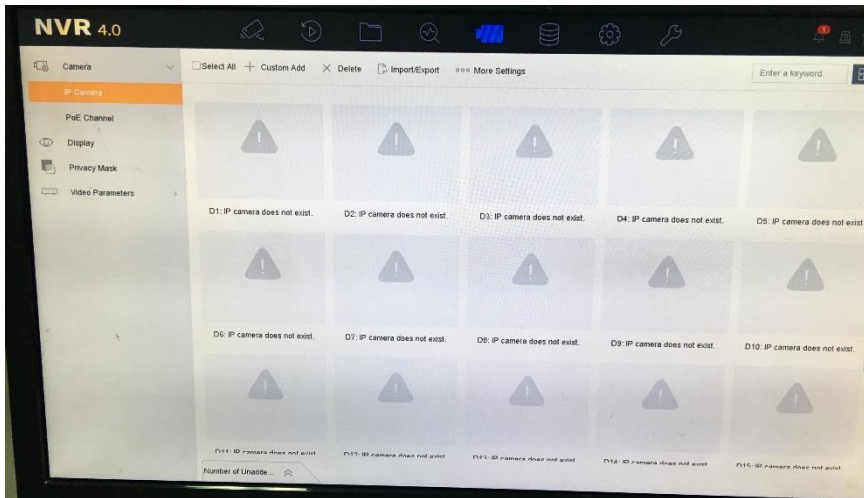
For Non-PoE Recorders, you will need to use the “Custom adding” or “add all the cameras” (after configuring the network settings)



In this section of the KBA we going to discuss how to assign the cameras to the NVR using Method 2b.

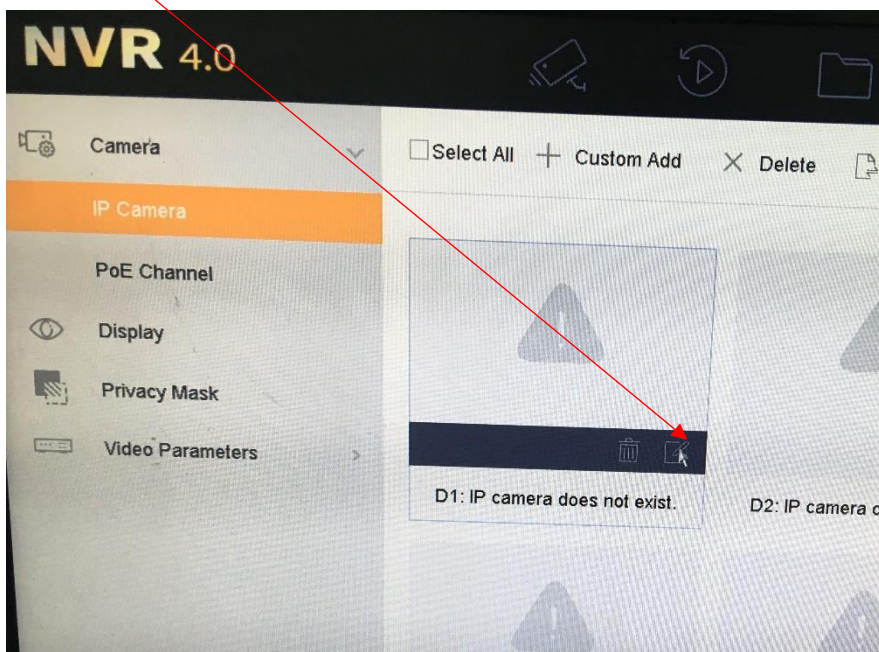
- Log into the NVR and go to Camera Management,
- For unit which has Plug and Play Ports, you will see there are already channels in the list, these channels can't be deleted as it's corresponding to the PoE ports on the back.

Camera management for PoE recorder:

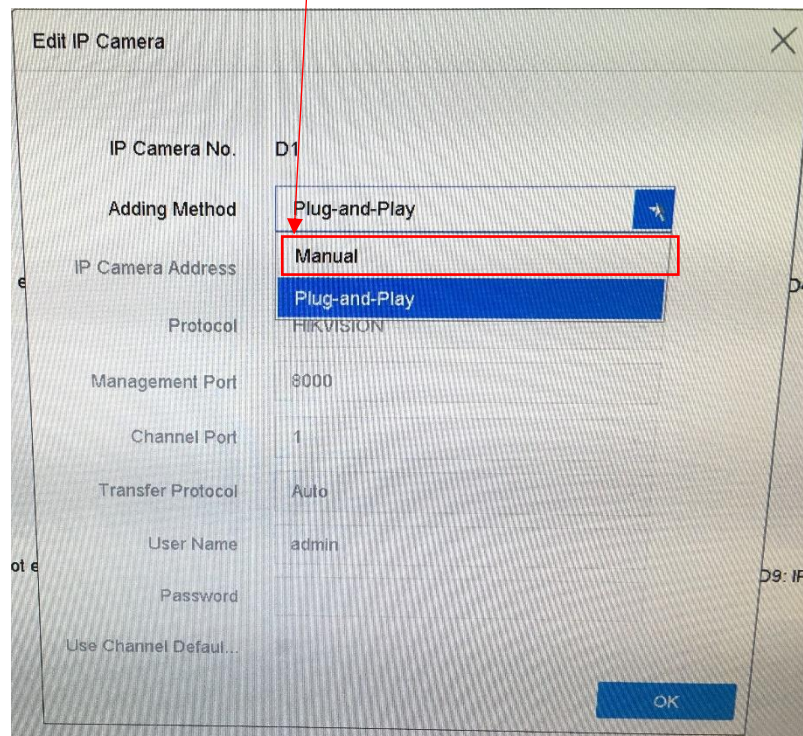
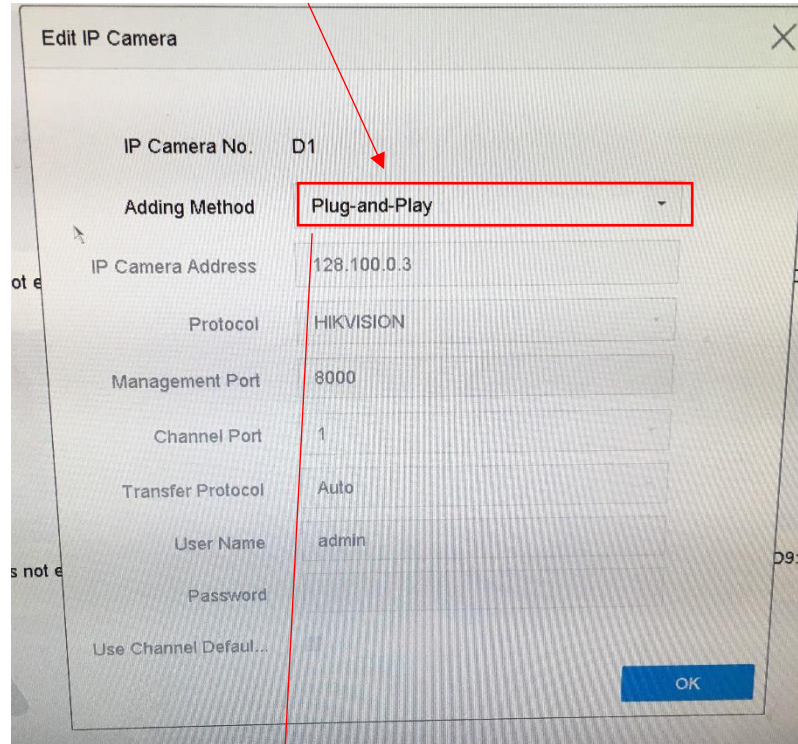


If your Recorder has Plug and Play ports, then all you will need follow the below procedure:

- ii) Click the Edit button to change the channel from plug and play to Manual

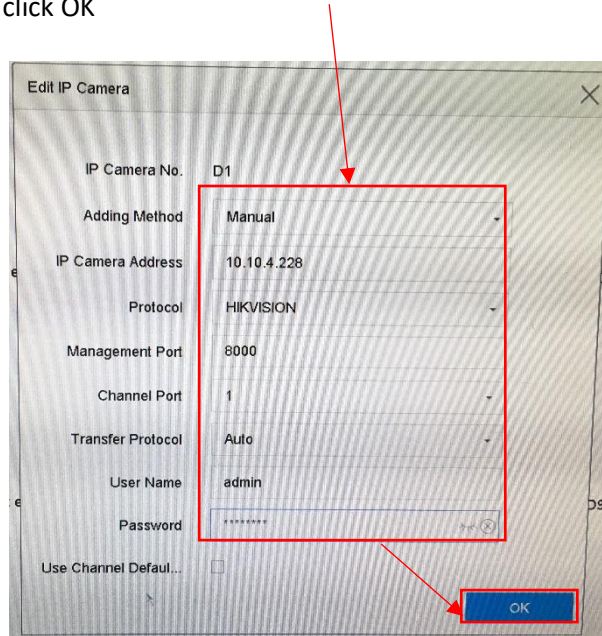


Change the Adding Method to manual by clicking the drop-down box (**NOTE: Once a network camera has been assigned this channel cannot be used for plug & play, for example cannot plug camera into this PoE Port**)

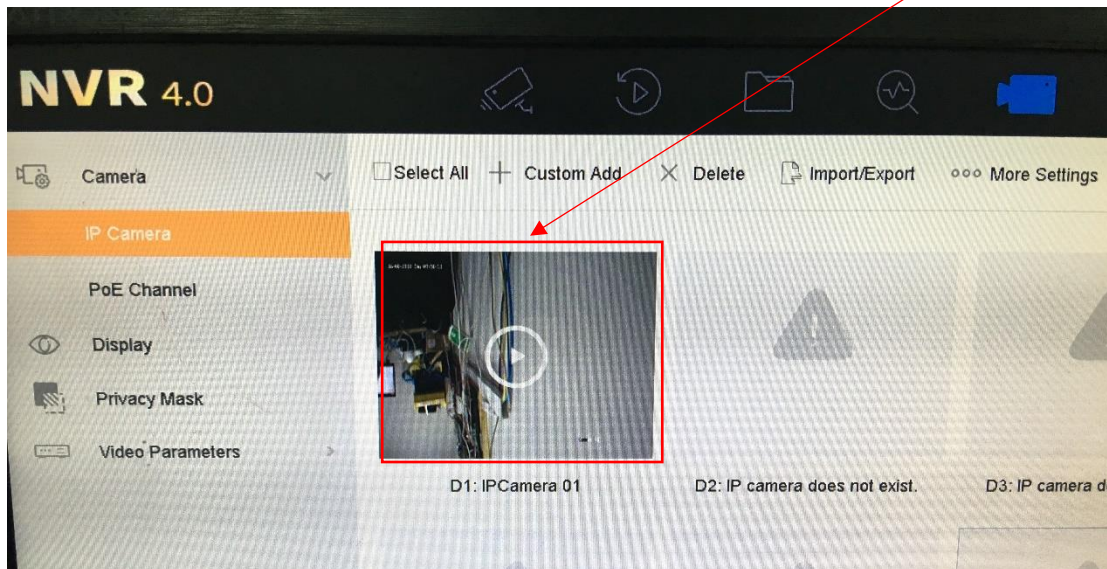




- vi) Enter the IP Address that you have assigned to the camera earlier and enter the password you used to activate the camera and click OK



- vii) The camera will attempt to connect and once it does you will see a thumbnail of the camera view



- viii) Repeat the process for all network cameras

For Non-PoE Recorders, you will need to use the “Custom adding” or “add all the cameras” (after configuring the network settings of the cameras and the NVR)