

Technical Note Description

How to find the IP address to make initial connection to a NetVu Connected Gen4 product.

Product Models Covered

All NetVu Connected Gen4 products

Description

Configuration of NetVu Connected products is performed via the web browser interface. However, to make the initial connection it is required to know the correct IP address. There are a number of methods available to achieve this.

When cameras are installed with a NetVu Connected NVR or other master controller as recommended then the IP address is discovered and managed automatically, even when set to a manual address outside the current network address range. If a camera is used 'standalone' for some reason, then the IP address will have to be managed manually.

Products with a Local display

At power up the IP address will be displayed, either as part of the menu System, or in the case of a camera on the video out if available. Please note that this display may revert to a different selected display mode after a period of time.

Proceed to the section below **"After discovery of the IP address"**

Products connected to the Network set to DHCP

At factory default settings DHCP will be enabled. The Network administrator should be able to identify the DHCP allocated address if provided with the MAC address of the product. The majority of NetVu Connected products have MAC addresses in the range 00:D0:D9:xx:xx:xx

This can typically be found in the DHCP Server status, or may also be found in the Router table.

Once identified proceed to the section below **"After discovery of the IP address"**. If however the IP address is still not known, attempt one of the following steps.

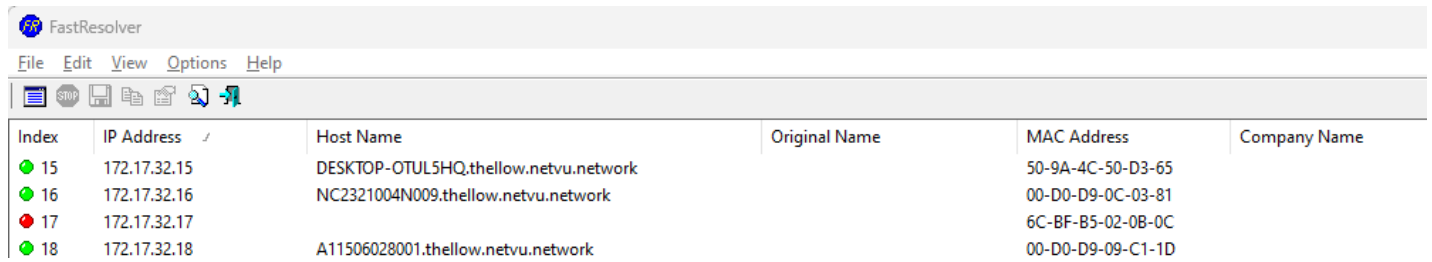
Identify IP address on the subnet using FastResolver

It may be that even though the IP address has been allocated by DHCP, it has not been possible to determine this from the network system. Alternatively the unit may be on a static address on the current subnet.

There is useful free utility called FastResolver available to download from

<https://www.nirsoft.net/utills/fastresolver.html>

An example of discovering a range on a network can be seen below.



The screenshot shows the FastResolver application window with a menu bar (File, Edit, View, Options, Help) and a toolbar. Below the toolbar is a table with the following data:

Index	IP Address	Host Name	Original Name	MAC Address	Company Name
15	172.17.32.15	DESKTOP-OTUL5HQ.thellow.netvu.network		50-9A-4C-50-D3-65	
16	172.17.32.16	NC2321004N009.thellow.netvu.network		00-D0-D9-0C-03-81	
17	172.17.32.17			6C-BF-B5-02-0B-0C	
18	172.17.32.18	A11506028001.thellow.netvu.network		00-D0-D9-09-C1-1D	

Two NetVu Connected devices can be seen –

Ser. no NC2321004N009 with IP address: 172.17.32.16 and with MAC address: 00-D0-D9-0C-03-81

Ser. no A11506028001 with IP address: 172.17.32.18 and with MAC address: 00-D0-D9-09-C1-1D

NOTE: This particular domain server has also created a DNS name with the System Name / Site ID, which by default is the Serial number followed by the local domain name –

NC2321004N009.thellow.netvu.network The DNS name can be used in the browser instead of the IP address.

Otherwise proceed to the section below “**After discovery of the IP address**”.

Identify IP by Global Ping and ARP discovery

The command line *ping* command normally addresses a single device, however it is possible to ping all devices on the current subnet with a global ping.

This is achieved by using the *ping* command with the 'broadcast address' which is usually the last entry in the IP range. For the above network this is 172.17.35.255. For a typical router generated network such as 192.168.1.xx it would be 192.168.1.255

Viewing the ARP table using the *arp* command as shown below will display all the connected and responding devices. Below there are a number of NetVu Connected devices, where the MAC address is in the range 00-d0-d9-xx-xx-xx

```
C:\Windows\System32>ping 172.17.35.255

Pinging 172.17.35.255 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.17.35.255:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Windows\System32>arp -a

Interface: 172.17.32.60 --- 0xd
 Internet Address      Physical Address      Type
 172.17.32.3           00-d0-d9-0b-20-22    dynamic
 172.17.32.9           00-d0-d9-0c-01-7b    dynamic
 172.17.32.12          00-04-13-84-20-26    dynamic
 172.17.32.17          6c-bf-b5-02-0b-0c    dynamic
 172.17.32.27          00-d0-d9-0b-a6-4c    dynamic
 172.17.32.30          00-d0-d9-0c-03-97    dynamic
 172.17.32.36          00-04-13-84-1f-8d    dynamic
 172.17.32.76          00-d0-d9-0c-03-92    dynamic
 172.17.32.103         00-08-dc-e8-71-7b    dynamic
 172.17.32.116         00-04-13-84-20-1f    dynamic
 172.17.32.254         f4-03-43-10-08-cb    dynamic
 172.17.35.100         00-25-b3-ec-b8-d5    dynamic
 172.17.35.255         ff-ff-ff-ff-ff-ff    static
 224.0.0.2             01-00-5e-00-00-02    static
 224.0.0.22            01-00-5e-00-00-16    static
 224.0.0.251           01-00-5e-00-00-fb    static
 224.0.0.252           01-00-5e-00-00-fc    static
 239.255.255.250      01-00-5e-7f-ff-fa    static
 255.255.255.255      ff-ff-ff-ff-ff-ff    static

C:\Windows\System32>
```

Select the required IP address based on the MAC address of the required unit and proceed to the section below "After discovery of the IP address".

Discover IP on Zeroconf

There is an automatic IP range variously called Zeroconf / Automatic Address Range / Bonjour.

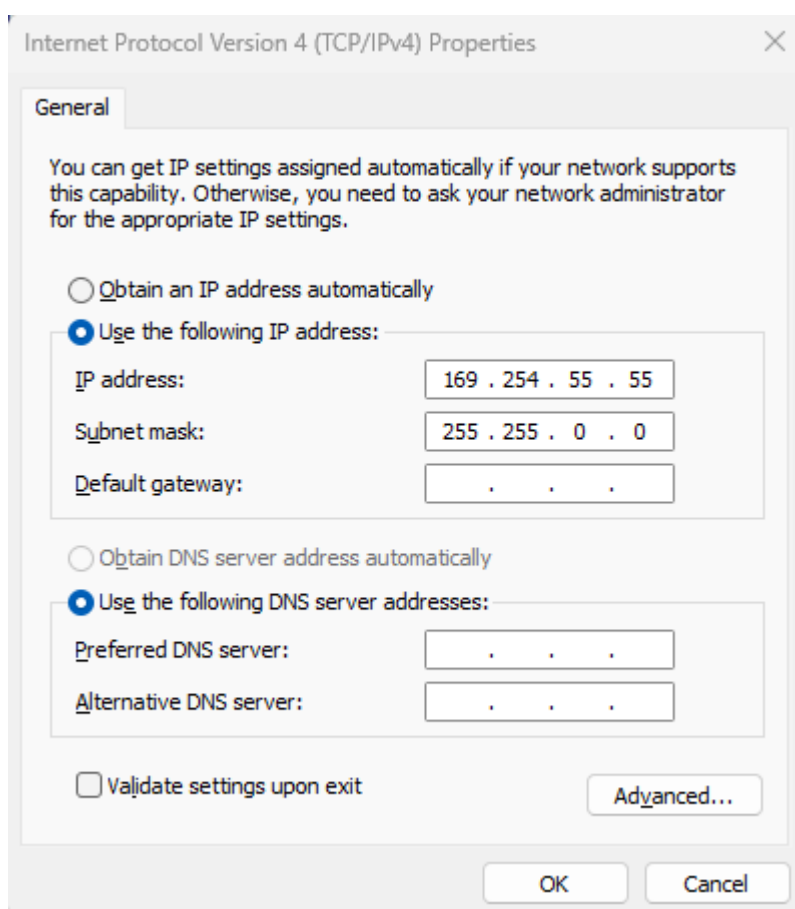
This is in the IP Class B range of 169.254.0.0 to 169.254.255.255

Most devices will automatically allocate a Zeroconf address if unable to acquire an address by DHCP, and a Static IP address is not set. The last two values will be generated automatically, with resolution of any clashes of two devices allocating the same address.

NetVu Connected products always support a Zeroconf address at the same time as a DHCP or Static allocated address. This allows for connection via IP regardless of whether any other network facilities exist or not. This is particularly useful if a single service laptop needs to connect direct to an NVR or camera, which may not otherwise be connected to a network.

This capability also allows a device to be accessed, even though it may have retained a Static address which is not even from the current location.

If there is no DHCP present the PC will ultimately switch to an automatic once the requests for DHCP have timed out, however it may be more convenient to select a Zeroconf address manually – such as 169.254.55.55 as an example, with subnet mask 255.255.0.0 as below



NOTE: It is possible to set a general static address, and also add a Zeroconf address using the 'Advanced' button as above. If a specific USB Ethernet adapter is set this way, it will typically retain the settings, so it may be beneficial to carry an additional low cost USB Ethernet adapter for this purpose if used regularly.

As this is a Class B range with 65533 available addresses, it would be quite slow to search with FastResolver, so it is recommended to use the Global ping method, as below

```
C:\Windows\System32>ping 169.254.255.255

Pinging 169.254.255.255 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 169.254.255.255:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),

C:\Windows\System32>arp -a

Interface: 172.17.32.60 --- 0xd
  Internet Address      Physical Address      Type
  172.17.32.32          40-61-86-66-10-61    dynamic
  172.17.32.254         f4-03-43-10-08-cb    dynamic
  172.17.35.100         00-25-b3-ec-b8-d5    dynamic
  172.17.35.255         ff-ff-ff-ff-ff-ff    static
  224.0.0.22            01-00-5e-00-00-16    static
  224.0.0.251           01-00-5e-00-00-fb    static
  224.0.0.252           01-00-5e-00-00-fc    static
  239.255.255.250      01-00-5e-7f-ff-fa    static
  255.255.255.255      ff-ff-ff-ff-ff-ff    static

Interface: 169.254.55.55 --- 0x17
  Internet Address      Physical Address      Type
  169.254.11.75         00-d0-d9-09-ef-77    dynamic
  169.254.11.119        00-d0-d9-09-ef-7f    dynamic
  169.254.28.193        00-d0-d9-0c-03-92    dynamic
  169.254.29.193        00-d0-d9-0c-03-97    dynamic
  169.254.43.57         00-d0-d9-09-ef-80    dynamic
  169.254.43.125        00-d0-d9-09-ef-78    dynamic
  169.254.54.140        6c-bf-b5-02-0b-0c    dynamic
  169.254.75.20         00-d0-d9-09-ef-81    dynamic
  169.254.75.88         00-d0-d9-09-ef-79    dynamic
  169.254.100.114       00-d0-d9-09-c1-1d    dynamic
  169.254.103.43        00-d0-d9-0c-01-7b    dynamic
  169.254.107.50        00-d0-d9-09-ef-7a    dynamic
  169.254.127.242       00-d0-d9-0c-03-81    dynamic
  169.254.130.49        00-d0-d9-08-40-5a    dynamic
  169.254.139.13        00-d0-d9-09-ef-7b    dynamic
  169.254.154.47        00-d0-d9-0b-20-22    dynamic
  169.254.163.184       00-d0-d9-0b-fc-30    dynamic
  169.254.168.34        00-d0-d9-09-ec-20    dynamic
  169.254.169.195       00-d0-d9-08-81-60    dynamic
  169.254.171.103      00-d0-d9-09-ef-7c    dynamic
```

After discovery of the IP address

Once the IP address of the unit is noted, it can be entered into the browser address bar, which should then take the user to the configuration menus.

Please note that if the browser is connected via a different subnet, then username and password credentials will be required to make the initial connection, otherwise access without username and password is allowed when set to factory defaults.

NOTE: In the event that a direct connection is not available from the same subnet, please contact NetVu Technical Support who can provide a Level0 automatic credentials for the unit. Please ensure that you have the Model, Serial Number and MAC address available.