

RAIN BIRD

iQ4

IQTM 4 NCC EN Cartridge Setup

Steps to setup a NCC EN Cartridge for IQ™ 4 - Cloud

1. Work with the Site IT Network Personnel to setup the network parameters
2. Install the NCC EN Cartridge
3. Configure the NCC EN Cartridge (NCC Configurator)
4. Setup controller in IQ4
5. Perform a Reverse Sync to load all controller data into IQ™ 4 from the controller

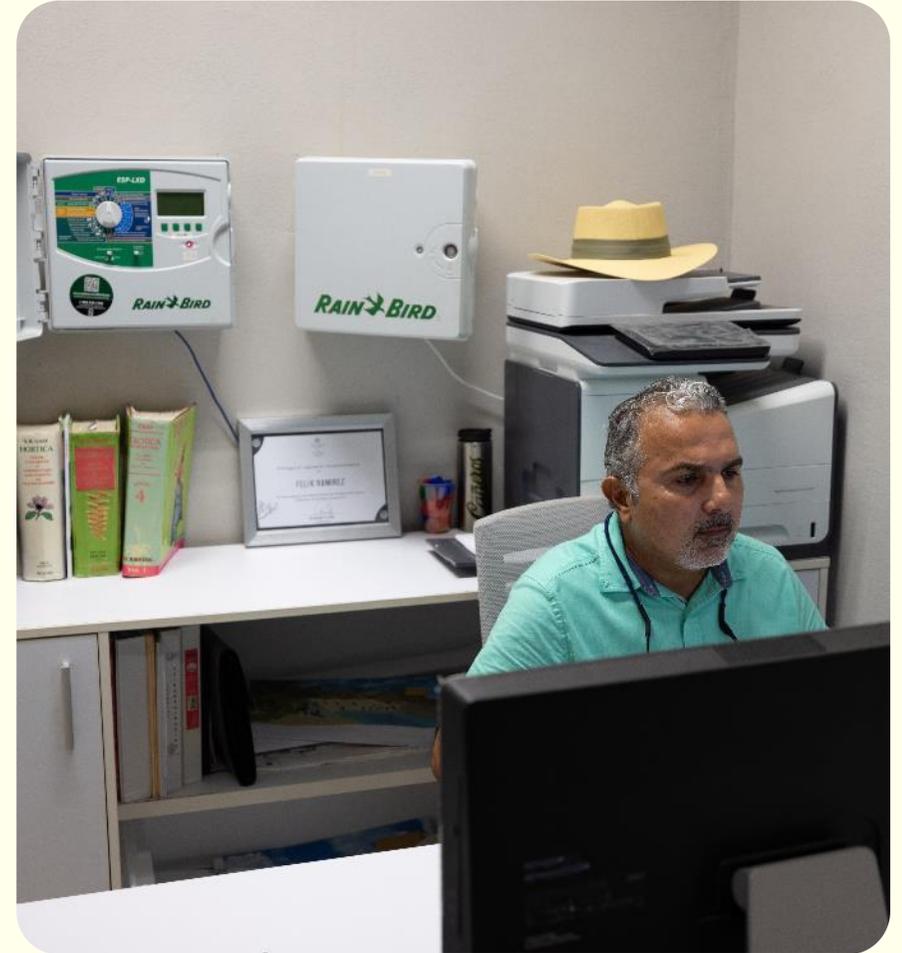




Step 1: Work with the Site IT Network Personnel to setup the following:

1. Setup a Network Static or Reserved IP Address and a unique Port Number for each IQ Satellite Controller
2. Provide the Network Subnet Mask and Gateway Address
3. Provide the Internet IP Address for the Router/ Fire Wall
4. Setup Port Forwarding (or Dynamic DNS) so IQ-Cloud can connect to the Network Router and be forwarded to the individual IQ Satellite Controllers

NOTE: Inbound communication from IQ4-Cloud (Amazon Servers) to the site network is identified on pages 6 - 9

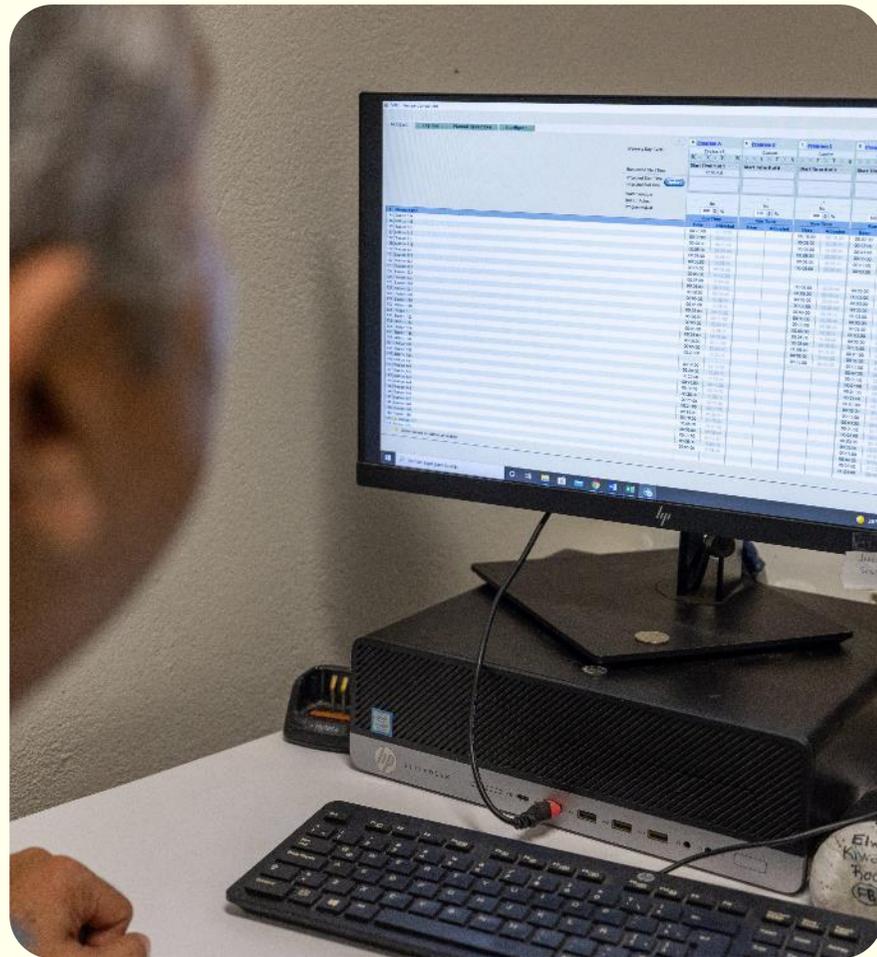




Step 2: Install the NCC EN Cartridge

The IQ4 web interface is served from <https://iq4.rainbird.com>. This interface also talks to an API server located at <https://iq4server.rainbird.com>.

NOTE: If the firewall can be configured to whitelist sites by DNS names, these two will be sufficient. However, if the firewall can only be configured to whitelist by IP address, then additional steps must be taken.





Step 2: Install the NCC EN Cartridge

The iq4server.rainbird.com service is served from a set of static IP addresses:

54.212.146.164

44.227.12.223

54.183.11.63

54.241.246.218

54.183.30.162

50.18.155.177

54.219.42.103



Step 2: Install the NCC EN Cartridge

The iq4.rainbird.com site is served via Amazon CloudFront, which is a CDN that provides caching and geographical distribution allowing for sites around the world to access the content from a fast, local data center.



Step 2: Install the NCC EN Cartridge

The following steps are required to find out what IP address your site is using to access IQ4 on CloudFront:

1. Open a command prompt by pressing the windows key and typing 'cmd' then pressing the enter key
2. In the command prompt window, type 'nslookup iq4.rainbird.com' (without the quotes)
3. The result will include a list of four IP addresses, which are your site's local CloudFront addresses
4. Once the four addresses are found, whitelist these along with the IP addresses on the previous pages

```
erator: Command Prompt
Windows [Version 10.0.18363.657]
Microsoft Corporation. All rights reserved.

C:\>nslookup iq4.rainbird.com
Server: ucpsvr11.rainbird.local
Address: 192.168.150.172

Non-authoritative answer:
Name: iq4.rainbird.com
Address: 13.226.254.118
Address: 13.226.254.91
Address: 13.226.254.57
Address: 13.226.254.47
Server: ucpsvr11.rainbird.local
Address: 192.168.150.172

iq4.rainbird.com
2qlh1w3v7ug1c.cloudfront.net
2600:9000:201f:8c00:14:bf47:ec00:93a1
2600:9000:201f:6e00:14:bf47:ec00:93a1
2600:9000:201f:6000:14:bf47:ec00:93a1
2600:9000:201f:8a00:14:bf47:ec00:93a1
2600:9000:201f:a600:14:bf47:ec00:93a1
2600:9000:201f:200:14:bf47:ec00:93a1
2600:9000:201f:b000:14:bf47:ec00:93a1
2600:9000:201f:b600:14:bf47:ec00:93a1
13.226.254.118
13.226.254.91
13.226.254.57
13.226.254.47
iq4.rainbird.com
```

IP addresses to whitelist

Step 2: Install the NCC EN Cartridge

Here is an example:

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.18363.657]
(c) 2019 Microsoft Corporation. All rights reserved.

I:\>nslookup iq4.rainbird.com
Server: tucpsvr11.rainbird.local
Address: 192.168.150.172

Non-authoritative answer:
Name: d2qlh1w3v7ug1c.cloudfront.net
Addresses: 2600:9000:201f:8c00:14:bf47:ec00:93a1
           2600:9000:201f:6e00:14:bf47:ec00:93a1
           2600:9000:201f:6000:14:bf47:ec00:93a1
           2600:9000:201f:8a00:14:bf47:ec00:93a1
           2600:9000:201f:a600:14:bf47:ec00:93a1
           2600:9000:201f:200:14:bf47:ec00:93a1
           2600:9000:201f:b000:14:bf47:ec00:93a1
           2600:9000:201f:b600:14:bf47:ec00:93a1
           13.226.254.118
           13.226.254.91
           13.226.254.57
           13.226.254.47
Aliases: iq4.rainbird.com
```

(IP addresses to whitelist)

Step 2: Install the NCC EN Cartridge

Ethernet Cable Connections:

1 Ethernet Cable Connections

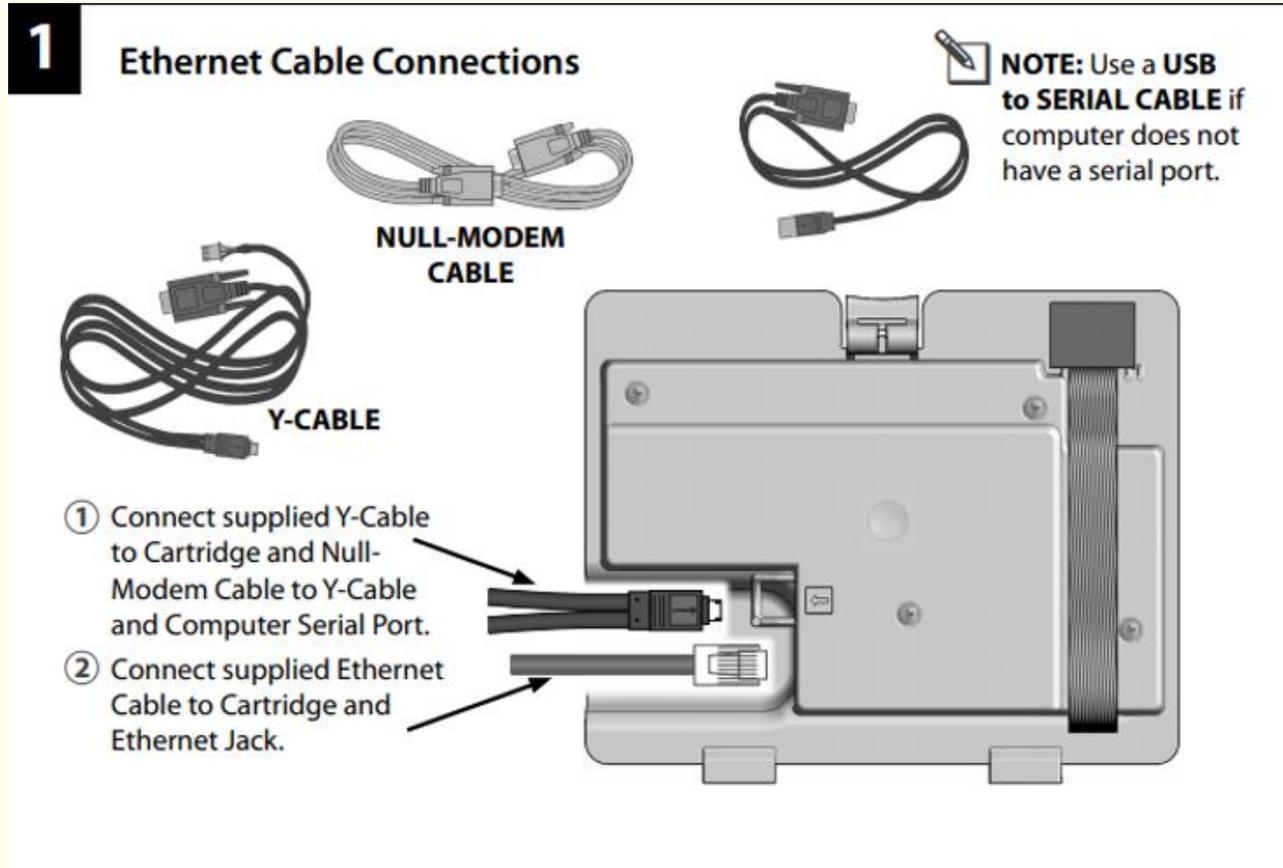
NOTE: Use a **USB to SERIAL CABLE** if computer does not have a serial port.

NULL-MODEM CABLE

Y-CABLE

① Connect supplied Y-Cable to Cartridge and Null-Modem Cable to Y-Cable and Computer Serial Port.

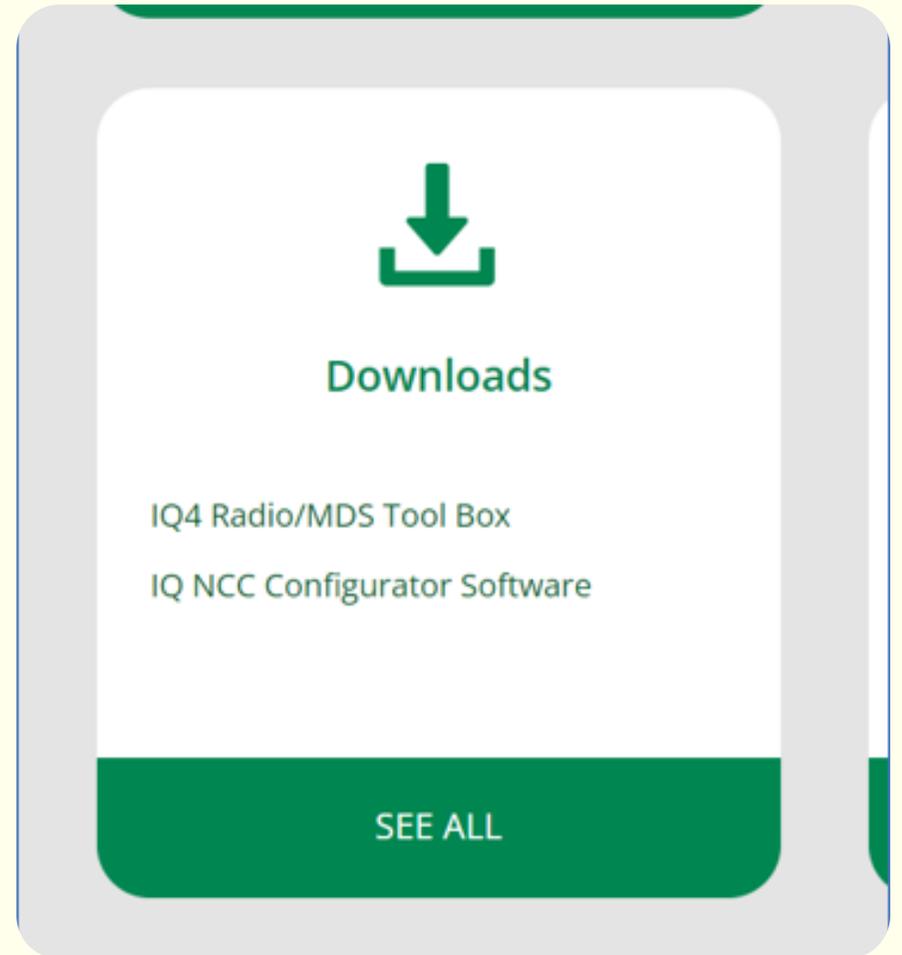
② Connect supplied Ethernet Cable to Cartridge and Ethernet Jack.



Step 3: Configure the NCC EN Cartridge (NCC Configurator)

IQ-NCC Configurator Software:

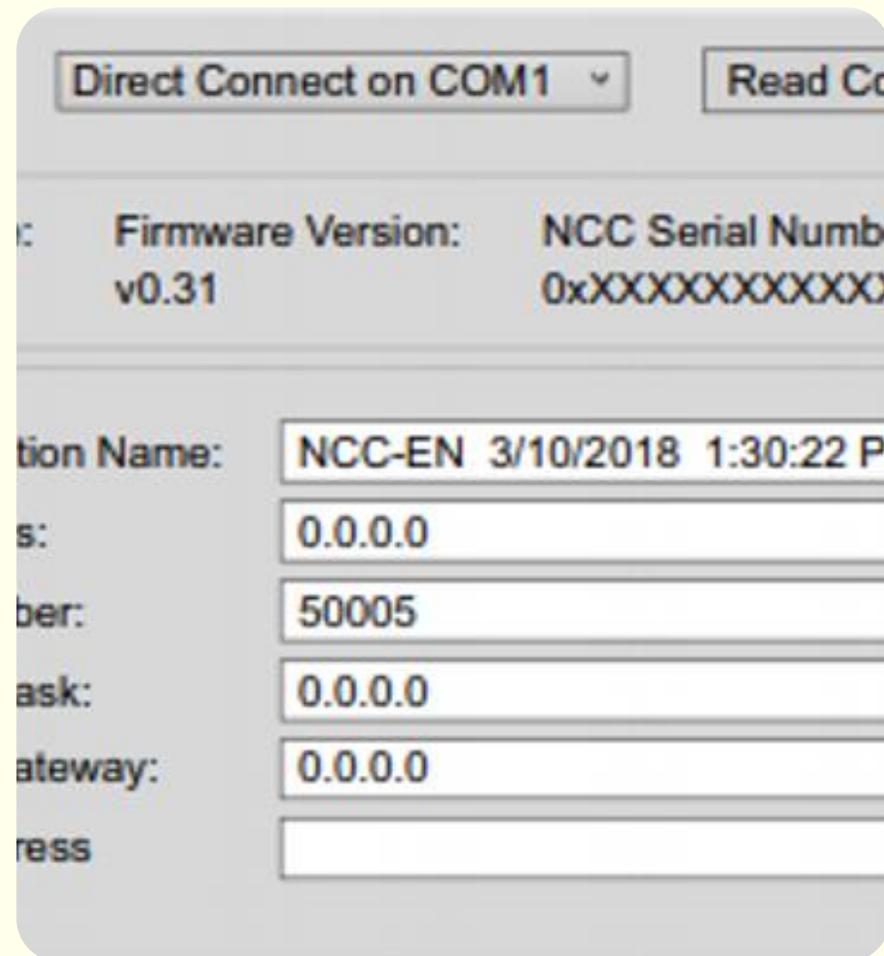
1. Go to <https://www.rainbird.com/usa/iq4-main>
2. Click on Resources, click on Downloads (See All)
3. Download, extract, and install the software on a Windows computer



Step 3: Configure the NCC EN Cartridge (NCC Configurator)

Use the NCC Configurator Software to Configure the Ethernet Settings:

1. Launch the NCC Configurator Utility on the computer.
2. Click the drop-down arrow to select the computer COM Port number to which the Null Modem Cable is connected.
3. Click on the Read Configuration button to retrieve the communication configuration settings from the NCC Cartridge.
 - a. The configuration setting fields will be blank or contain default values if the NCC Cartridge has never been configured previously.
4. Enter/edit configuration settings as supplied by IT personnel.
5. Click Send Configuration button to send configuration to the NCC cartridge





Step 4: Setup controller in IQ™ 4

Configuring the Cartridge on the controller:

1. The IQ Settings main menu is displayed. Use the UP or DOWN arrows to select Setup Wizard; press Next.
2. The Setup - Satellite Type screen is displayed. Use + or - to select Direct; press Next

NOTE: A Wireless Bridge (Ethernet to Wi-Fi Adapter) can be used to connect an IQNCCEN Ethernet Communication Cartridge to a wireless network. Download document "Wireless Bridge Configuration for Lantronix SGX5150" for set-up instructions.

For LX-IVM:

- ➡ Turn the controller dial to Advanced Settings and choose Configure Cartridge.

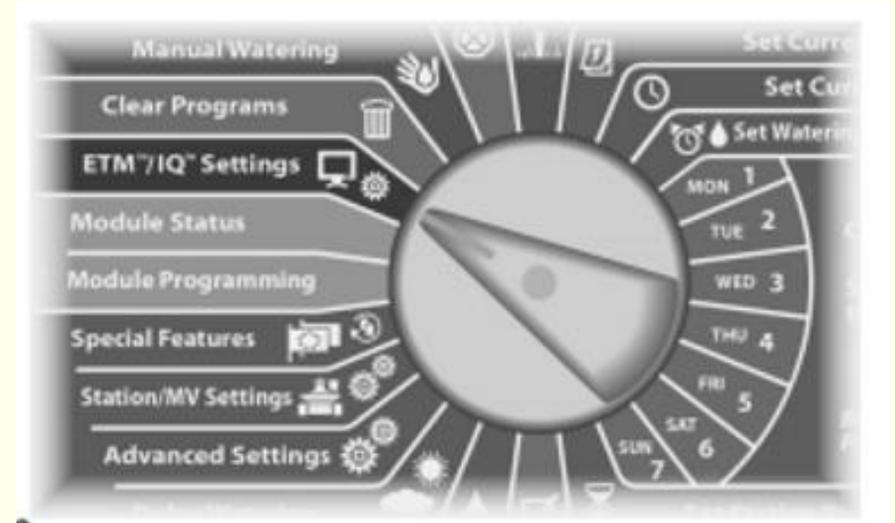




Steps 4 and 5: Setup controller in IQ™ 4 and Perform a Reverse Sync to load all controller data into IQ™ 4 from the controller

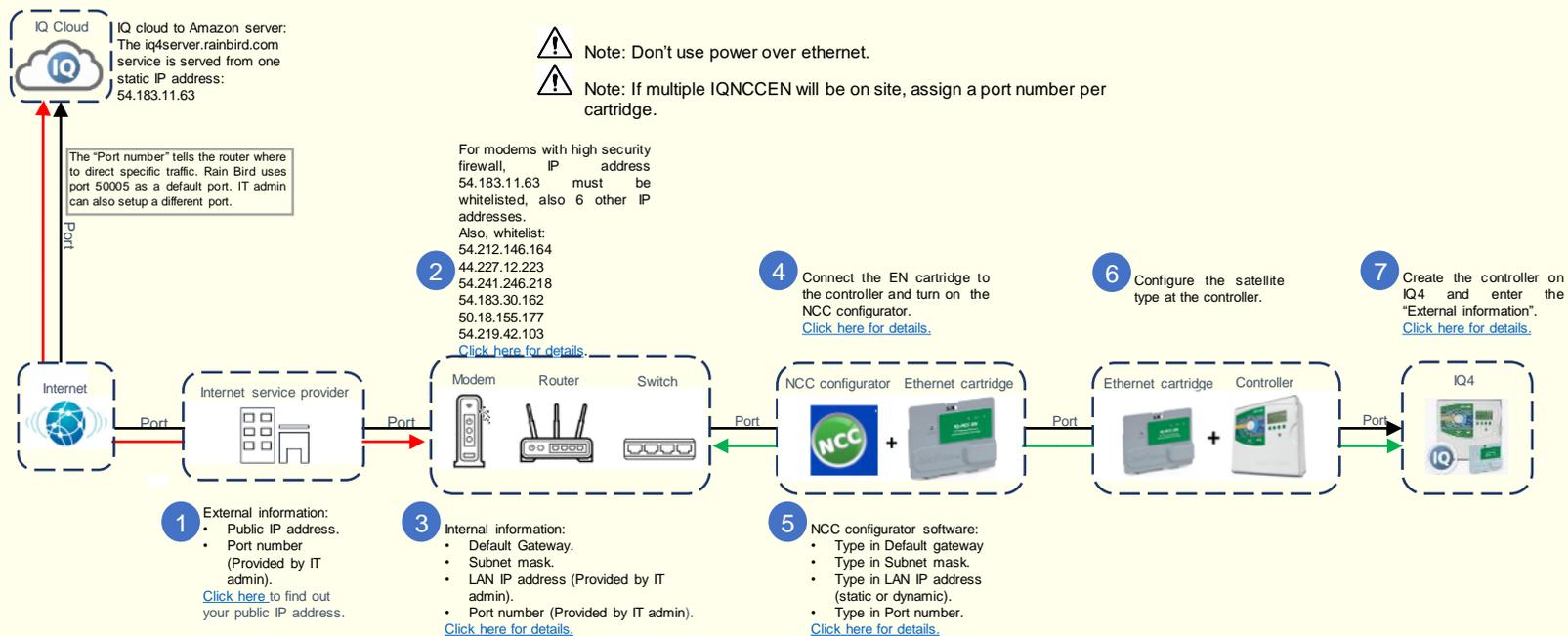
Setup controller in IQ™ 4:

1. See “IQ4 Quick Setup Training” presentation at:
<https://www.rainbird.com/usa/iq4-main>
2. Perform a Reverse Sync to load all controller data into IQ4 from the controller



Detailed Install Instructions

Network map



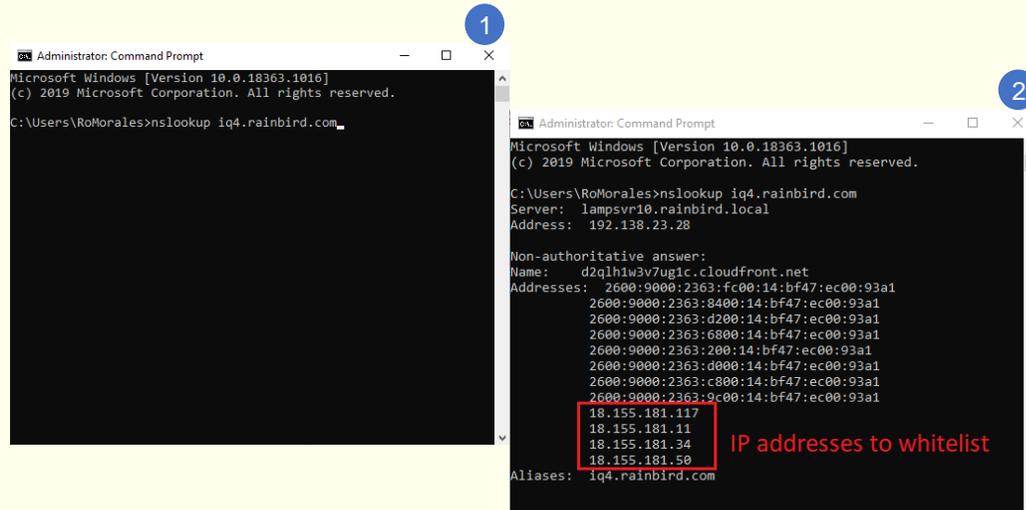
IP addresses to whitelist

The iq4.rainbird.com site is served via Amazon CloudFront, which is a CDN that provides caching and geographical distribution allowing for sites around the world to access the content from a fast, local data center. The following steps are required to find out what IP address your site is using to access IQ4 on CloudFront.

1. Open a command prompt by pressing the windows key and typing 'cmd' the pressing the enter key. In the command prompt window, type 'nslookup iq4.rainbird.com' (without the quotes).

2. The result will include a list of four IP addresses, which are your site's local CloudFront addresses. Once the four addresses are found, whitelist these along with the 54.183.11.63 IP address.

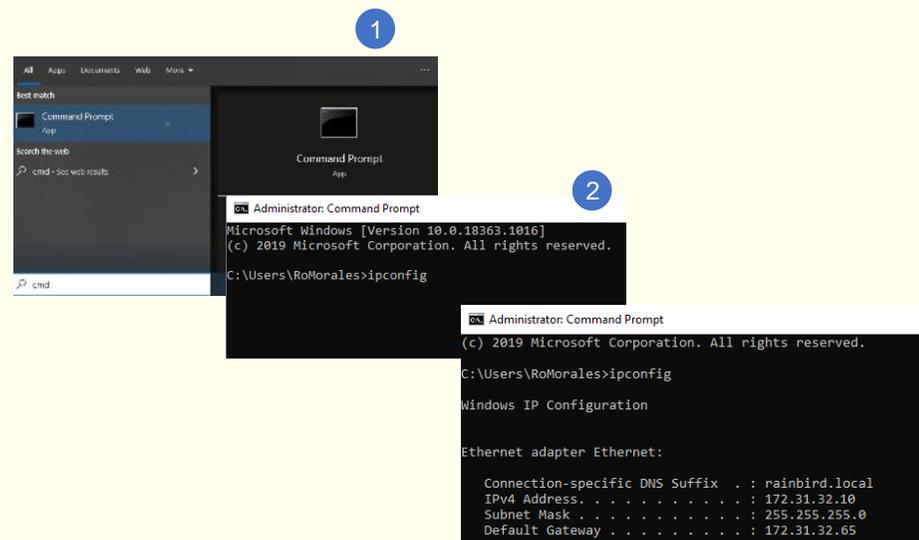
3. Also, whitelist:
54.212.146.164
44.227.12.223
54.183.11.63
54.241.246.218
54.183.30.162
50.18.155.177
54.219.42.103



[Back to network map](#)

Internal information

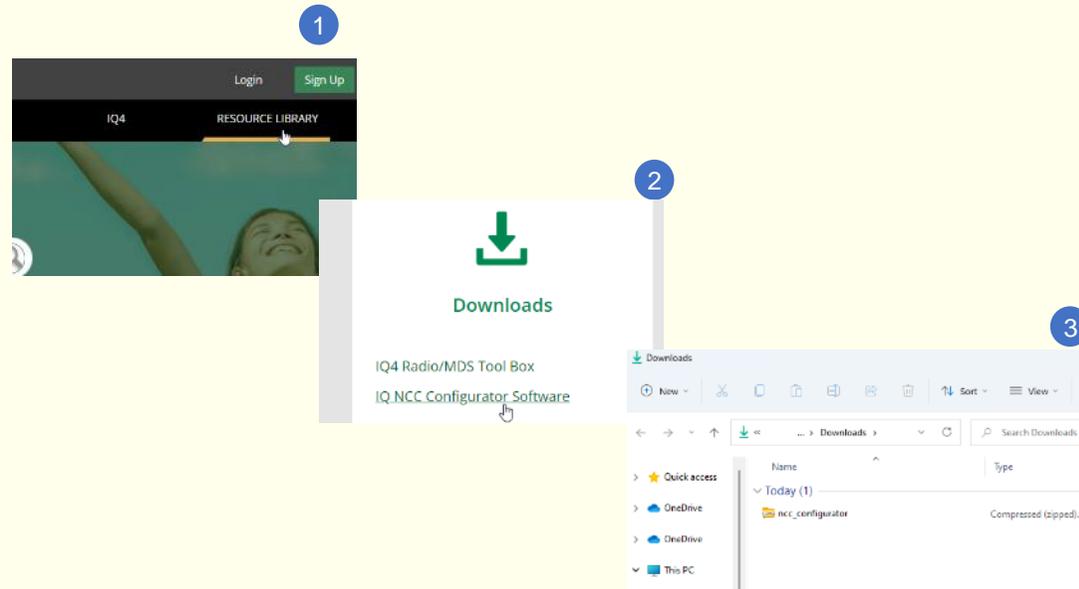
1. Type “CMD” (without the quotes) on the windows search box and click enter.
2. Type “ipconfig” (without the quotes) and click enter.
3. Internal information:
 - Default Gateway => Default Gateway
 - Subnet mask => Subnet mask
 - LAN IP address => IPv4 address
 - (or the provided by the IT admin).



[Back to network map](#)

NCC configurator download

1. Follow the link below and click on “Resource Library”.
<https://www.rainbird.com/usa/iq4-main>
2. Scroll down to “Downloads” and click on “IQ NCC Configurator Software”, the download will automatically begin.
3. Open your downloads folder, the file is compressed and named “ncc_configurator”.



Back to network map

NCC configurator software installation

1. Double click the compressed “ncc_configurator” and the “NCCDockInstaller” file, then double click the “NCCDockSetup” application. Press “Run” on the pop-up window.
2. The install shield will open, click “Next”.
3. Click “Install” on the Ready to modify the program window and then click “Finish”.

1

2

3

Back to network map



Note: To install this software, you need Administrator rights for the computer.

Cartridge-Computer connection

Some cables are required to connect the IQNCCEN cartridge with the computer, these are listed below (follow the links for more details):

- Y-cable (comes with the ethernet cartridge): <https://servicesstore.rainbird.com/iqcmycable-y-cable.html>
- Serial node to node cable: <https://servicesstore.rainbird.com/serial-cable.html>
- Serial to USB cable: [UT232R-200 FTDI | Mouser](#)

Steps to connect:

1. Connect the IQNCCEN ribbon cable to the controller.
2. Connect supplied Y-Cable to the IQNCCEN cartridge and to one end of the Serial Node to Node cable.
3. Connect the other end of the Serial node cable to the R232 end of the UT232R-200 cable.
4. Connect the USB end of the UT232R-200 cable to one USB port from the computer.

After completing this wiring, you will need to **TURN ON** the NCC configurator mode at the controller. (Steps on the next slide).



Back to
network
map

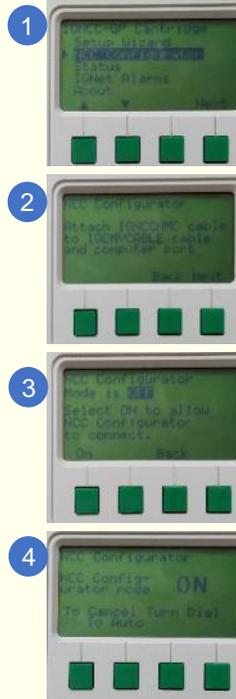
Turning on the NCC configurator

The NCC configuration mode will allow you to connect the cartridge to the computer and setup the required network information into the cartridge, plug the Y cable to the cartridge.

- To enter the NCC configuration mode on an LXD turn the dial to ETM/IQ/PBC settings.
- To enter the NCC configuration mode on an LXME turn the dial to ETM/IQ settings.

To turn ON the NCC configurator follow the steps below:

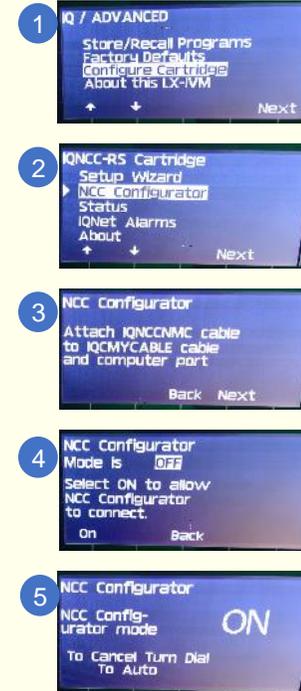
1. Go to NCC configurator and press next.
2. Connect the RS232 side of the Y cable to the node to node and the RS232/USB to the USB port of the computer, press next.
3. The NCC configuration mode will be OFF, press the button below ON.
4. The NCC configuration mode will turn ON, this is required for the NCC software to find the cartridge and enable the COM Port to be used.



- Plug the Y cable to the cartridge
- To enter the NCC configuration mode on a ESP-LXME2 and an LX-IVM turn the dial to advanced settings.

To turn ON the NCC configurator follow the steps below:

1. Go to configure cartridge.
2. Go to NCC configurator and press next
3. Connect the RS232 side of the Y cable to the node to node and the RS232/USB to the USB port of the computer, press next.
4. The NCC configuration mode will be OFF, press the button below ON.
5. The NCC configuration mode will turn ON, this is required for the NCC software to find the cartridge and enable the COM Port to be used.

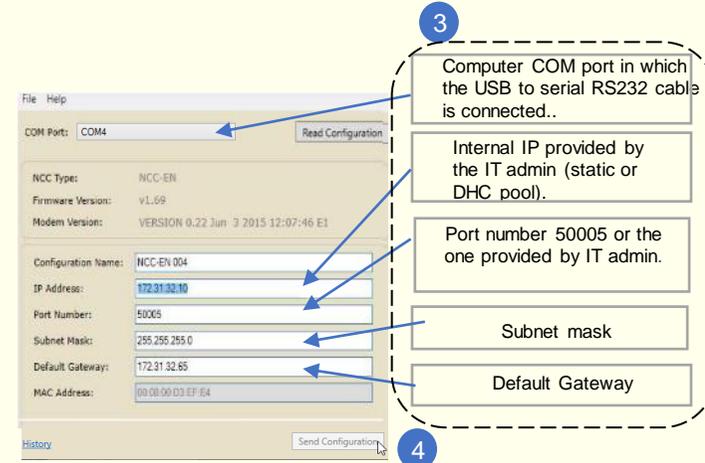
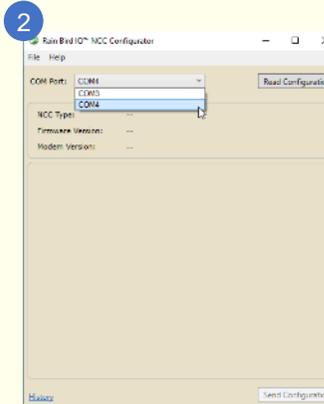


Back to network map

Adding Internal Information to NCC Configurator

Follow the steps below to configure the NCC cartridge:

1. On your computer desktop, locate the NCC configurator icon and double click to open.
2. Select the COM port in which the RS232/USB cable is connected and click "Read configuration".
3. Type in internal IP address, Port number, Subnet mask and Default gateway on requested fields.
4. Click "Send Configuration".



Note: If multiple IQNCCEN will be on site, assign a port number per cartridge.



Note: [Click here](#) for instruction on how to find your COM Port.

Back to network map

Creating controller on IQ4

1
Login to your IQ4 account and click on "CONTROLLERS"

2
Click the orange circle and select the controller you are working with.

3
Click on "IQNET Type" and select the satellite type. The type must match the one you selected at the controller (Direct o Server).

4
Click on "Connection type" and select IP connection.

5
Type in the external information, public/external/remote IP address and port number. To finish click "Save"

Public IP address

Port number (provided by IT)

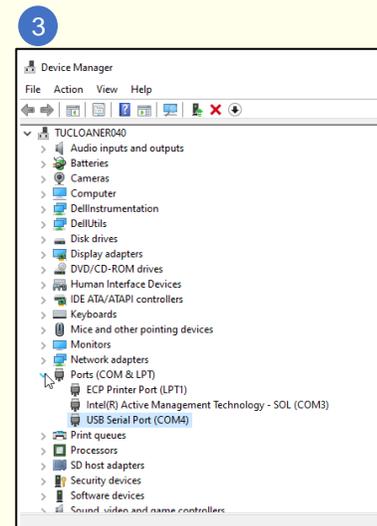
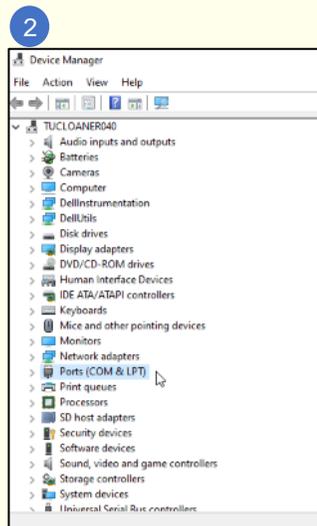
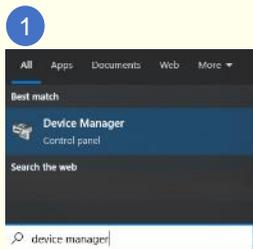
Back to network map

Note: Please confirm the public IP address with your IT administrator, a double layer security could be active for your network and have a masked public IP address.

Find your COM Port

Follow the steps below to find the COM port that the NCC cartridge is connected to:

1. Type "Device Manager" on the windows search bar and press enter.
2. Search on the list for "Ports (COM & LPT)" option, then click the ">" icon to expand.
3. Connect the USB to RS232 cable to your computer and pay attention to the Port list, the "USB Serial Port (COM)" that appears will be the one to use on the NCC configurator.



Note: Not seeing a "USB Serial Port (COM)" activate when we connect the USB to RS232 cable is due to the cable being defective. [Click here](#) to get a new and compatible USB to R232 cable.

Cable P/N : UT232R-200 FTDI

Back to network map

Frequently Asked Questions