IONConfigTool (ICT)
User Manual

Document version 1.1

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The following words and symbols mark special messages throughout this guide:

Warning: Text set off in this manner indicates that failure to follow directions could result in damage to persons or equipment.

Note: Text set off in this manner indicates special instructions which should be paid attention to.

1 Introduction

The IONConfigTool, also referred to as ICT, was developed to properly discover and configure IONODES devices on customer networks during initial installation, for day-to-day maintenance or for support purposes.

This user manual covers essential functions to get IONODES devices up and running in the most simple and efficient manner. By default, the ICT will scan a network using the multicast Bonjour protocol. If your network does not support or filters out multicast/Bonjour discovery, a unicast discovery method is also available and is explained in section 5.

2 The main interface
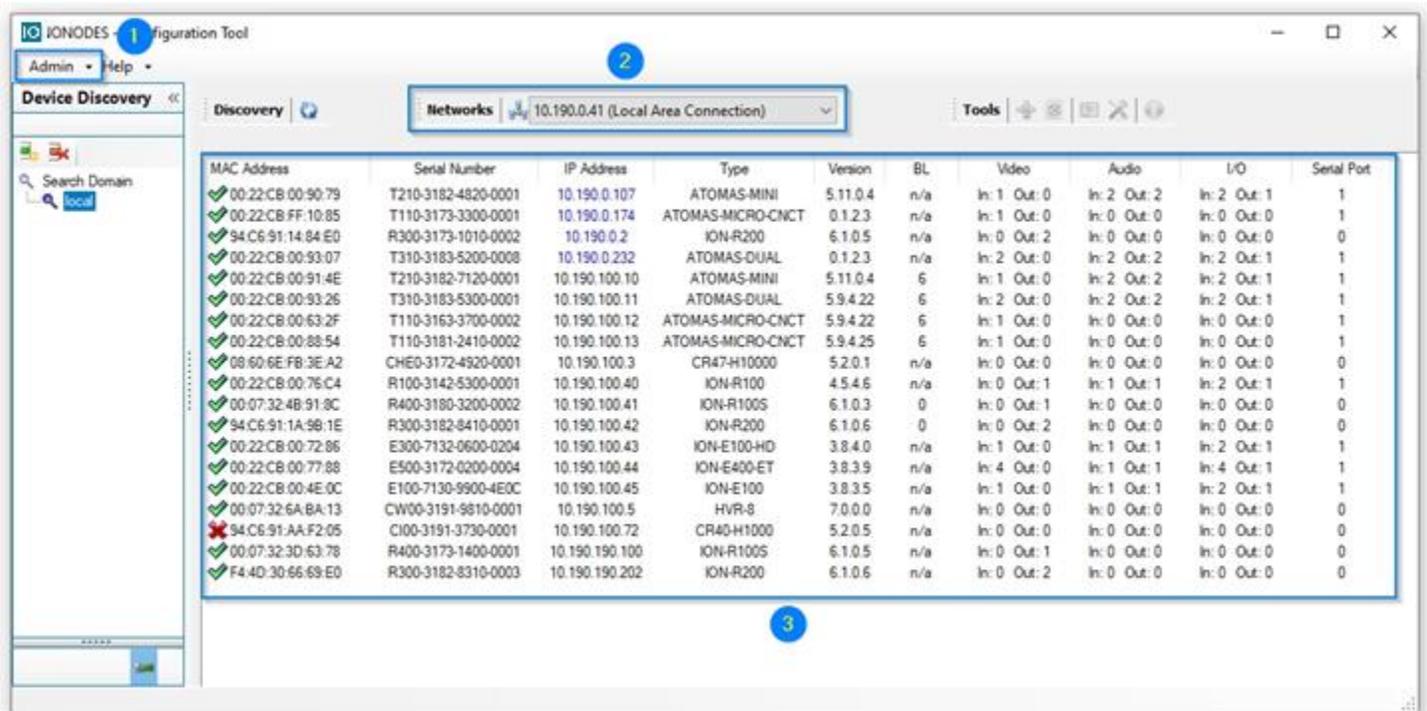
1. The Admin menu – used to input device credentials or use unicast network device discovery
2. Network interface selection – used to select which network interface to scan (i.e., cabled vs Wi-Fi networks)
3. Device listing – all IONODES devices discovered on the previously-selected network

3 The Admin menu
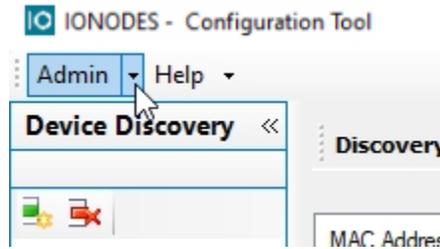
Click on the drop-down arrow to display menu selections

3.1 Unicast Discovery
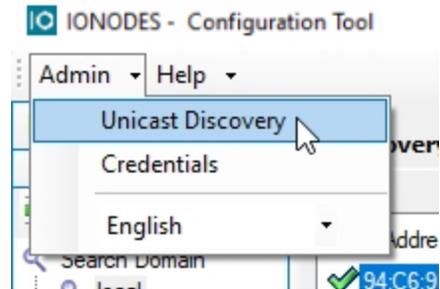
By default, the ICT uses multicast network discovery using the Bonjour protocol, as demonstrated in this part of the user guide. For Unicast discovery procedure, please refer to section 5 of this user guide.

3.2 Credentials
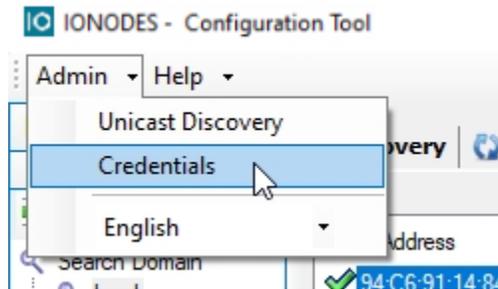
Selecting credentials will open the following window allowing you to enter the device credentials if different than the default admin/admin.
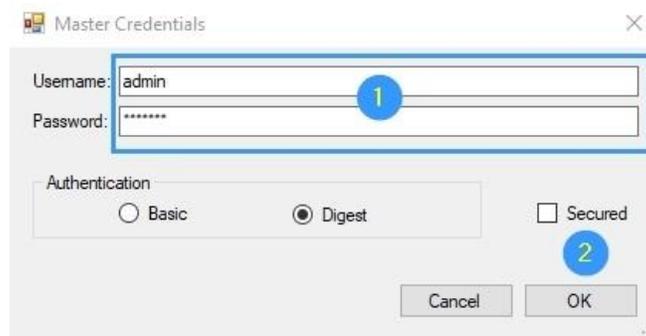
1. Enter the device's credentials if you have previously changed from the default admin/admin.
2. Click OK to save and close this window and return to the ICT

4   Device Discovery & Management Using Bonjour Protocol

4.1   Discovery list

To make things easier when discovering multiple devices on a given network, we suggest clicking on the IP Address column heading to sort multiple devices in ascending or descending order.

1. A green checkmark indicates the unit is online. A red X indicates that the unit has fallen offline since initial discovery list was created.

Note: 2- IP addresses listed in blue are DHCP-assigned
           3- IP addresses listed in black are static-configured IPs

A left click of the mouse on the MAC Address of a given device will open a context menu with multiple choices. In this section, we'll see what the most often used ones do.

4.1.1 Assign IP Address

This will open the IP assignment window
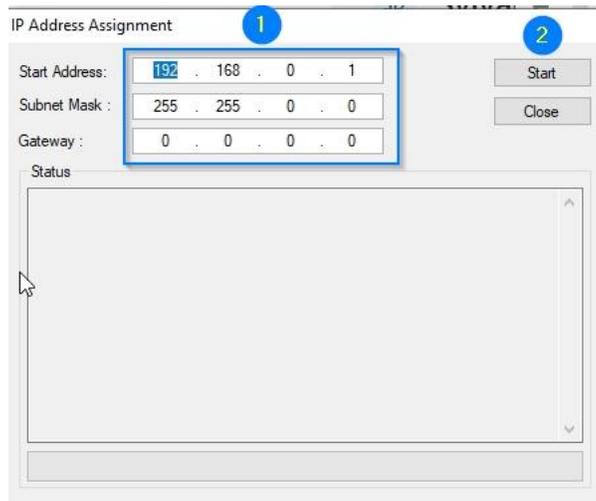
1. Manually assign IP information
2. Click Start button to apply and close the window

4.1.2 Firmware upgrade
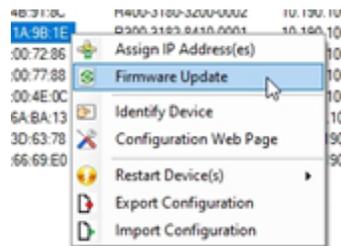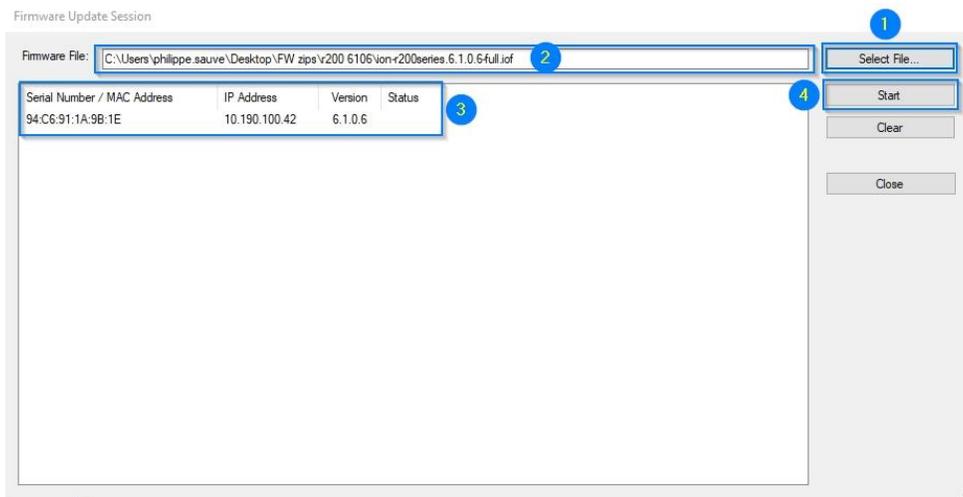
1. Click to select firmware file through Windows Explorer
2. Select the firmware file path
3. Confirm proper device information and current firmware version
4. Click start to install the new firmware followed by possible reboot, device dependant

4.1.3 Identify Device
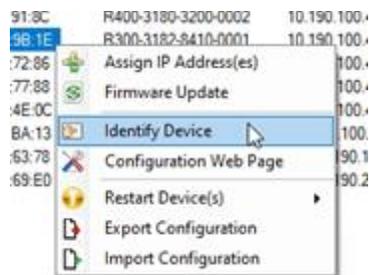
On all IONODES encoder and decoder products, this will make their status LED flash for you to physically identify them. See their respective user manual for details on the LED behavior.

4.1.4 Configuration Web Page
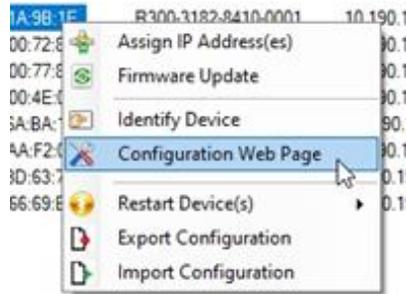
This will open the configuration web page using your computer's default web browser.

Warning: Older IONODES devices require Microsoft Silverlight and must be opened using Microsoft Internet Explorer or Microsoft Edge in Internet Explorer mode.

4.1.5 Restart Device
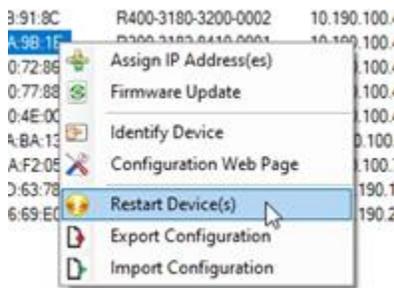
As indicated, this will send a signal to the device to restart.

4.1.6 Export Configuration
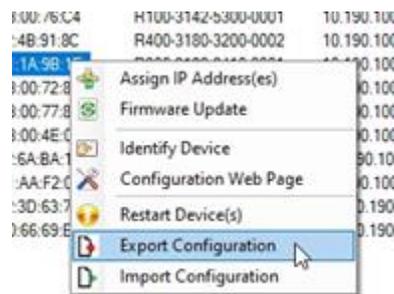
This will open the Export Configuration window.
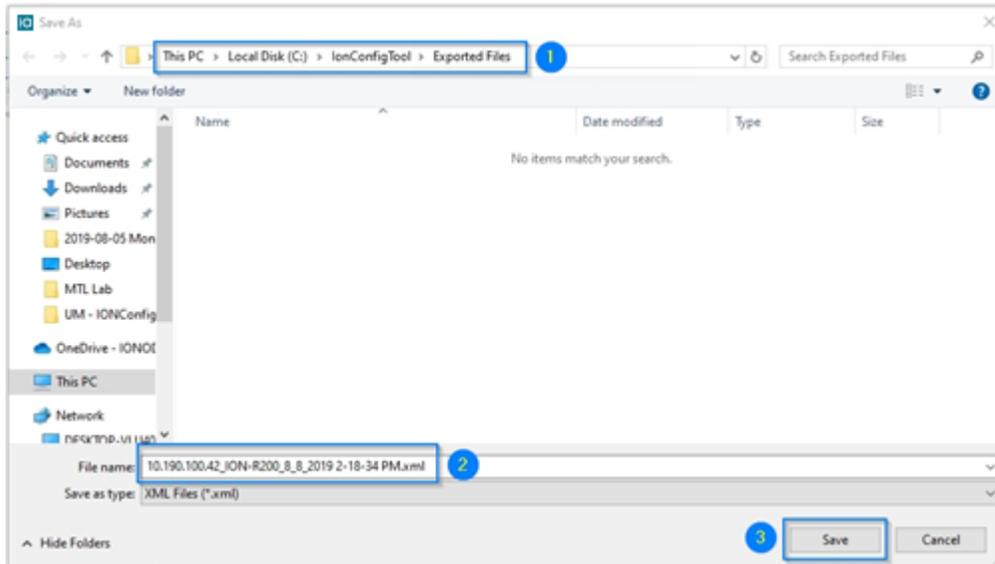
1. The ICT will automatically save the configuration file within its own folder structure
2. Name of configuration file is automatically generated based on IP, device and date & time
3. Save to finalize export operation

4.1.7   Import Configuration
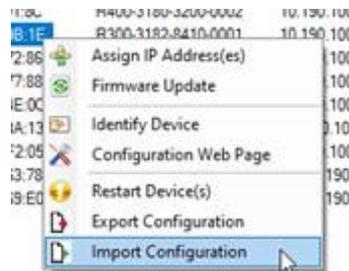
This will open a warning advising that passwords and network information are not imported.
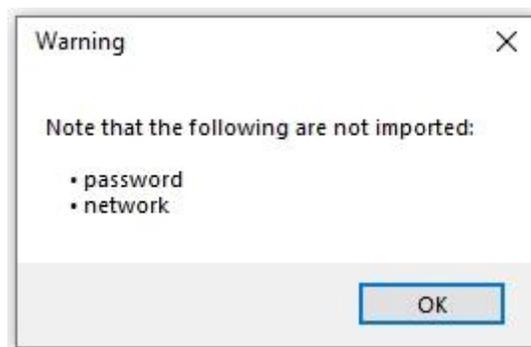
The Import Configuration selection window.
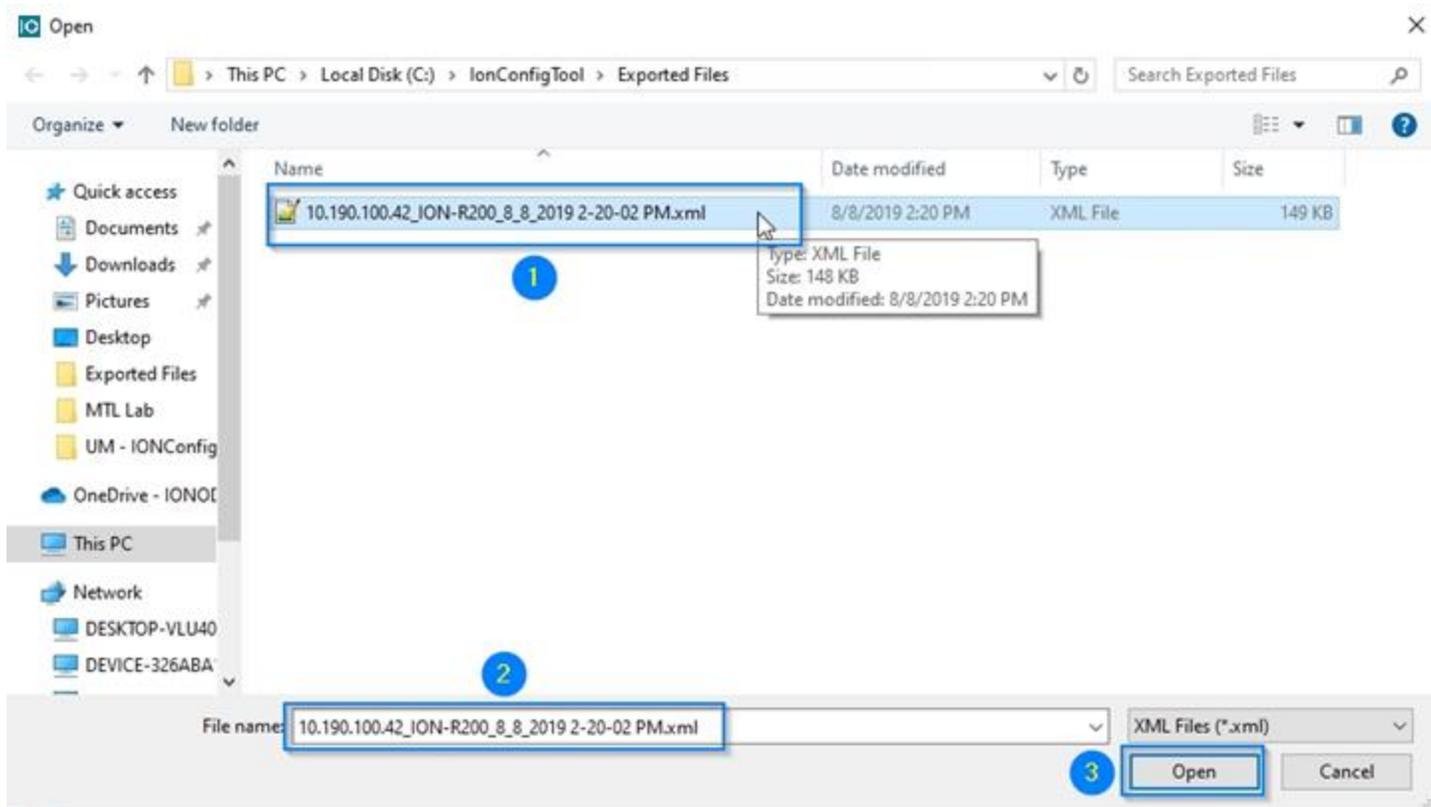
1. Select the file to be imported
2. Ensure proper file is selected, especially if multiple files are available within the folder
3. Click Open to continue the import operation
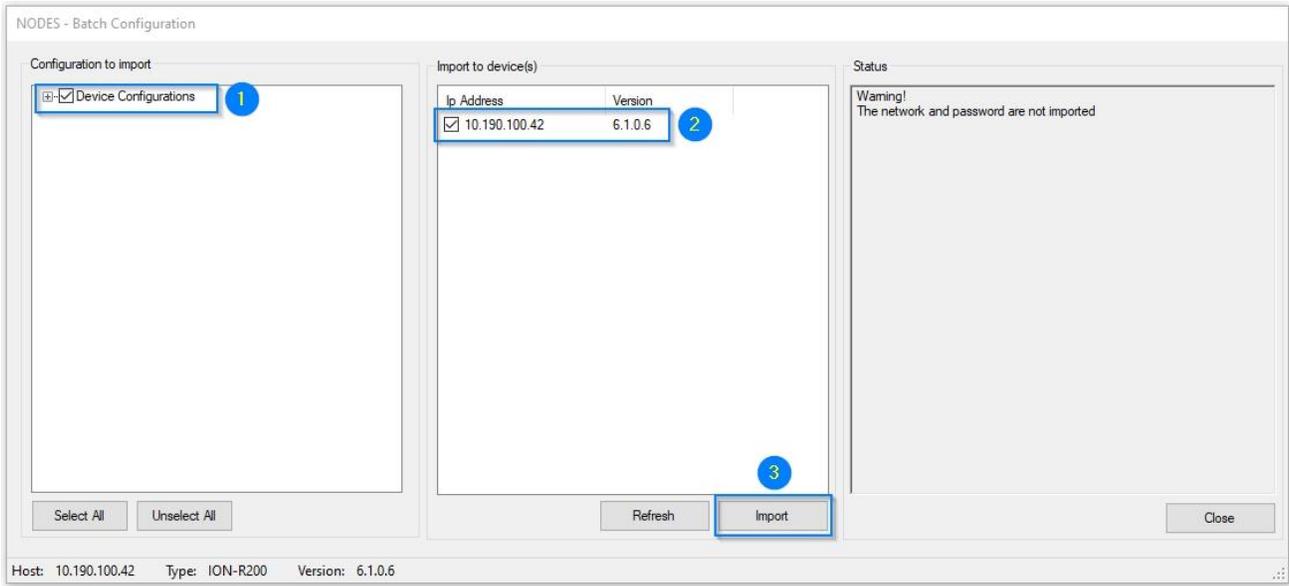
1. Select all the configuration that you want to import
2. Select the device where the configuration will be imported
3. Click Import to start the import operation
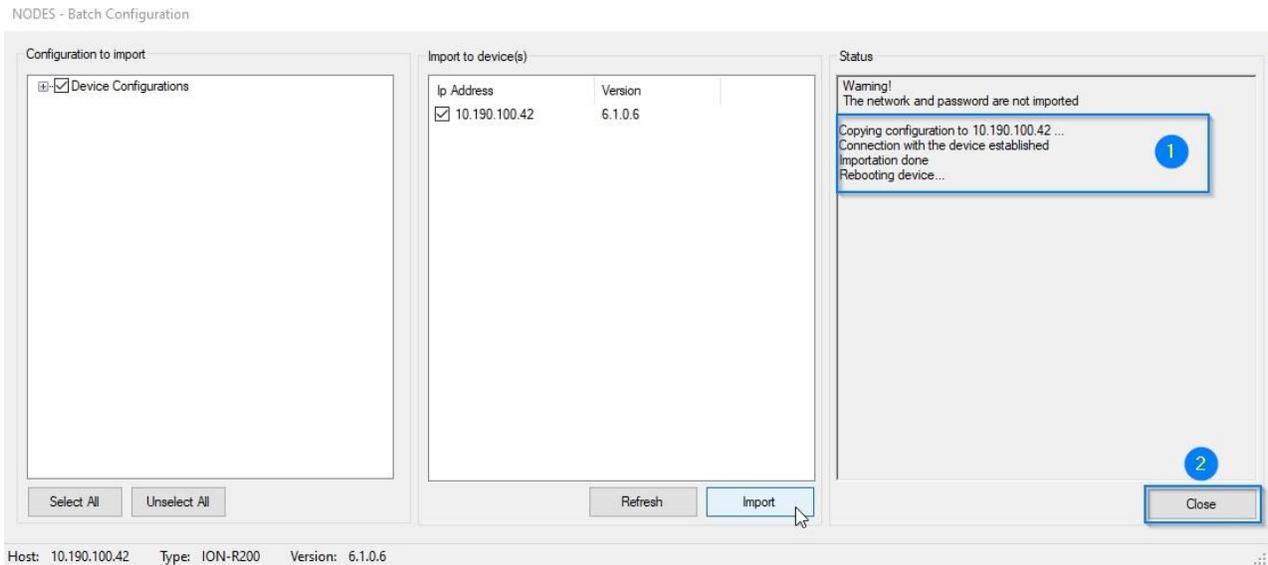
1. Verify no errors are reported
2. Click Close to end import routine and return to ICT interface

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5 Discovering IONODES devices when your network does not support the Bonjour Protocol

Some of the more secure enterprise networks filter out the Bonjour protocol as well as other network scan functions for security reasons. When you initially plug your IONODES device into one of these networks, although it is set by default to using DHCP and will be attributed an actual network IP address, network filters might make the device undiscoverable in our IONConfigTool or other IP scanning software. To remedy this situation and allow a network discovery with our IONConfigTool, it is possible to run a Unicast scan with some very basic authentication. Here's how to do this…
If your device is already on your network and undiscoverable, head down to Section 2.

5.1 Unicast Discovery Test

For demonstration purposes, we have disabled the Bonjour Discovery in our ION-R200 Secure Display Station to keep it from being discovered on our network. This can be changed on the Configuration page, in the Network tab of your IONODES device if you want to run a similar test.
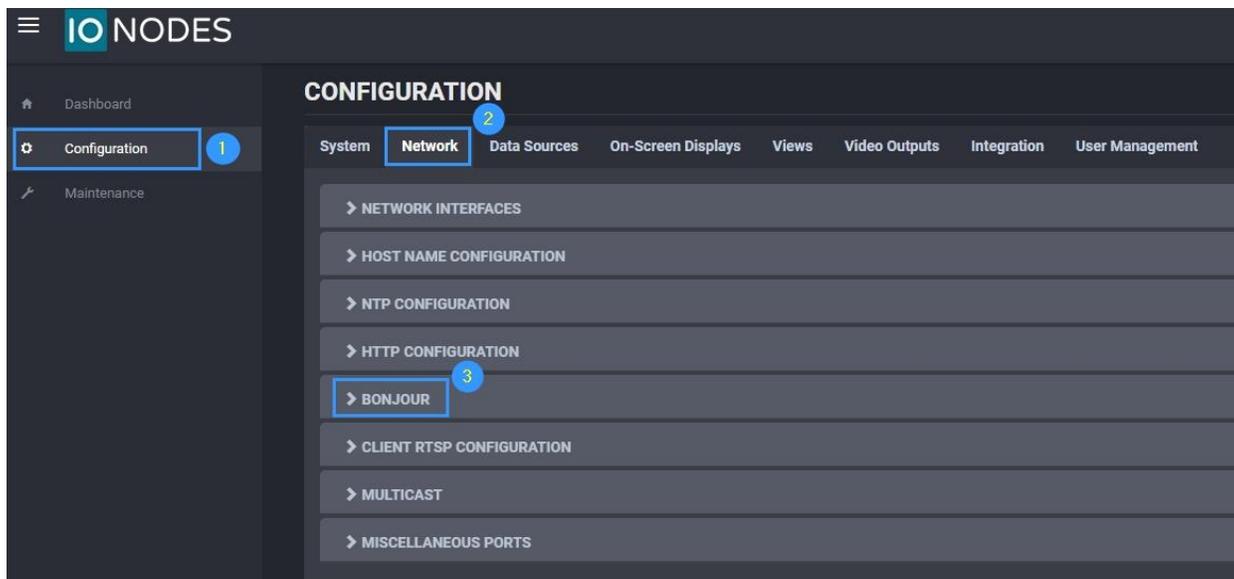
5.1.1 Disable Bonjour protocol

1. Once logged in to your IONODES web user interfaceI, head over to the Configuration page
2. Click on the Network tab
3. Click on the Bonjour section to select it

4. Disable the Bonjour protocol and click Save at the bottom of the page

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Now that the Bonjour protocol is disabled. When we run the IONConfigTool, in this example, our ION-R200, with a known IP of 10.190.100.42, is not discovered.

mber	IP Address	Type
120-0001	10.190.100.10	ATOMAS-MINI
300-0001	10.190.100.11	ATOMAS-DUAL
700-0002	10.190.100.12	ATOMAS-MICRO-CNCT
410-0002	10.190.100.13	ATOMAS-MICRO-CNCT
200-0002	10.190.100.41	ION-R100S
600-0204	10.190.100.43	ION-E100-HD
200-0004	10.190.100.44	ION-E400-ET
900-4E0C	10.190.100.45	ION-E100

5.2 Unicast Discovery Configuration

5.2.1 Configure Unicast Discovery
1. In the Admin menu item of the IONConfigTool, click on Unicast Discovery.
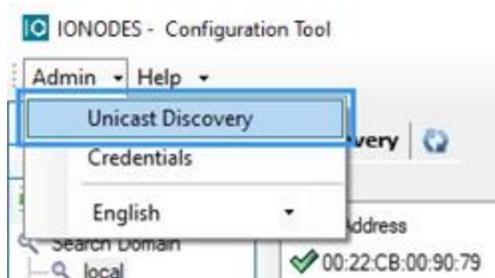
This will bring up the Unicast Discovery settings window.
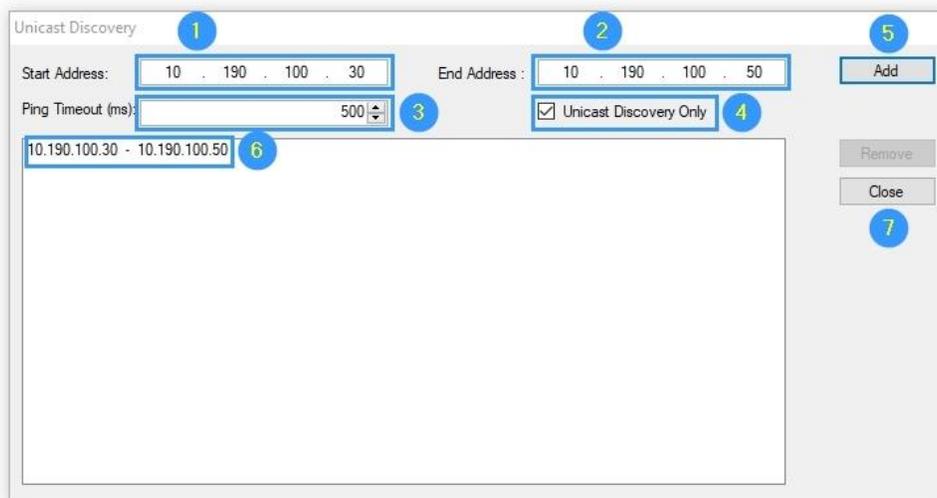
Note: The values shown in the graphic are for this specific example. Verify with your network administrator for your network-specific values

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5.2.2 Configure IP scan range(s)

1. Enter the starting address of the IP range to scan
2. Enter the last address of the IP range to scan
3. Enter the desired ping timeout. This is the time the ICT will wait before attempting to reach the next device in the IP address range.
4. Check Unicast Discovery Only
5. Click the ADD button to add the IP range to the search criteria. Multiple IP ranges can be added to a single search
6. This will add the IP range(s) to the search list
7. Close the configuration window

5.2.3 Configure Credentials

Since the IONConfigTool will send a request on all IPs of the IP range, you must enter the proper authentication credentials of the device being discovered. In the Admin menu item of the IONConfigTool, click on Credentials
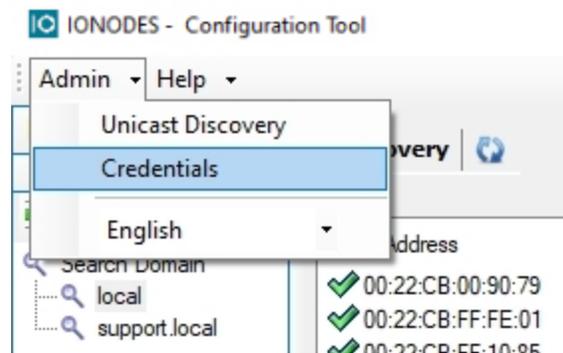
By default, the credentials are set to admin / admin as username and password. However, if the credentials have been previously changed at some point, the new credentials must be entered in the ICT to properly discover the device. To do this:

1. Enter the desired username & password combination
2. Click OK to save and close the Credentials configuration window
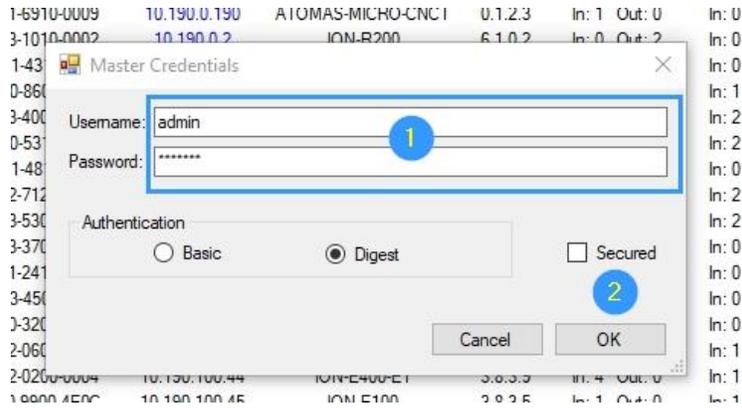
5.2.4   Refresh device list results
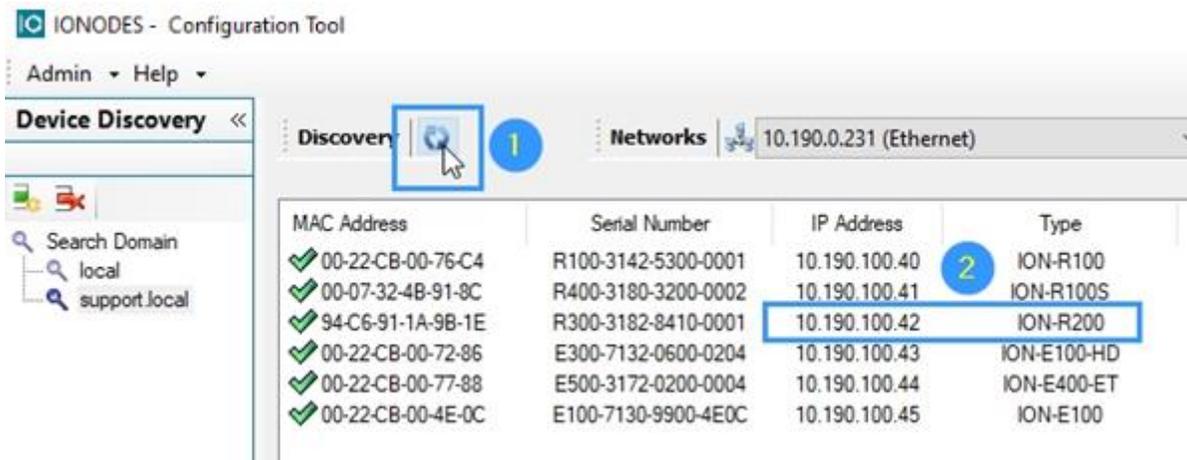
1. Simply hit the Refresh button on the IONConfigTool to force a new Unicast scan of the IP range with proper credentials as outlined in the previous steps
2. Device will now be listed in the discovered device list when present on the same network

6 Troubleshooting

6.1 Unable to run the IonConfigTool

- Make sure you have properly decompressed (unzipped) the contents of the downloaded zipped file to a selected or default empty directory before running the executable. The application cannot be run from a temporary folder, as when opening the zipped file from within Windows Explorer.

6.2 Unable to see discovered units

Verify unit has power via PoE or a valid power supply.
- Make sure you have connected the device to your network.
- Make sure the GREEN LED on the RJ45 connector is lit. If it is not lit, verify the network connectivity with the network switch.

- Before the device can be discovered, the status LED must be lit GREEN as this indicates ready state of the device.

- Since Bonjour Protocol uses multicast, verify with your IT department to ensure your network is multicast-enabled.

- Verify that your firewall settings allow the Bonjour protocol traffic (port 5353)

- Refer to section 5 for Unicast discovery.

6.3 Unit is discovered but remains offline

- Verify that your network is on the same subnet as the discovered device

7 Getting Help

You can get help from the IONODES technical support team in many ways:

- By sending an email to support@ionodes.com
- By calling our office during regular work hours at:
  - o +1 (844) 696-1060 (Toll Free North America)
  - o +1 (450) 696-1060

Our technical support team is trained to support you with installation as well as maintenance of your IONODES products.