

# Adding or replacing a mesh node in an existing mesh network

Use this procedure to add or replace a HotPort node in an existing mesh. For this procedure to work, all similar platform nodes should be running the same firmware version. For information on moving licensing, see FAQs under Support Resources tab, *What is the procedure to move a license key from one mesh node to another mesh node?*

## Before you begin

You need to have this information and privileges:

- Administrator privilege for the mesh
- Passwords for the mesh and HotView Pro
- Radio channel plan
- IP address of the new or replacement mesh node
  - If the node is new, the IP address is 192.168.224.150 (default).
  - If you do not know the IP address, see “Do not know the IP address of a previously used mesh node” on page 5.

You also need these items:

- Computer
- AC power cord for the mesh node
- Ethernet cable

## Steps

To add a new node or replace an old node in a mesh network:

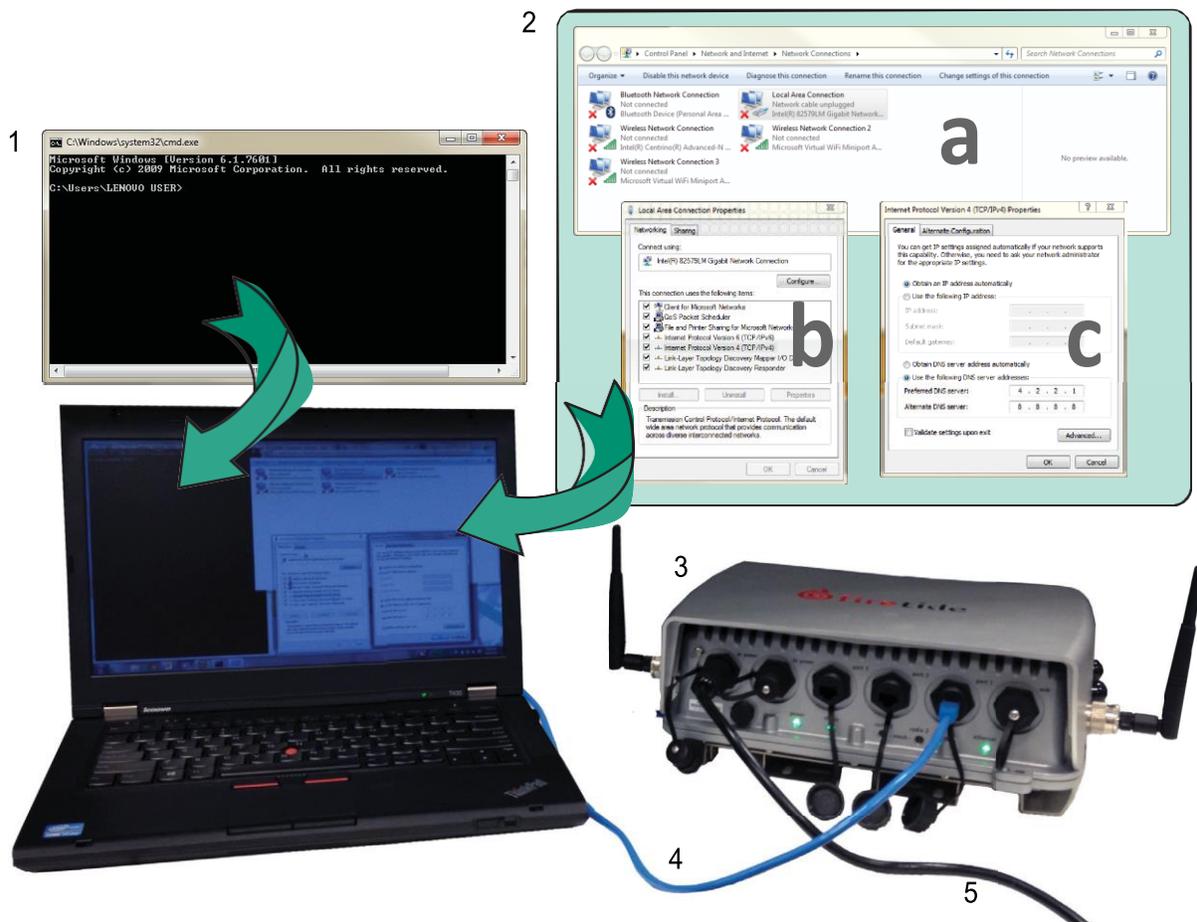
1. Start and log into HotView Pro.
2. Go to **Mesh > Add mesh**.
3. When the login window appears, enter the mesh password.



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4. After the mesh appears, save a mesh node configuration file from a mesh node, such as the head node.
  - a. Left-click the mesh node to select it.
  - b. Right-click the mesh node > **Import mesh configuration from this HotPort.**
  - c. Give a name to the file, and then save it to the desktop.

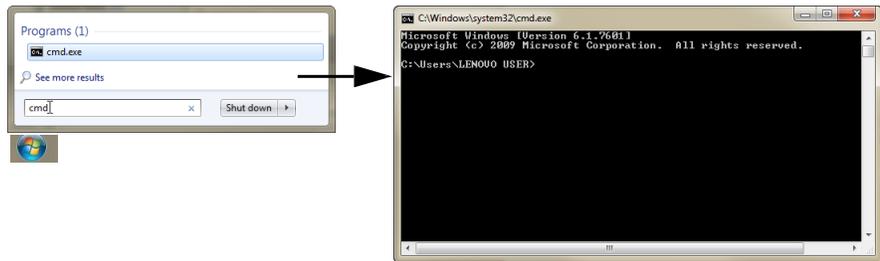
The next picture shows a command prompt window (1), windows to change an IP address in Windows 7 (2 a, b, and c), a mesh node with staging antennas (3), Ethernet cable attached to the laptop and mesh node (4), and a power cord attached from the mesh node to a power source (5). This is the setup for the next five steps.



5. Connect the AC power cable to the mesh node and then power on the mesh node.

After one minute the mesh node is ready. Make sure that the power and status LEDs come on.
6. Connect the Ethernet cable from one of the Ethernet ports of the mesh node to your computer.

7. Make sure that the Ethernet port status LED comes on. Change the static IP address of your computer to an IP address compatible with the address of the mesh node. See “Changing a LAN IP address of a computer” on page 4.
  - a. Enter an IP address/subnet mask for your computer of the format 192.168.224.xxx/255.255.255.255 (where xxx is an address on the same subnet as the mesh node). If the mesh node has a different IP address, use select an IP address that is compatible with its IP address.
  - b. Click **Apply**.
8. Click **Start**, and then enter `cmd` to open a command prompt window.

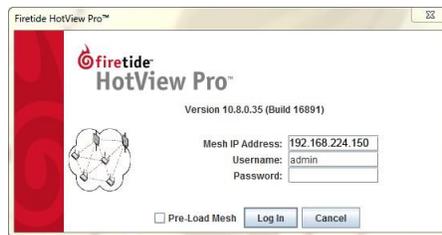


9. Enter: `ping 192.168.224.150-t`

**Note:** If the mesh node has another IP address and you know it, use that one.

Ping -t continuously sends a ping. The ping stops and starts (normal behavior) while you apply the new configuration and when you set the country code (if necessary).

10. From **Hot View Pro** go to: **Mesh > Add mesh**
11. Enter 192.168.224.150, and then click **Log in**.



After the system detects the mesh node, it appears in the monitor window.

12. Left-click to select the new mesh node.
13. Set the country code to change the operational mode to full-power. The mesh node stops receiving pings while the country code updates. When the mesh node starts to acknowledge pings, you can apply the saved configuration file.
14. Right-click the node, and then select **Apply mesh configuration to this HotPort**.
15. Select the file you saved in step 4.

16. Click **Apply**.
17. Make sure that the node has the correct radio channel settings.
  - a. Right-click the node > **Radio Settings**
  - b. Enter radio 1 and 2 settings.
  - c. Click **Add Node Settings**.

After you are satisfied that the configuration is compatible with the existing mesh network settings, you are ready to install this mesh node in the field.

18. Log out of the meshes and HotView Pro.
19. Power off the mesh node.
20. Disconnect the Ethernet cable.

After you install and power on the new mesh node, the Radio 1 LED will come on. You can also log into the mesh from HotView Pro and view the new mesh node.

## Changing a LAN IP address of a computer

To connect to a mesh node with an Ethernet connection you have to change the LAN IPv4 address to an address on the same subnet as the mesh node.

The next table shows the steps to change the IPv4 address for different operating systems.

Operating system	Steps
Windows 7	<ol style="list-style-type: none"> <li>1. Go to <b>Start</b></li> <li>2. In the search box, enter "View Network Connections".</li> <li>3. Right-click on <b>Local Area Connection &gt; Properties</b>.</li> <li>4. From the Networking tab, select <b>TCP/IP4</b>.</li> <li>5. Click <b>Properties</b>.</li> </ol>
Windows XP	<ol style="list-style-type: none"> <li>1. Go to <b>Start &gt; Connect To &gt; Show all connections</b></li> <li>2. Right-click Local Area Connection, and then select <b>Properties</b>.</li> <li>3. Select Internet Protocol, and then click <b>Properties</b>.</li> </ol>
Windows 8	<ol style="list-style-type: none"> <li>1. Go to <b>Network and Internet &gt; Network Connections</b></li> <li>2. Right-click <b>Wired Ethernet Connection &gt; Properties</b></li> <li>3. Select Internet Protocol Version 4, and then click <b>Properties</b>.</li> </ol>
Windows Vista	<ol style="list-style-type: none"> <li>1. Go to <b>Start &gt; Control Panel &gt; Network and Sharing Center (Classic View) &gt; Manage network connections</b></li> <li>2. Right-click on Local Area Connections, and then select <b>Properties</b>.</li> <li>3. Select Internet Protocol Version 4 (TCP/IPv4), and then select <b>Properties</b>.</li> </ol>

## Troubleshooting

This section lists issues and suggestions to resolve them.

### Do not know the IP address of a previously used mesh node

If you do not know the mesh IP address, you can use a utility to discover it:

- Advanced IP Scanner at <http://www.advanced-ip-scanner.com/>
- Angry IP Scanner at <http://www.angryip.org>

When you use these tools, use an Ethernet cable to connect to the mesh node directly and make sure you turn off the wireless features of the laptop from which you run the utility.

### Do not know the password for the mesh node

The password for a new mesh node is firetide.

If you do not know the password of a previously used mesh node, you must reset the mesh node to the factory default settings.

The procedure is different for indoor and outdoor mesh node models:

- “Returning a HotPort 7020 to the default settings” on page 5
- “Returning a HotPort 7010 to the default settings” on page 6

### Returning a HotPort 7020 to the default settings

You can reset an outdoor mesh node with this procedure. The reset button is behind the screw on the left side of the port connector and is recessed 0.5 inches.



**Caution!** When a HotPort mesh node is reset, all configuration information is erased.

For this procedure you need these items:

- Paper clip
- Adjustable wrench
- Computer with HotView Pro

To reset an outdoor mesh node:

1. Power on the mesh node.
2. Remove the plastic screw near the Ethernet and DC connectors and put it in a safe place. Use an adjustable wrench if the screw is too tight to remove by hand.

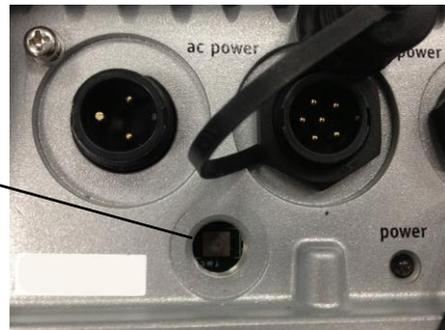


**Caution!** Do not use pliers to remove the screw because you can break the screw.

**Note:** Do not remove the top half of the plastic screw or push the white plastic insert. The white plastic insert is not the reset button.



Reset button



3. Put the mesh node on its front panel.
4. Press and hold the reset button with the paper clip for 20 seconds. The device reboots, and the LEDs indicate its operational status.
5. Wait one minute, and then log in with HotView Pro.
6. Configure the mesh node or apply a previously saved configuration file.
7. Replace and tighten the screw that covers the reset button.

## Returning a HotPort 7010 to the default settings



**Caution!** When a mesh node is reset, all configuration information is erased.

The back panel of the mesh node has a recessed reset button. Do a reset when you remove a device from the field or when communication with a device is lost.

You need these items for this procedure:

- Paper clip or piece of stiff wire
- Computer with HotView Pro
- Ethernet cable

To reset an indoor mesh node:

1. Power on the mesh node.  
Wait until the status LED comes on. After one minute, the mesh node is ready to be reset.
2. Press and hold the reset button with the paper clip for 20 seconds.

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The device reboots, and the LEDs indicate its operational status.

3. Wait one minute, and then log in with HotView Pro.
4. Configure the mesh node or apply a previously saved configuration file.

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