



APPLICATION NOTE

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Product Family: Networking Hardware

Number: AN-NH-012

Subject: Troubleshooting Managed Switch Access

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Revision: Original

Users may encounter situations where they are unable to access their switch. This can occur if the switch is configured at an unknown address, has VLANs configured, or a number of other issues.

Troubleshooting this process has several steps:

1. Confirmation of a managed switch
2. Computer connection check
3. IP Address check
4. Switch configuration check
5. RMA criteria

Step 1: Confirmation of a managed switch

Only managed switches have an interface that users can log into. The unmanaged switches and the media converters do not have a management interface.

The default IP address of these switches is *192.168.0.1*. The default login is *admin*. The default password is *admin*.

Step 2: Computer connections check

To ensure that you are properly connected to the switch, use the following steps:

1. From the Start menu, open the Control Panel.
2. Double-click on Network Connections.
3. Double-click on the Adapter that is connected to your switch.
4. The connection status should be listed as **Connected** or as **Limited or no connectivity**. If this is the case, proceed to Step 3. If the connection status is listed as **Disconnected**, proceed to item 5.



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5. Confirm that the cable is physically seated in the network (LAN) port of your computer. Remove and reseat the cable. A click should be heard when the cable is properly seated. If a link is established, the LEDs next to the port should be lit or flashing.
6. Try another port of the switch if no link is detected.
7. Try another Ethernet cable, if one is available.
8. Restart your computer.
9. Try another PC, if one is available.
10. If there are still no Link indications, proceed to Step 5 for RMA Criteria.

Step 3: Computer IP address check

To set your PC's IP address, or to check your PC's current IP address, use the following steps:

1. From the Start menu, open the Control Panel.
2. Double-click on Network Connections.
3. Click on the Adapter that is connected to your switch to highlight it. Right click to display the popup menu and choose Properties.
4. In the General tab, scroll through the list of items that the connection uses until you reach the **Internet Protocol (TCP/IP) Version 4** item. Click on it, and then click the **Properties** button.
5. If a static address has been configured, it will be listed here.
6. Click the **Use the following IP address button**.
7. Enter the desired IP address, subnet mask and gateway (if known) in the appropriate fields.
8. This information must be in a compatible subnet of the switch you wish to communicate with. For example, if the switch is configured for 192.168.0.1 with a subnet mask of 255.255.255.0, your computer should be set to an unused address in the same range, such as 192.168.0.100, with subnet mask 255.255.255.0.
9. The DNS settings should be blank, unless your network administrator has provided these values for you.
10. Click **OK** in the TCP/IP properties window, then **OK** again in the Connection properties window.



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11. Your IP address has now been set.

Step 4: Switch configuration check

To ensure that a setting in your switch is not preventing you from accessing it:

1. You must be able to access the console port of the switch, either using RS232 or USB. To take advantage of the USB port, please download the USB driver from www.automationdirect.com. Install the USB driver to your PC.

2. After completing the USB driver installation, you may then connect the switch via USB. The Found New Hardware Wizard will appear.



3. Click **No, not this time**, and then click **Next**. On the next dialog, select **Install the software automatically**, and then click **Next**.

4. The computer will locate the driver and confirm that you would like to install the unverified driver. Click **Continue Anyway**, and then click **Finish** to complete the installation.



View the USB COM Port

To view the COM port the USB device has been assigned to, do the following:

1. From the Start menu, open the Control Panel.

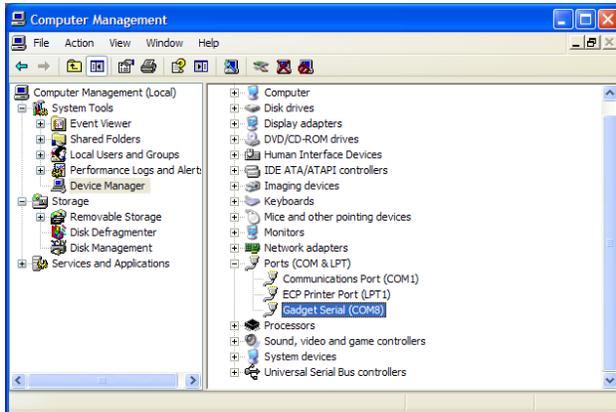


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2. Double-click on Administrative Tools, and then double-click on Computer Management.

3. Under **System Tools**, click on the **Device Manager**. Click on **Ports (COM & LPT)** to view the ports. The switch driver installs as **Gadget Serial (COMx)**



The COM number following the name can now be used to access the switch using the terminal interface.

NOTE: The USB and RS232 ports cannot be connected simultaneously. Please connect only the cable type you wish to use to communicate with the switch.

Access the Terminal User Interface

To access the terminal user interface, do the following:

1. Connect a USB cable from a USB port on your PC to the USB port on the switch. Or, connect the serial port of your PC (typically a female DB9 connector) to the serial port of the switch (female RJ45 connector.) Refer to the hardware user manual for details on how to make this connection.
2. Configure a terminal program (such as TeraTerm) for 9600, 8N1 and no flow control. Once connected, pressing enter will produce a login prompt.

Log in with the username **cli** and password **admin**.

1. Type **info support** and review the information displayed.
2. To change the switch's address, type **network address xx.xx.xx.xx** where xx is the desired IP address.



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3. To change the subnet mask, type **network subnet xx.xx.xx.xx** where xx is the desired subnet.
4. The vlan mode should be set to **disabled**. If it is not, type **vlan mode disabled** and press Enter.
5. Type **commit** and press Enter if any settings were changed in steps 1-4.
6. To confirm the switch has a valid link status with the port you are connected to, type **info link all** and press Enter. Verify that the port you are connected to has a link speed in the **Link** column.
7. You should now be able to access the switch. You can check your connectivity to the switch by opening a command prompt (Choose Start > Run. Type **cmd** and click OK) and typing **ping xx.xx.xx.xx** where xx is the address of the switch.
8. If you are still unable to access the switch, you can attempt to restore factory defaults by typing **defaults** and pressing Enter. When prompted, type **reset** and press enter to reboot the switch with the factory defaults.
9. If you are still unable access the switch at its default address, it may be necessary to reload firmware. Please refer to the Firmware loading app note.
10. If after loading firmware the switch is still inaccessible, proceed to step 5 for RMA criteria.

Step 5: RMA Criteria

If you have proceeded through the steps above and are still unable to access your switch, you may need to replace your switch. Please have the following information for each unit to be returned before requesting an RMA:

- Complete part number
- Serial number and/or date code
- Description of the fault

Technical

Assistance: If you have questions regarding this Application Note, please contact us at 770-844-4200 for further assistance.