F5 WANJet 200

Quick Start Guide

Quick Start Overview

Following is a high level overview of the steps required to successfully install and configure your F5 WANJet 200 appliance. For detailed instructions please refer to subsequent sections of this guide.

1. Plug the power cord into a power outlet. The system will boot up automatically.

2. Set system IP Address (default is 192.168.168.100), subnet mask (default is 255.255.255.0) and WAN gateway IP address. These values can be set via the console port or by directly accessing the web configuration utility via the default system IP address:
   https://192.168.168.100:10000

3. Connect the LAN switch to the LAN port and WAN router to the WAN port with the provided Ethernet cables.

   NOTE: The crossover (orange) cable should be used for connecting to the WAN router.

4. Check the license key and set any additional local subnets. Use the **Optimization Policy** link in the **Operational Settings** area of the Web UI. Save the settings.

5. Enter the remote WANJet IP address and shared key via the **Remote WANJets** link in the **System Settings** area of the Web UI. Save the settings.

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6. Login in to the Web UI for the remote WANJet (other side of the WAN link) and repeat step 4 and 5.

Before You Begin

Before you unpack the WANJet 200 and begin setup, gather the following information.

1. An IP address and corresponding subnet mask that you will assign to the WANJet 200 (for example, 172.16.1.2 with netmask 255.255.255.0).

   This IP address must be in the same subnet as the WAN router that you will directly connect to the WANJet 200's WAN port.

2. The WAN router (WAN gateway) IP address.

3. If routing occurs within your local LAN, the address of your LAN next-hop router.

4. An agreed upon character string to be used as a shared key (password) between a pair of WANJet appliances (for example, **NYandLondon**).

Unpack the box and check the contents to make sure all parts listed below are included. If any are missing, please contact F5 for replacement. Your WANJet 200 packaging includes the following:

WANJet 200 Appliance	Blue CAT6 Ethernet Cable
One Power Cord	Documentation CD
Orange CAT6 Crossover Cable	This Quick Start Guide
Beige Rollover (Console) Cable	Packing List

Power Up the Unit

1. Plug the supplied power cord into a power outlet. The system will boot up automatically.

   There is no power button. The device can be powered down by disconnecting the power cord.

Setting the Address

Set the following three parameters. If your appliance came preconfigured from the factory with your desired parameters, skip this section.

WANJet IP Address (default is 192.168.168.100)

Subnet mask (default is 255.255.255.0)

WAN Gateway IP Address

There are two methods for setting the IP address, using a LAN connection or using the **Console** port with a connection to a PC.

Configuring WANJet using a LAN Connection

1. Connect a laptop (or other computer) directly to the WANJet's LAN port using the supplied blue CAT6 Ethernet cable.

2. Statically assign a unique IP address (for example, 192.168.168.175 with subnet mask 255.255.255.0) to your WANJet from your PC. For a PC with Windows XP (the procedure may vary for other operating systems) use the following procedure.

   From the **Start** menu select **Control Panel**.

   Double-click the **Network and Internet Connections** icon.

   Double-click on the **Network Connections**. A window with a list of network connections will appear. Double-click on the network (likely a local area connection) connection that corresponds to the port that you connected the Ethernet cable to in step 1. The **Local Area Connections Status** dialog box appears.

   Under the **General** tab select **Properties**. The **Local Area Connections Properties** dialog box appears. Locate a scrollable area marked **This connection uses the following items.**

   Scroll down and single-click (highlight) the item in the list called **Internet Protocol (TCP/IP)**. Click the **Properties** button.

   Under the **General** tab select **Use the following IP address**.

   Enter the unique IP address (for example, 192.168.168.175) in the **IP address** field and 255.255.255.0 in the **Subnet mask** field. Click the **OK** button.

   When the **Local Area Connections Properties** dialog box reappears, select **OK**.

   When the **Local Area Connections Status** dialog box reappears, select **Close**.

3. Start a web browser and go to the default WANJet URL
   `https://192.168.168.100:10000`

   Be sure to include the "`s`" after `http`, and the port number `:10000` at the end of the URL.

4. When this window appears, enter `admin` as the **username**, and the default **Password** of `swanlabs`. Click **Log On**.

   For more information on the Web UI, see *Logon to the WANJet Web UI*.

5. Click the **Local WANJet** link on the **Operation Settings** area.

6. Enter **IP Address**, **Netmask**, and **WAN Gateway** values in the appropriate fields. Press the **Save** button to save the settings.

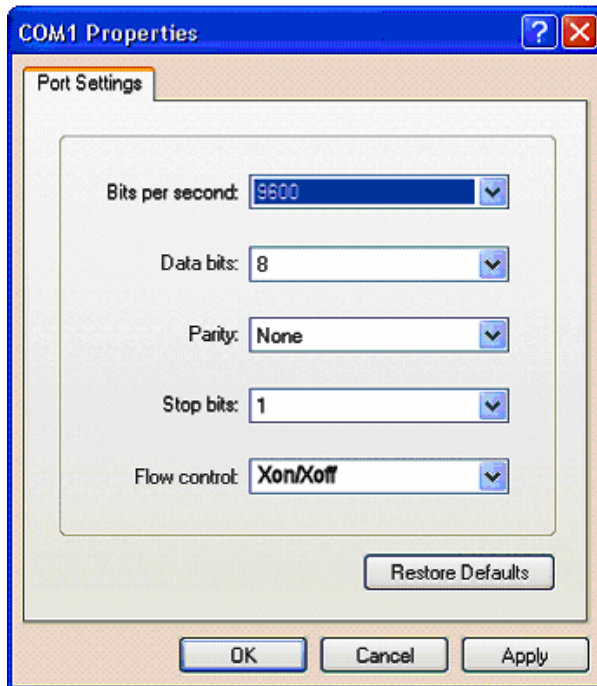You have now successfully configured the network settings for the WANJet 200 appliance.

Configuring the WANJet 200 Using the Console Port

You can perform initial WANJet configuration through a PC with a terminal emulation program installed. The following step-by-step procedure shows an example for configuring WANJet settings through the HyperTerminal program in Windows XP.

1. Use the serial cable to connect the WANJet to the PC you want to use for the initial configuration process. Connect one end of the serial cable to the serial port on the back of the PC, and connect the other end to the **Console** port on the back panel of the WANJet appliance.

2. On the PC, click **Start** and go to **Programs > Accessories > Communications**; then click **HyperTerminal**.

3. Type the connection name in the **Name** field on the **Connection Description** dialog box, and then click **OK**; the **Connect To** dialog box opens.
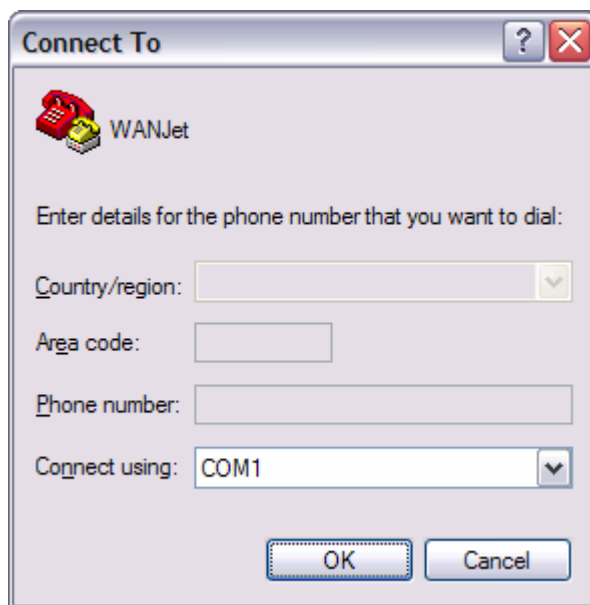
4. Select the connection port from the **Connect Using** drop-down list (usually **COM1**), and then click **OK**; the **Properties** dialog box opens on the **Port Settings** tab.

COM1 Properties

Port Settings

Bits per second: 9600

Data bits: 8

Parity: None

Stop bits: 1

Flow control: Xon/Xoff

Restore Defaults

OK   Cancel   Apply

5. Select the **9600** option from the **Bits per second** drop-down list.

6. Select the **Xon/Xoff** option from the **Flow control** drop-down list, and then click **OK**.

   If the WANJet Login prompt is not displayed when the connection session begins, press **<Enter>**.

7. Type the username you use to access the WANJet Web UI (this is normally `admin`, unless you are using RADIUS authentication) in the **Login as** prompt, and then press **<Enter>**.

8. Type the default password of `swanlabs` and press **<Enter>**. The information displayed includes the last logon date and time, in addition to the IP address of the machine you used to access the serial console. The WANJet Serial Number is also displayed.

9. Type the **Config** command at the prompt; WANJet configuration details are displayed.

10. Type the IP address you want to assign to the WANJet appliance in the **Set WANJet IP** prompt, and then press **<Enter>**.

    The IP address provided at the end of the **Set WANJet IP** prompt is the default IP address (for example, **WANJet-[192.168.168.100]-2-#).**

11. Type the Netmask you want to assign to the WANJet appliance in the **Set WANJet Netmask** prompt, and press **<Enter>**.

12. Type the WAN Gateway that the WANJet appliance will be using in the **Set WANJet Gatewa**y prompt, and then press **<Enter>**.

13. The serial interface prompts for four more options. Press **<Enter>** four times to skip all these options and accept the default values.

14. After pressing <**Enter**> for the fourth time, wait until the procedure finishes. The procedure is complete when you see a prompt displayed which contains the new IP address (for example, **WANJet-[172.16.1.140]-2-#**).

15. Type **exit** to log off the WANJet appliance.

You have now successfully configured the network settings of the WANJet 200 appliance.

Logon to the WANJet Web UI
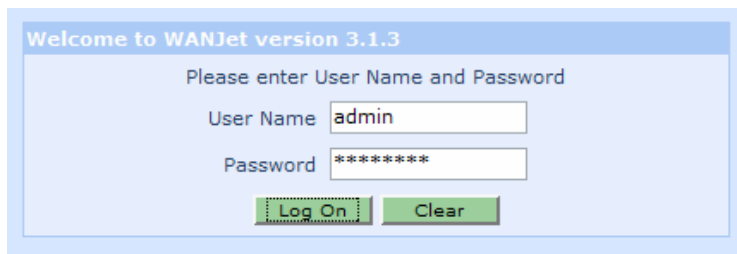
This section shows how to log on to the WANJet Web UI and use the most important Web UI functionality.

To log on to the WANJet Web UI:

Start a web browser and go to the following URL:
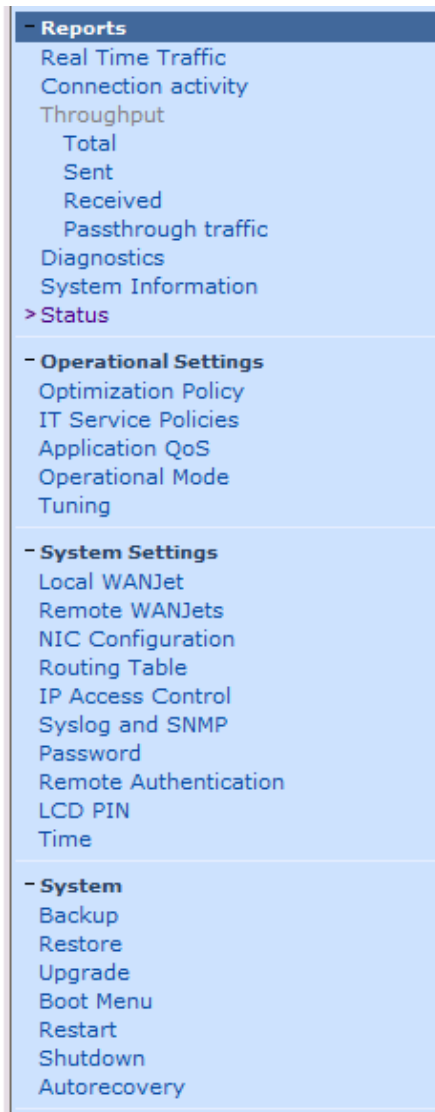`https://<your WANJet's IP Address>:10000`

For example, if the IP address is 192.168.168.102, go to: *https://192.168.168.102:10000*
Be sure to add the "s" after http, and :10000 at the end of the URL.

When this window appears, enter *admin* as the username and the default password of *swanlabs*. Click **Log On**.

Welcome to WANJet version 3.1.3
Please enter User Name and Password
User Name: admin
Password: ********
[Log On] [Clear]

The WANJet Web UI appears and your WANJet 200 unit is now online. Use the Web UI for all WANJet configuration.

The WANJet Web UI selection menu is shown below:

- **Reports**
  Real Time Traffic
  Connection activity
  Throughput
    Total
    Sent
    Received
    Passthrough traffic
  Diagnostics
  System Information
  > Status

- **Operational Settings**
  Optimization Policy
  IT Service Policies
  Application QoS
  Operational Mode
  Tuning

- **System Settings**
  Local WANJet
  Remote WANJets
  NIC Configuration
  Routing Table
  IP Access Control
  Syslog and SNMP
  Password
  Remote Authentication
  LCD PIN
  Time

- **System**
  Backup
  Restore
  Upgrade
  Boot Menu
 Restart
  Shutdown
  Autorecovery

Deploying WANJet 200 in a Point-to-Point Configuration

WANJet 200 appliances can be deployed in different network configurations (i.e., one-arm, point-to-point, redundant, and point-to-multipoint). This Guide assumes installation in a point-to-point configuration as shown in the next figure. If you plan to deploy in any of the other configurations, please consult the *WANJet User Guide* on the CD for detailed installation instructions.

Both a local and a remote WANJet appliance need to be cabled and configured properly before either appliance will optimize traffic.

The diagram below shows two WANJet 200 units in a point-to-point configuration. The routers are connected to the WAN, and the WANJet is inserted between the LAN switch and WAN gateway router. The LAN port on the WANJet is connected to the LAN switch, and the WAN port on the WANJet is connected to WAN router.
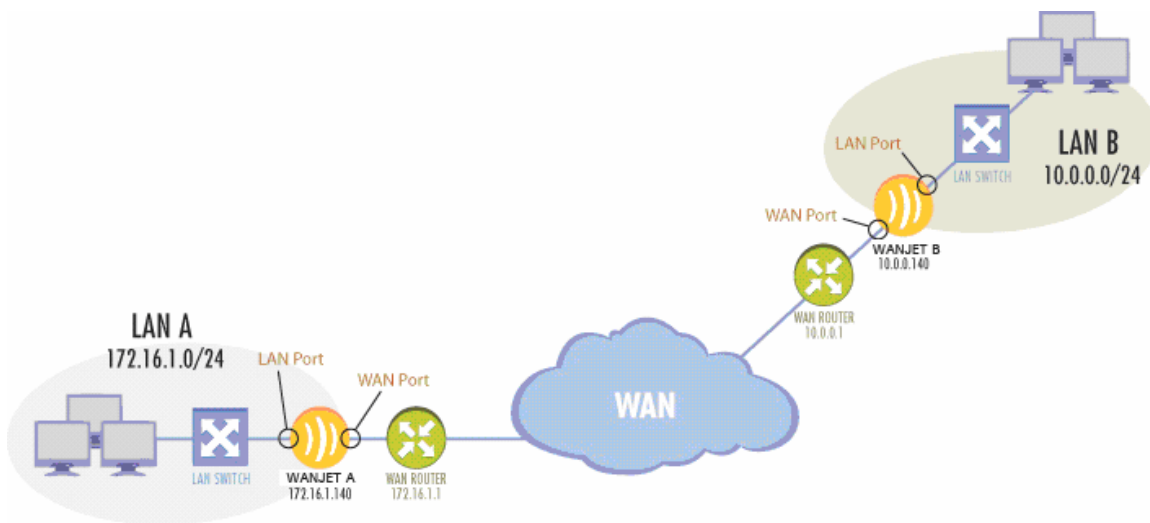
Firewall Guidelines

If a WANJet is placed behind a firewall, the following ports must to be opened to ensure proper operation. Most should already be open except the Web UI and Local WANJet ports.

Port	Number
WANJet Web UI (TCP port)	**10000**
Local WANJet management (TCP port)	**3701**
Local WANJet tunnel (TCP port)	**3702**
Local WANJet tunnel (TCP port)	**3703**
DNS (UDP port)	53
SNMP (UDP port)	161
SNMP Traps (UDP port - optional)	162
SSH (TCP port)	22
ICMP packets (for pinging the appliance)	*N/A*

Cabling the WANJet 200

1. Connect the supplied blue Ethernet CAT6 cable to the LAN port on the rear of the WANJet. Connect the other end to your LAN Switch.

2. Verify that the **Link LED** on the front panel above the **LAN Port** is lit.

   If the **Link LED** is not lit, refer to the troubleshooting section of this guide.

3. Connect the supplied orange crossover CAT6 Ethernet cable to the **WAN Port** on the rear of the WANJet. Connect the other end to your WAN router.

4. Verify that the **Link LED** on the front panel above the WAN port is lit.

   If the **Link LED** is not lit, refer to the troubleshooting section of this guide.

Basic Configuration

To begin the configuration process, make sure you perform the basic configuration steps below. Log in to the WANJet Web UI to perform all configuration. Refer to the section on *Logon to the WANJet Web UI* for more information.

Important!

WANJet appliances are always configured in pairs. You need to perform these steps for **BOTH** appliances in your network (both sides of the WAN link). You can perform all configuration functions at each appliance, or from a single machine using the Web UI.

Assume that WANJet A is connected locally and that WANJet B is connected at the remote side of the WAN Link. Refer to the configuration diagram in the *Deploying WANJet in a Point-to-Point Configuration*. For this configuration, perform the general steps below:

> **On WANJet A:** Verify the license key. For networks that have multiple subnets, set the local LAN router IP address and add local subnets for WANJet A. Add WANJet B as a remote WANJet.

> **On WANJet B:** Verify the license key. For networks that have multiple subnets, set the local LAN router IP address and add local subnets for WANJet B. Add WANJet A as a remote WANJet.

Once the WAN link between the WANJet pair is up, subnet specifications are automatically exchanged between the appliances. For example, the "local subnets" specified on WANJet A are copied in as "remote subnets" for WANJet A in the configuration information on WANJet B.

Verify the License Key

The license key can be found on the Packing List included with the WANJet 200 package.

1. Click the **Local WANJet** link on the **System Settings** area.

Local WANJet

WANJet Alias	Local-0
WANJet IP	175.16.2.1
WANJet Netmask	255.255.255.0
WAN Gateway	175.16.2.2
LAN Router	175.16.2.3
WANJet Port	3701
License Key	- - -

Redundant Peer IP ☐

VLAN Settings

Note: Click "Save" to apply the changes.
Changes will not be reflected until the operation is completed.
In order for WANJet to work properly, you need to replicate the
Local WANJet changes in the Remote WANJets section of the
other WANJet(s).

[Add] [Save] [Cancel]

2. Verify the WANJet license key in the **License Key** field. The license key should match the key on the License Key Certificate. Type in the correct license key if necessary.

3. Enter a name for the WANJet appliance in the **WANJet Alias** field (optional).

4. Click the **Save** button.

Specify the LAN Router and Add Local Subnets

Perform these steps only if you have more than one subnet in your LAN. The LAN Router refers to the address of the next-hop router within your LAN. Check with your network administrator if you are not sure if you need to specify additional subnets.

1. Enter the IP address of the router in the **LAN Router** field on the **Local WANJet** page shown above.

2. Click the **Save** button.

3. Select the **Optimization Policy** link in the **Operational Settings** area to add local subnets.

Optimization Policy

Local WANJet   Test-0-1, 172.16.30.80

Include WANJet Subnet ☑

Local Subnet	Alias
✓ 172.16.30.0/24	

[Add]

Remote WANJet test0_2, 192.168.240.2 [▼] [Reset]

Remote Subnet	Alias
✓ 192.168.240.0/24	

[Add]

Protocol	Service Name	Processing Mode	Compression	Encryption	Connection Intercept	TOS Priority
TCP	All ports	ACM5	Y	N	N	0 (Low)
UDP	All ports	Passthrough	N	N/A	N/A	N/A

[Add]

Note: Click "Save" to apply the changes.
Changes will not be reflected until the operation is completed.

[Save] [Cancel]

4. Verify that the **Include WANJet Subnet** check box is selected. Leave this box checked unless there is a reason not to optimize traffic from the subnet that includes the WANJet.

5. Click the first **Add** button to add a local subnet.

Add Subnet - Microsoft Internet Explorer   [_][□][×]

Local Subnet 172.16.2.0
Netmask 255.255.255.0
Alias Sales
◉ Enabled ○ Disabled

[OK] [Cancel]

6. Enter the subnet in the **Local Subnet** field (for example, 172.16.2.0).

7. Enter the appropriate netmask for the local subnet in the **Netmask** field (for example, 255.255.255.0).

8. Assign a string to identify the subnet in the **Alias** field (optional).

9. Check the **Enabled** radio button.

10. Click **OK**. If the combination of the local subnet address and the subnet mask do not make sense you will receive an error message. Check with your Network Administrator if you need help entering local subnets.

11. The **Optimization Policy** web page re-appears. The local subnet you just entered is displayed.

Note that the local subnet specifications are written in a shorthand that expresses both the subnet address and the subnet mask (for example, 172.16.1.0/24). In the example, the /24 means that the first 24 bits of the address must match the local subnet address, and the address of any host in the subnet is defined by the last 8 bits of the address (for example, 172.16.1.6 is a valid address for the subnet).

12. Repeat steps 5 through 11 to add more subnets.

13. Click the **Save** button.

Adding a remote WANJet appliance

1. Click the **Remote WANJets** link in the **System Settings** area. The **Remote WANJet** screen displays showing no remote appliances:

2. Click the **Add** button to add the remote appliance. The **Manage Remote WANJet** screen displays.

3. Enter the IP address of the remote WANJet appliance in the **WANJet IP** field.

4. Enter the shared key in the **Shared Key** field. The shared key is a character string that is assigned by the Network Administrator. The only requirement for the shared key is the key must match for any pair of WANJet appliances that exchange information. This field must match the shared key entered used during the configuration of the local appliance.

5. Leave all other fields alone and click **OK**. The **Remote WANJets** page appears with the new remote appliance listed.

6. Click the **Save** button.

Perform this same procedure in the Web UI for the remote WANJet appliance, listing the local appliance as a remote appliance to that one.

After you finish the initial configuration, you may need to perform more complicated configuration tasks. For more detailed configuration options please see the WANJet Configuration section in *WANJet User Guide*.

Testing Connectivity

To test the connectivity between the local WANJet appliance and the remote appliances, please perform the following steps for each appliance.

Check Status

Click the **Status** link at the **Reports** area to view the status of the remote appliances. A green light displays next to the IP address of any remote WANJet appliances that are connected.

Check Reports

If you have traffic passing through the network, click any of the throughput reports such as **Total**, **Sent**, or **Received** in the **Reports** area. Optimized traffic reports should be available.

Check Diagnostics

Click the **Diagnostics** link on the **Reports** area, and then click the **Remote WANJets** link. On the **Diagnose Remote WANJets** page, check the **Tunnel Status** of the link you want; the tunnel status should be up.

Troubleshooting

Q. I cannot ping the WANJet appliance.

A: Make sure the computer you are pinging from has a valid network connection. Try pinging other known devices. Go to the Console port and make sure you have the correct IP address for the appliance.

Q: I can ping the WANJet, but I cannot ping the WAN gateway router.

A: Re-check the cabling as described in the section *Cabling the WANJet 200*. Make sure the gateway router is connected to the WANJet's WAN port with the supplied crossover cable.
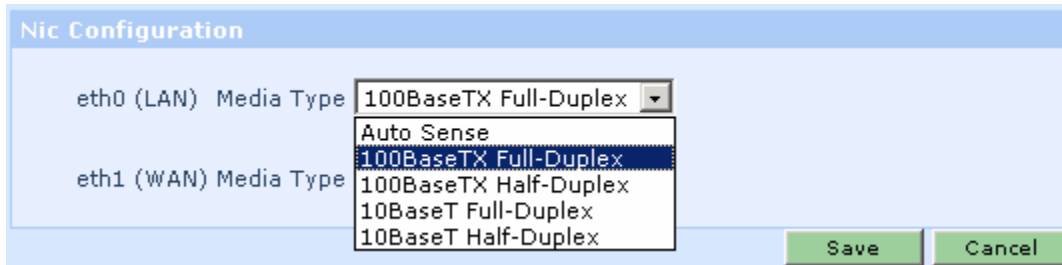
Q: I cannot see that WANJet is optimizing traffic (or the optimization is extremely low).

A: Review your configuration of local and remote subnets at BOTH appliances. You may have heavy traffic on a subnet that is not included in the WANJet configuration. Make sure you include all subnets for which traffic should be optimized.

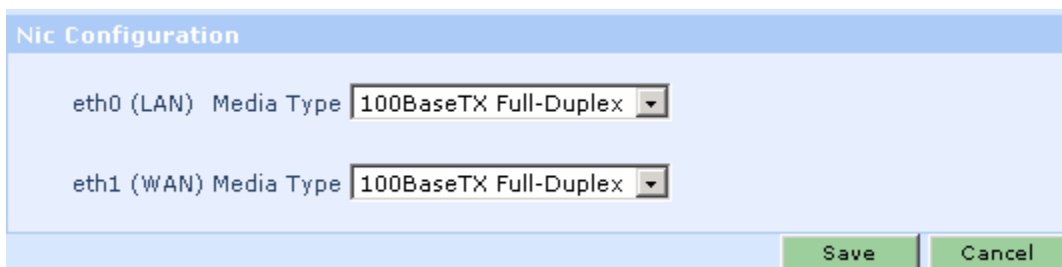**Q: Why does the** Link LED **for the WAN or LAN port not light up?**

A: Verify that your cables are installed properly. Next, verify that the ports on the WAN Router and the LAN Switch connected to the WANJet are set to auto-negotiate. If either port is forced to a specific link speed and duplex value, you will need to set the WANJet's port to match this value. To reset the NIC configuration (link speed and duplex value) for a WANJet port, follow the steps below.

1. Start a web browser and go to the WANJet URL:
    https://<your WANJet's IP Address>:10000

2. At the log in dialog, enter *admin* as the **User Name**, and leave the **Password** field blank. Click **Log On**.

3. Select **Nic Configuration** from the **System Settings** area.

4. Set the Media Type for the **eth1 (WAN)** interface that will correspond to the link between the WANJet and the WAN router. Select the correct option from the pull-down menu (for example, 100BaseTX Full-Duplex).

5. Set the Media Type for the **eth0 (LAN)** interface that will correspond to the link between the WANJet and the LAN switch. Select the correct option from the pull-down menu. The speed and duplex value for LAN and WAN Media type should match.

    NOTE: It is strongly recommended that if you force the link for one of the WANJet ports that you force the link for both ports. This will prevent any link problems in pass-through mode if power to the WANJet appliance is lost.

6. Press the **Save** button and log off the WANJet Web UI.

Technical Support Information

Phone	(+1) 206-272-6888
Fax	(+1) 206-272-6802
Web	http://tech.f5.com
FTP	ftp.f5.com
E-Mail	support@f5.com

For additional information, please visit http://www.f5.com

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