BIGFOOT NETWORKS KILLER™ 2100

USER'S GUIDE

SOFTWARE VERSION 6.0

WWW.BIGFOOTNETWORKS.COM

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Introducing the Bigfoot Networks Killer™ 2100 Gaming Network Card

Thank you for purchasing the Killer™ 2100 gaming network card, the only network card designed for online gaming.

Killer™ 2100 gaming network card is the fastest networking product available for online games. Killer™ 2100 is a PCIe-based, gigabit-Ethernet card that uses a dedicated network processing unit (NPU) and Bigfoot Networks' exclusive Game Networking DNA™ to classify and accelerate online game traffic in your PC to maximize performance and responsiveness.

Killer™ 2100 uses advanced features to deliver more intelligence and more control than standard network interfaces. Killer™ Network Manager software automatically detects game traffic and prioritizes it for optimum performance. Using the Killer™ Network Manager software, you can set limits using Visual Bandwidth Control™ or shut unwanted applications down completely with Application Blocking, so they don't interfere with your online games. You can also monitor the status of other systems in your PC in real time and save that information for later analysis.

Killer™ 2100 default settings deliver top performance in most online gaming situations. The benefits of speed, intelligence and control will help you get more enjoyment and better results out of your games. Get into your favorite online game and go on a raid or get in a heavy firefight. You'll notice over a few days the same things our happiest customers tell us—they have more control and better responsiveness in situations that used to bog down their computers with lag.

Killer™ 2100 gaming network card offers:

- **Advanced Game Detect™** — Automatically classifies and accelerates traffic to and from your game faster than any other desktop, gigabit networking product on the planet.
- **Visual Bandwidth Control™** — See which applications are using bandwidth and tune performance for each, so they don't interfere with your online gameplay.
- **Application Blocking** — Provides per-application control to block programs that access the network for increased performance and safety.
- **Online Gaming PC Monitor™** — Monitor and manage the health and performance of your gaming rig with graphical

displays and detailed logging from an innovative and easy-to-use software interface.

- **Bandwidth Tester** — Measures Internet networking bandwidth so you can optimize your online gaming experience

- **Plug and Play** — Simply plug in the card and install the software. Killer™ 2100 automatically works with all online games – no mods, patches or updates required.

Obtaining Help

If you need technical support, go to the online self-help options available at:

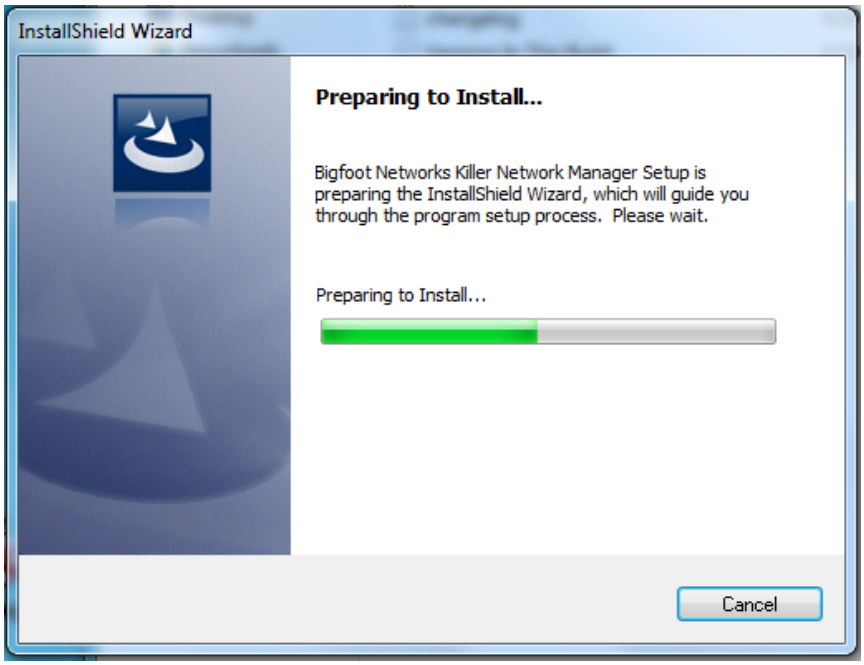
http://www.bigfootnetworks.com/support

For detailed support information, see *Support on page 41*.

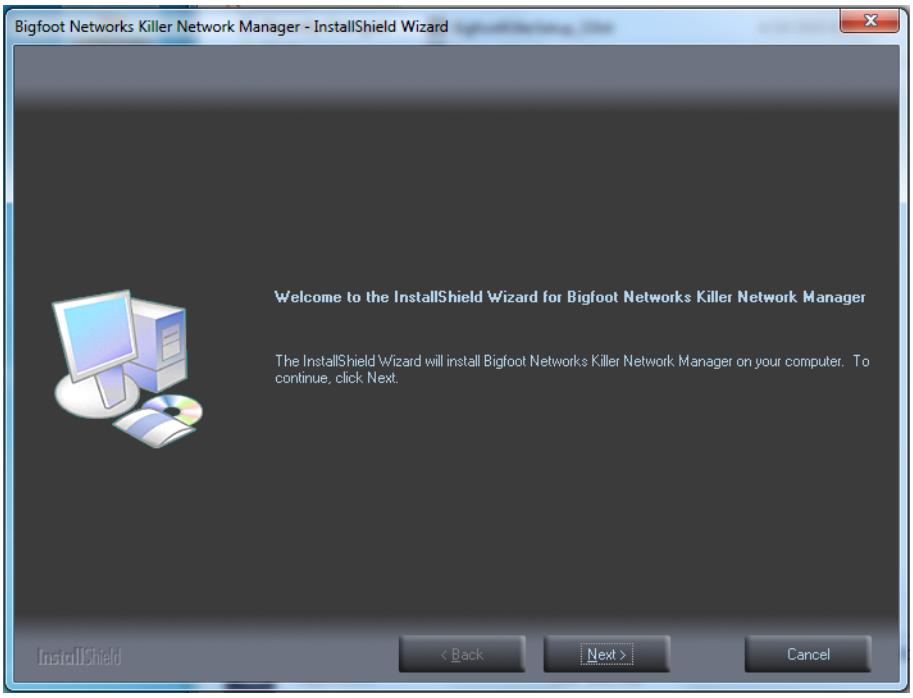
Installing the Bigfoot Networks Killer™ Network Manager Software

The Killer™ Network Manager software installs with the Killer™ 2100 driver. See the *Killer™ 2100 Quick Start Guide* for installation instructions.

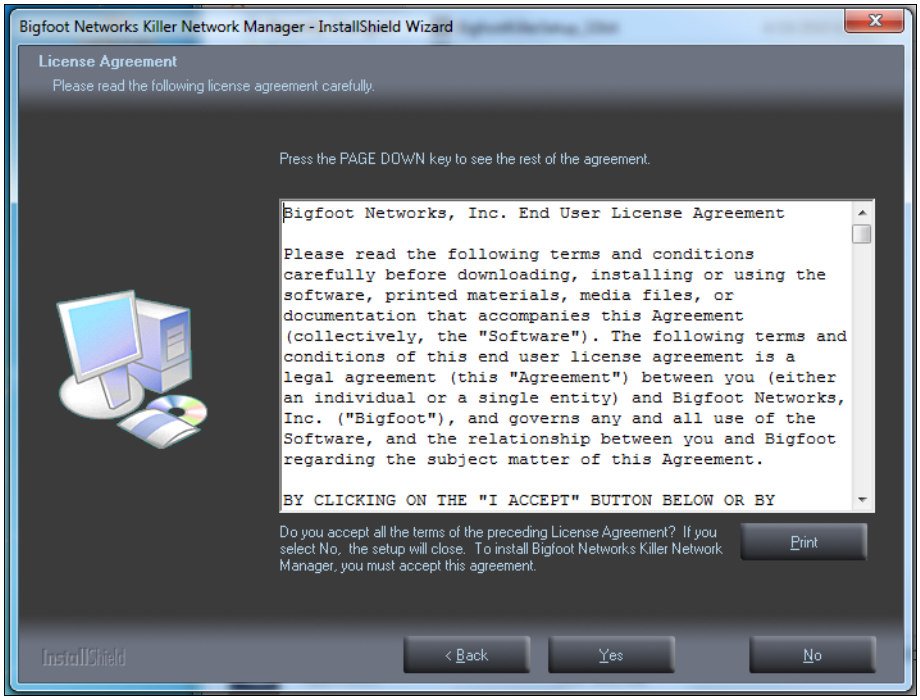
1. Double-click the Killer™ 2100 installation file that is compatible with your operating system.



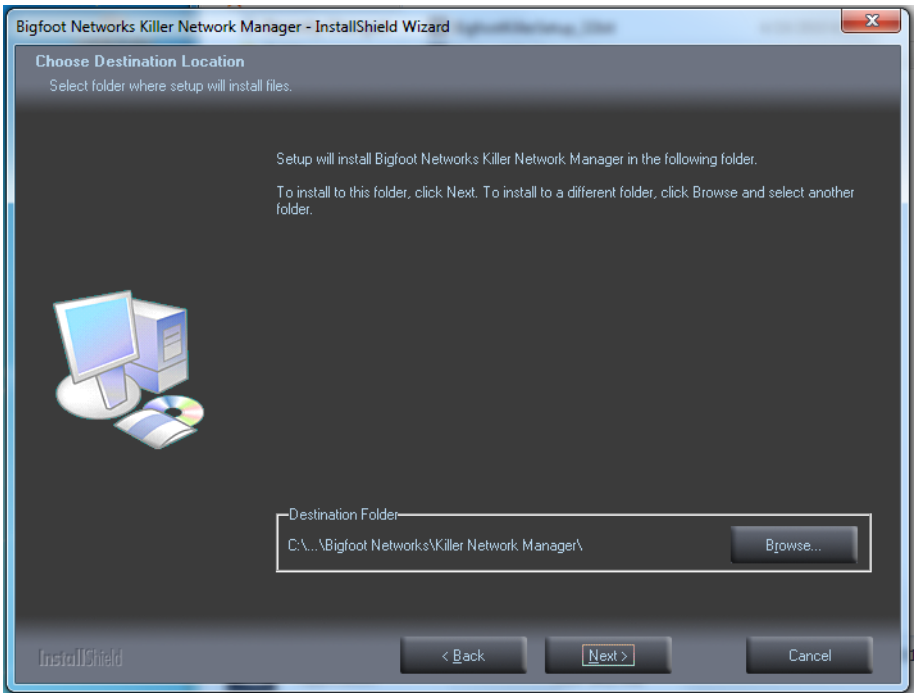
2. The splash screen appears. Click **Next**.



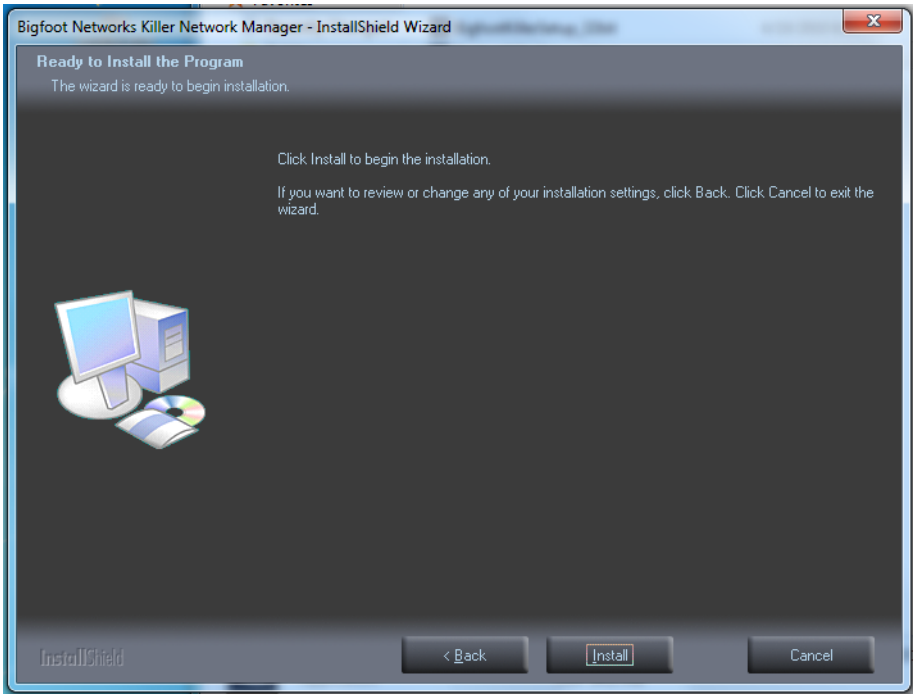
3. Review and and accept the licensing agreement. Click **Yes** to continue.



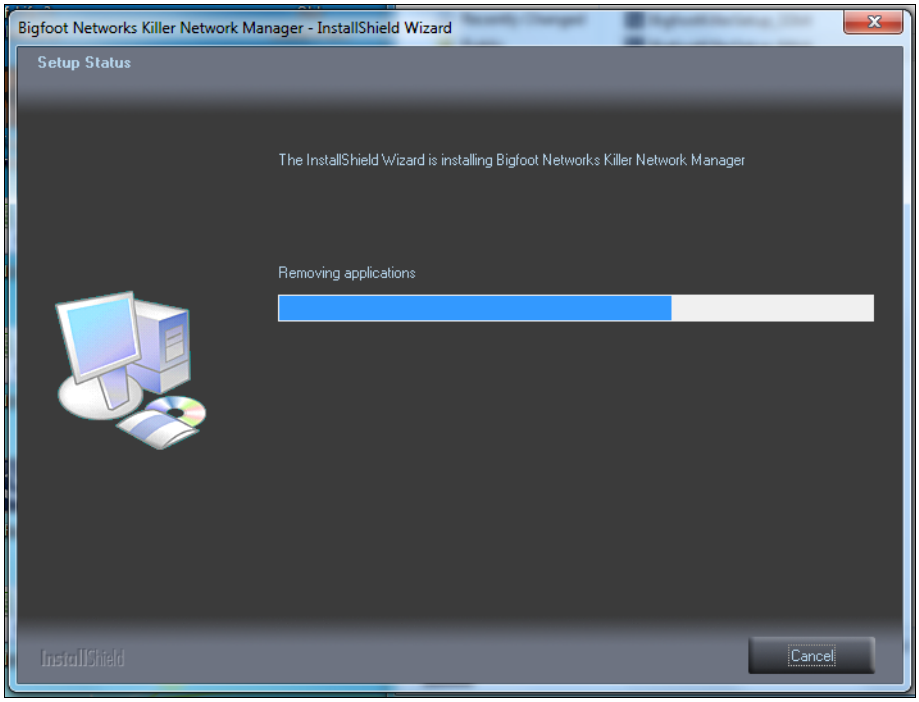
4. Click **Next** to accept the default installation directory for the software. Use the **Browse** button if you wish to install in a different location.



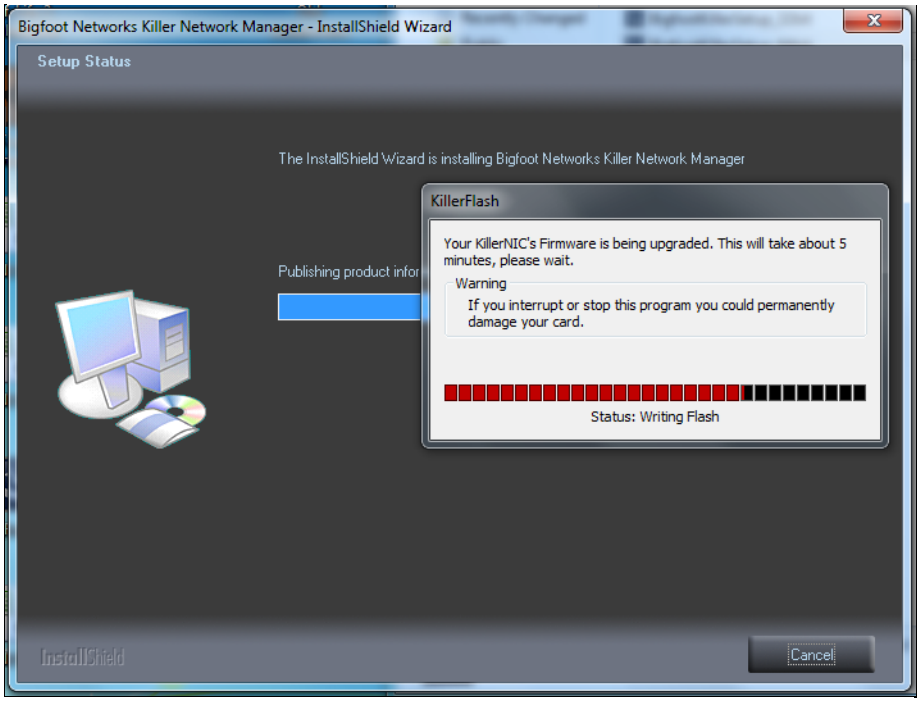
5. Click **Install** to proceed with the installation.



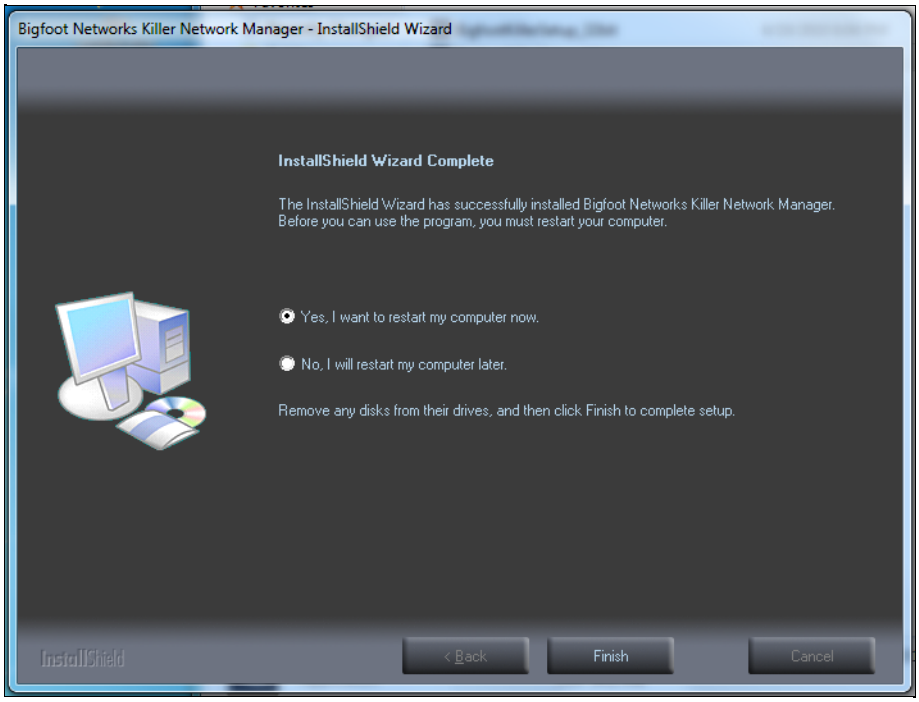
The status screen appears:



The software programs the firmware on the card. Avoid closing the installation program or shutting down your computer during this process:



6. Upon completing the installation process, click **Yes, I want to restart my computer now**, if it is convenient.



Starting the Killer™ Network Manager Software

Killer™ Network Manager software loads at Startup. It runs as a Windows tray application.

If you need to start Killer™ Network Manager from the Windows **Start** menu, select **Start** > **All Programs** > **Bigfoot Networks** > **Killer Network Manager**.

When the application window is minimized, you can open the Killer™ Network Manager window by selecting the icon in the Windows system tray. Right-click on the Killer™ 2100 tray icon to show the application window.

- The icon appears in the Windows system tray on your desktop (usually in the lower right corner), as shown here:

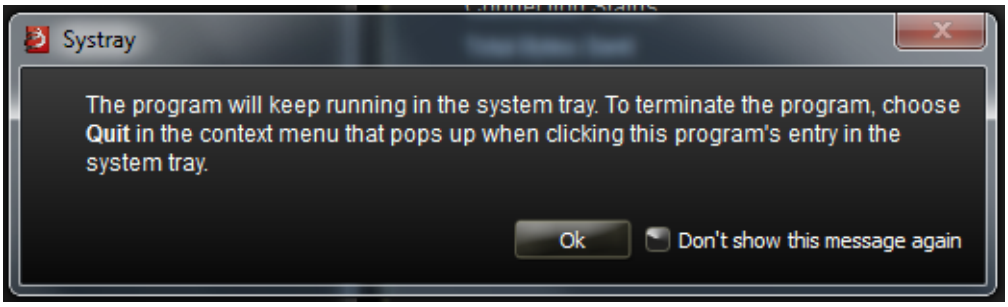
Minimizing Killer™ Network Manager

To close the Killer™ Network Manager software:

1. Click the Close icon — the red X in the top right-hand corner on any window:

Note: This minimizes the application. The application remains running.

The following dialog box might appear:



Check the box if you do not wish to see this dialog in the future.

Viewing Connection Status with the Tray Icon

The Killer™ 2100 tray icon shows the Killer™ 2100 connection status and overall health:

The tray icons change and convey that you can view more details by mousing over the icon.

Icon	Application Status	Network Statuscc
	Good	Connected
	Bad	Warning messages

Getting Started: Network Settings

Before using the Killer™ 2100, you must confirm you have configured the right network settings for your network. Killer™ Network Manager software uses default settings optimized for most network situations. We recommend you review your settings to ensure the best performance.

Configuring Network Connection Type

To modify how fast the Killer™ 2100 connects to the local network or Internet, you can configure your LAN connection speed and duplex mode settings.

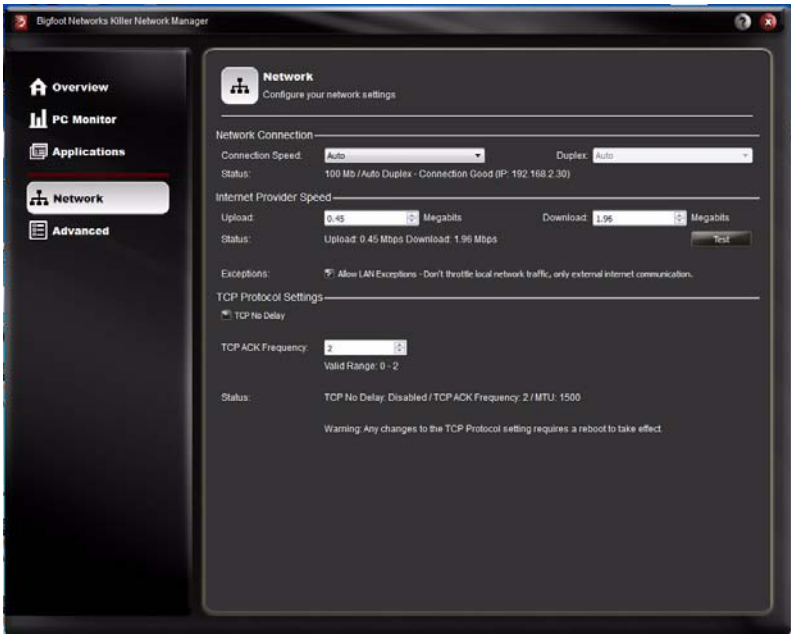
If you hard-set your connection speed in the configuration, you must also hard set it in your router as well.

> **Note:** The default LAN connection speed and duplex mode settings are automatically configured for most situations.

To configure LAN connection speed:

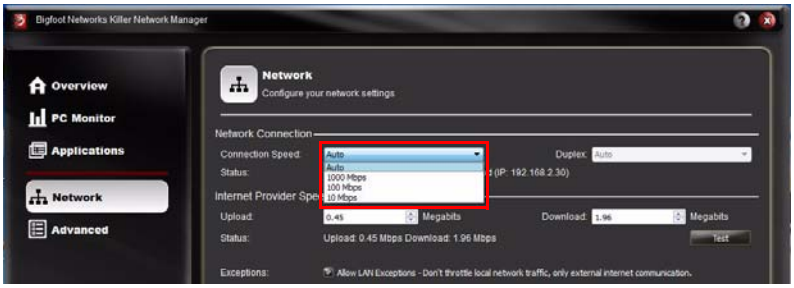
1. Open **Killer™ Network Manager** by selecting the icon in the Windows System tray.

2. Select the **Network** tab from the navigation menu on the left.



3. View your current settings under **Network Connection** > **Status**.

4. View the **Connection Speed** drop-down menu, and select the best setting for your network:

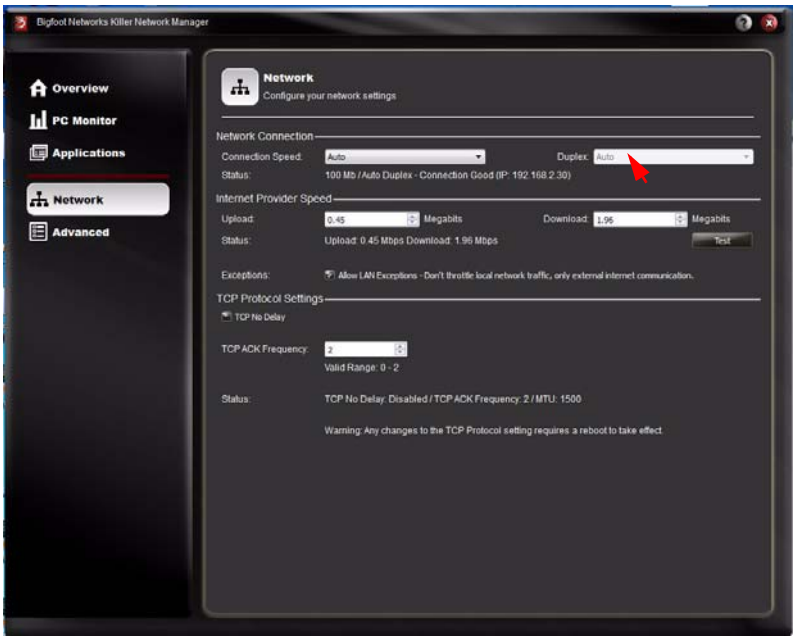


In most situations, we recommend you set this to Auto unless you have specific requirements to connect to your local network:

Speed	Description	Requirement
Auto	Killer™ 2100 uses the highest speed available	None
1000 Mb	Configures the Killer™ 2100 for 1000 Mb (1 Gigabit) connections Note that speeds up to 1000 Mb are also supported	Your local network connection must support 1 Gigabit (1000 Mb) Ethernet networking connections

Speed	Description	Requirement
100 Mb	Configures the Killer™ 2100 for 100 Mb connections Note that speeds up to 100 Mb are also supported	Your local network connection must support 100 Mb Ethernet networking connections
10 Mb	Configures the Killer™ 2100 for 10 Mb connections only	Your local network connection must support 10 Mb Ethernet networking connections

5. Select the **Duplex** setting and choose the setting that matches the connection type.



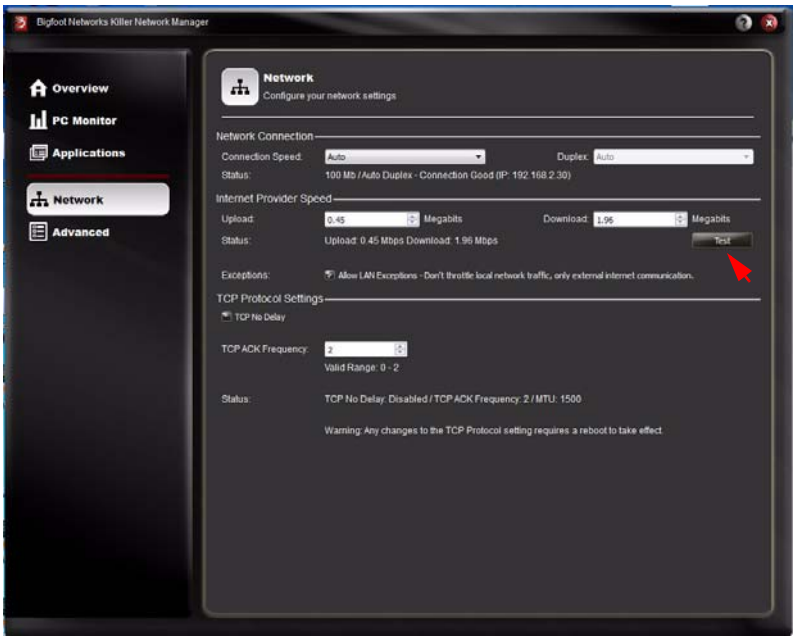
In most situations, we recommend you set this to **Auto** unless you have specific requirements to connect to your local network:

- The duplex mode should be changed from the default setting only if your switch or router requires this mode to connect to the Killer™ 2100. If connection speed is **Auto**, this value sets to Auto and cannot be changed.
- If connection speed is **1000 Mb**, this value sets to Full and cannot be changed.
- If connection speed is **100 Mb** or **10 Mb**, this value can be set to Full or Half Duplex.

Configuring Internet Upload and Download Bandwidth

You can configure default bandwidth settings for Internet uploads and downloads from the **Network** tab on the Killer™ Network Manager window.

Important: Before using the Killer card product for the first time, you should select the **Test** button which runs a short test of your current total Internet bandwidth delivered through your Internet service provider.

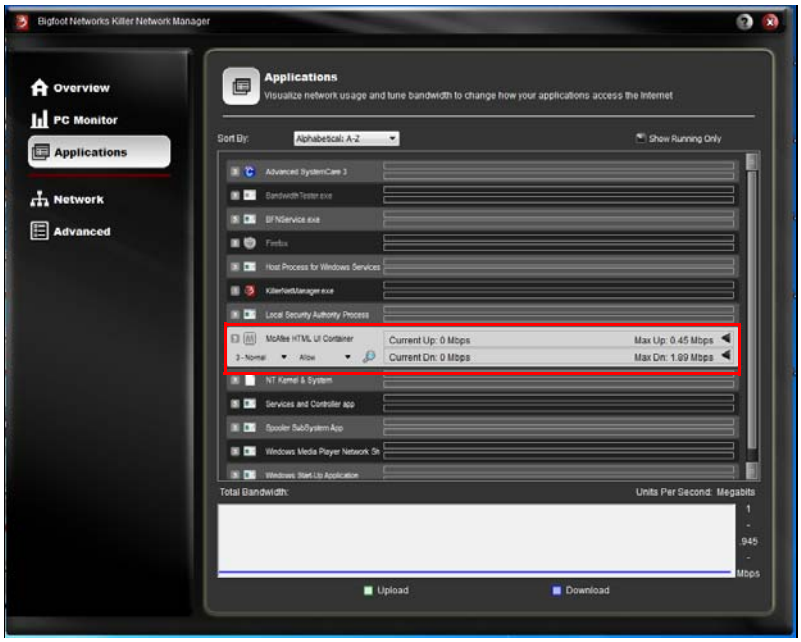


Upon completion of the test, the results are used to configure the optimal Upload and Download speeds for Killer™ Network Manager.

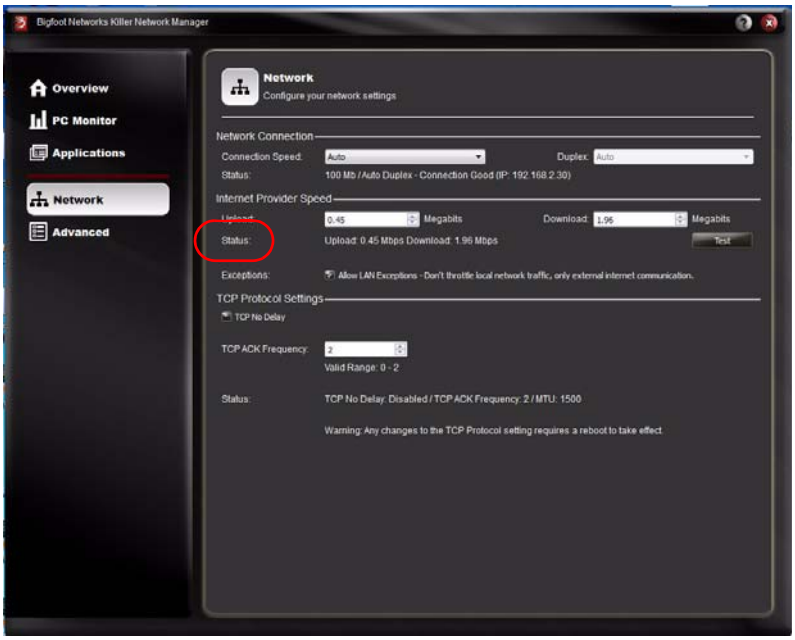
You may want to run the Bandwidth Test periodically to verify that your network bandwidth has not changed significantly from your Internet Service Provider.

Bandwidth Test is used to optimize bandwidth usage on your Killer card. The values entered in the **Upload** and **Download** fields are used as

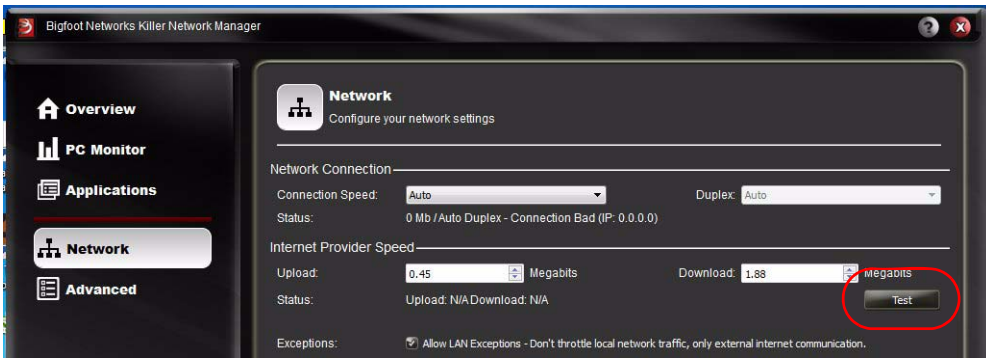
maximum values in the **Visual Bandwidth Control** features on the **Applications** window, shown below:



1. In Killer™ Network Manager, select the **Network** tab from the navigation menu on the left.
2. View your current settings under **Internet Provider Speed** > **Status**.



3. Select the **Test** button to the right beneath the **Internet Provider Speed** area. This starts the Bandwidth Test. The test takes 1 to 2 minutes and automatically provides values for your **Upload** and **Download** fields.



Bandwidth values used in the **Internet Provider Speed** area are used as the maximum values for the Visual Bandwidth Control feature on the **Applications** window.

Note: We do not recommend setting these values higher than your available bandwidth. When the settings are too high, Killer™ Network Manager does not manage bandwidth limits effectively, and you might experience poor performance on your network applications.

The Bandwidth values reported by the **Bandwidth Test** may differ from those published by your Internet service provider. These values may change based upon different network conditions.

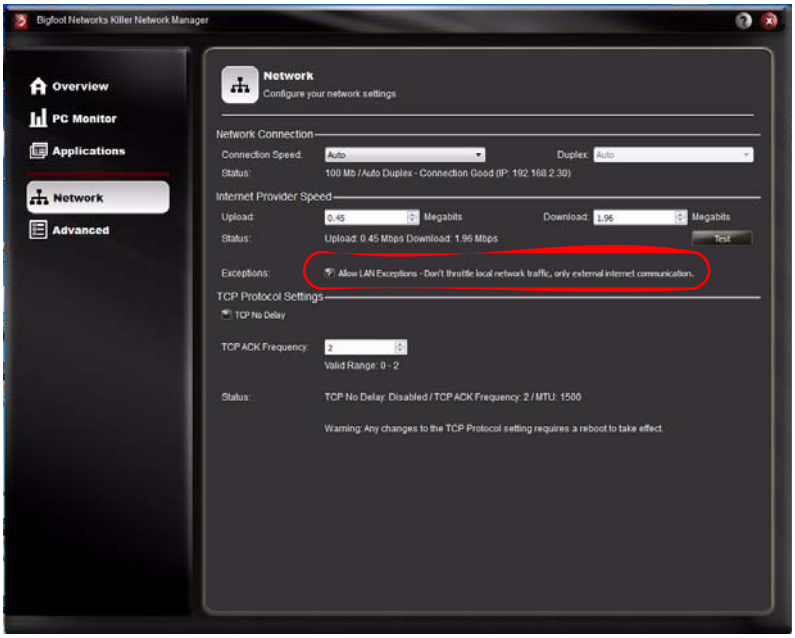
Manually Changing the Upload and Download Bandwidth

1. In Killer™ Network Manager, select the **Network** tab from the navigation menu on the left.
2. In the **Internet Provider Speed** area, enter a value in the **Upload** field to change the upload speed of your network connection.
3. In the **Internet Provider Speed** area, enter a value in the **Download** field to change the download speed of your network connection.

Configuring LAN Exception Settings

The LAN **Exceptions** setting lets you maximize bandwidth on your local LAN while still controlling bandwidth to and from the Internet. When enabled, local LAN traffic is not limited by the maximum limits set with

the **Visual Bandwidth Control** feature on the **Applications** window. LAN Exceptions is enabled by default.



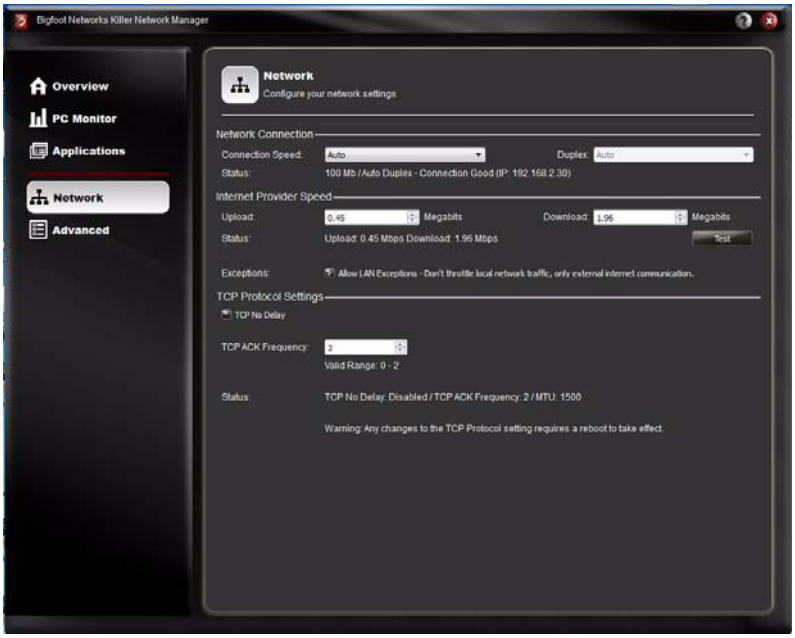
1. In Killer™ Network Manager, select the **Network** tab from the navigation menu on the left.
2. In the **Internet Provider Speed** area, select the check-box beside **Allow LAN Exceptions** to enable this option.
3. To disable LAN Exceptions, uncheck the box.

Note: In some network situations such as an Internet café or large shared network, you might want to limit LAN traffic bandwidth below what is possible on a Gigabit Ethernet network. In these scenarios, you should uncheck the LAN Exceptions option.

Verify TCP Protocol Settings

Killer™ Network Manager ships with default network settings recommended for most online games and other network usage. Do not change these settings unless you need to modify these settings for your specific network situation or are advised by a support specialist.

1. In Killer™ Network Manager, select the **Network** from the navigation menu on the left.



2. Under **TCP Protocol Settings**, configure the options as described below:

Setting	Description
TCP No Delay	Check this option to toggle TCP No Delay on or off. This is an advanced network setting used to manage how your PC handles sending TCP network protocol packets. When enabled, TCP No Delay sends data packets immediately without waiting for more data. In some situations, this improves network latency performance for online games and other applications that use TCP, however, in other cases, it decreases overall performance by increasing the amount of traffic on the network. When disabled, TCP No Delay will delay sending a data packet until the packet is full. This approach is often referred to as the Nagle Algorithm.

Setting	Description
TCP ACK Frequency	This is an advanced network setting used to manage how your PC handles networking protocol acknowledgements. Enter a value to determine the frequency at which received data packets are acknowledged. Change TCP Ack Frequency only if you are attempting to change latency behavior in specific programs. By lowering the value, you increase the frequency of TCP Acknowledgements on the network. In some cases, this may improve network latency performance for online games and other applications that use TCP, however, for normal application usage, it increases the amount of traffic on the network and may degrade overall network performance.

3. Reboot the computer.

Viewing Overview Information

To view your overall system information:

1. In Killer™ Network Manager, select the **Overview** tab from the navigation menu.

2. View the status:

System Info	Description
Processor	Type of processor (CPU) installed in your computer
Network	Currently active network hardware installed in your computer. For instance, Killer 2100 gaming network card. If you have more than one network connection installed, this is the active connection (interface with the network cable plugged into it).
Memory	Amount of memory (RAM) installed in your computer. Note: On non-64bit operating systems that contain 4 GB or more of RAM, this number shows less than 4 GB because of video card memory addressing.
Graphics	Name of graphics platform installed in your computer.
Operating System	Operating system installed and running on your computer.
CPU Usage %	Average percentage of your computer's CPU in use.
Connection Status	Status of your network connection (Connected or Not Connected).
Total Bytes Sent	Number of bytes sent by the network connection.
Total Bytes Received	Number of bytes received by the network connection.
System Info	**Description**
Average ICMP Ping	Average round-trip ping times using ICMP. Ping is a feature used to measure latency across the Internet. Ping is the measure of time in milliseconds that it takes to send a message and receive a response across the network. ICMP (Internet Control Message Protocol) ping is the standard IETF protocol for measuring ping. This feature sends UDP packets to an application running on a known server. The server then returns the packet.
Average UDP Ping	Average round-trip ping times using UDP. UDP ping is a custom Bigfoot Networks ping application that sends UDP packets to an application running on a known server. The server then returns the packet.

Frames Per Second	Number of frames per second displayed through your graphics platform. Note: To view frames per second, your computer must have: • The Fraps application installed and running (download and install from: **http://www.fraps.com**) • A DirectX or OpenGL game running
NPU Usage %	Average percentage of Killer™ 2100's Network Processing Unit (NPU) in use.

Viewing High-Level Performance Information

To view high-level bandwidth speeds as well as the number of active and inactive processes with your current connection:

1. In Killer™ Network Manager, select **Overview**.

b

2. The **Applications** pane shows the following information:
    - Current bandwidth control settings (in Mbps)
    - LAN Exception settings
    - Active and inactive processes
    - Graph of total bandwidth percentages and speeds (Mbps) for uploaded, downloaded data

Note: To view statistics and the graph on the **Overview** tab, you must enable PC Monitor and Logging on the **Advanced** tab.

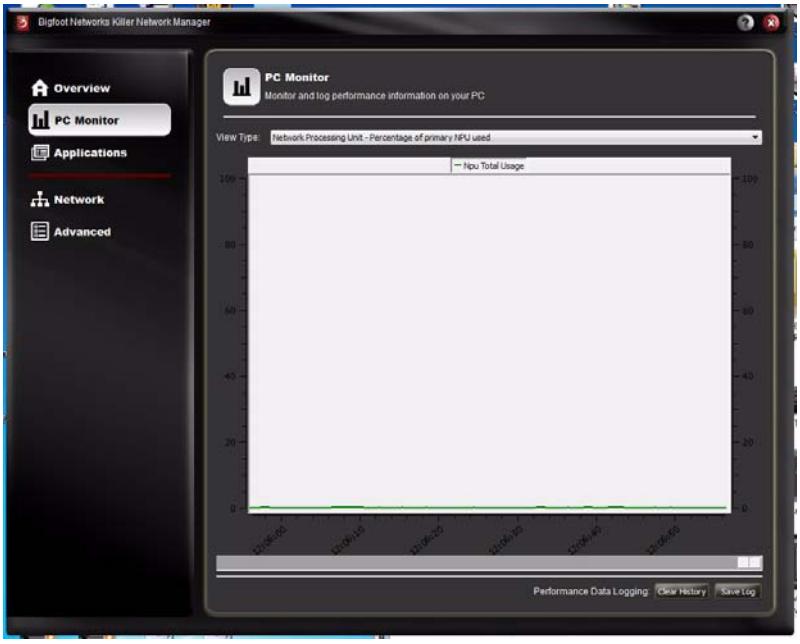
Viewing PC Monitor and Logging Statistics

1. In Killer™ Network Manager, select **PC Monitor**.

2. Select the type of information you want to monitor from the View Type drop-down menu:

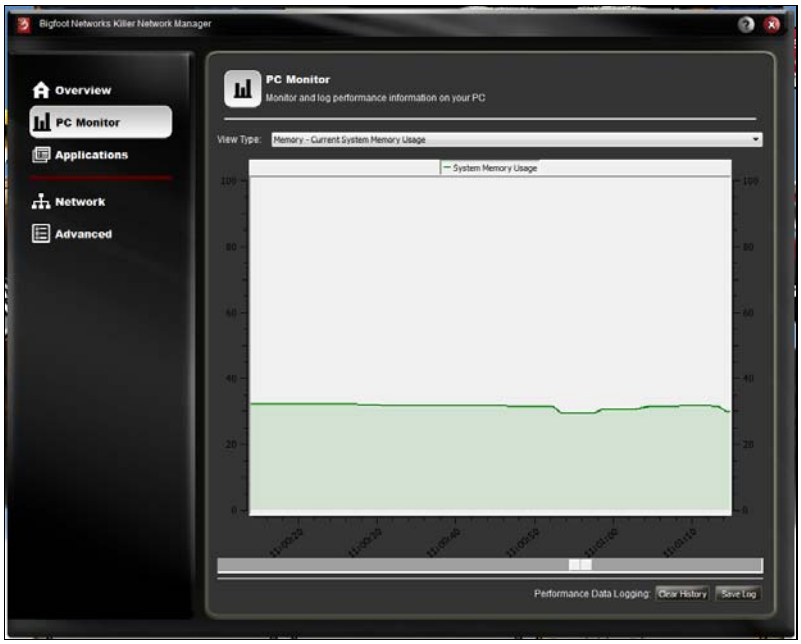
   - **Processor** — The percentage of your computer's CPU in use.

   - **Network Processing Unit** — The percentage of NPU (on the Killer™ 2100) in use.



   - **Internet Bandwidth** — The network bandwidth transmit (TX) and receive (RX) speeds and the off-loaded bandwidth TX and RX speeds.

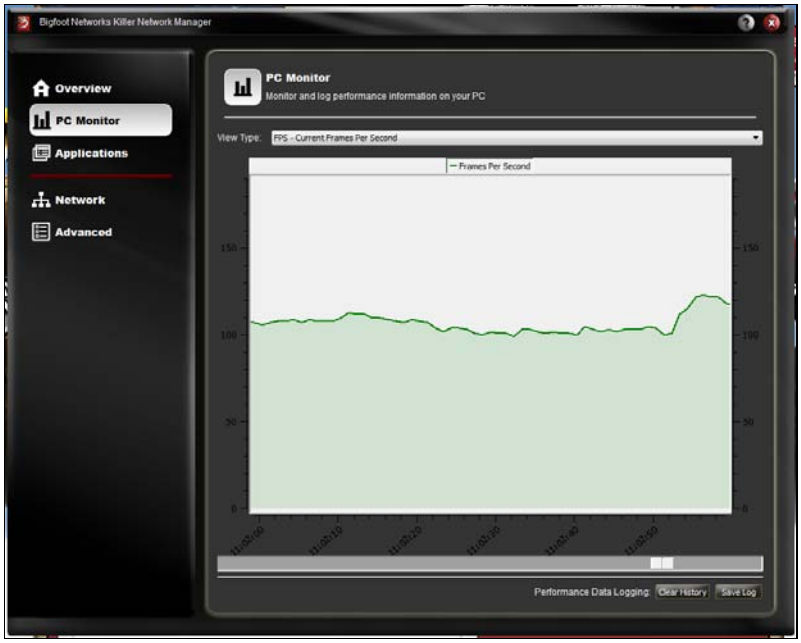
- **Memory** — The current system memory percentage in use.



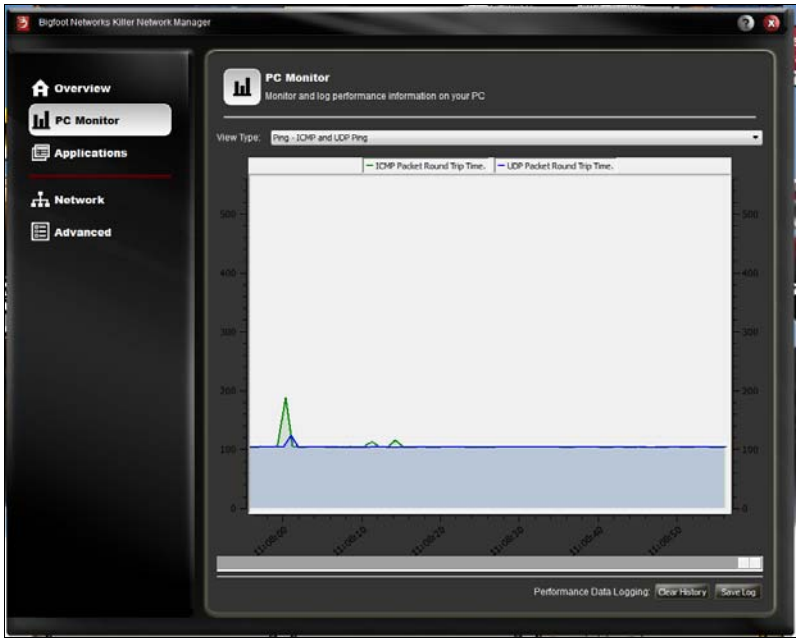
- **FPS** — The Frames Per Second (FPS) rate. To view frames per second, your PC must have:

  a. The Fraps application installed and running (download and install from: **http://www.fraps.com**).

b. A DirectX or OpenGL game running.



- **Ping** — The average round-trip times using ICMP and UDP ping measurements.



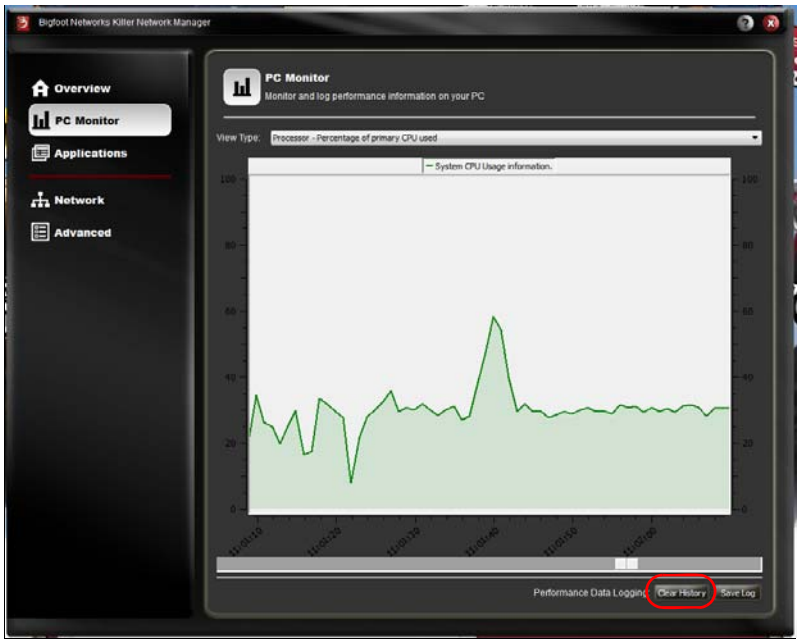
Viewing History

Note: To view graphs and collect statistics on the **PC Monitor** tab, you must enable PC Monitor and Logging on the **Advanced** tab.

In Killer™ Network Manager, select **PC Monitor**. You can view history by using the slide tab beneath the graph window.

Resetting Statistics

In the **PC Monitor** screen, click **Clear History**. All historical data is removed. The graph resets and then starts collecting statistics immediately.



Saving Statistics

1. In the PC Monitor screen, click Save Log to save the file to your computer.

   This log file includes data for all monitored information in a .csv (comma separated values) format.

2. Open the .csv log file in Microsoft Excel or other third-party reporting and analysis application.

3. The log file holds a maximum of 24 hours of data. To reset the log file, click **Clear History** from any window.

Optimizing How Applications Access the Internet

Killer™ Network Manager allows you to view networked applications running on your computer and control and optimize how the applications access the Internet. In addition, you can set bandwidth speeds for uploading and downloading, and block or allow Internet access for an application.

By controlling the bandwidth and priority of each online game and application, you can game with less lag and smoother online gameplay.

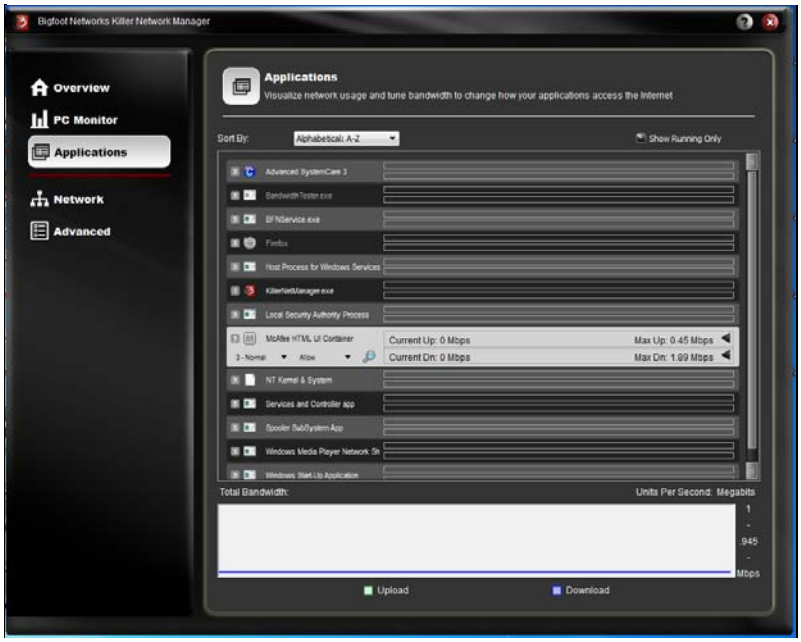
Using Killer™ Network Manager, manage the following for your games and applications:

- Internet bandwidth (upload and download)
- Application priority
- **Block / Allow** access to the Internet

Viewing Current Application Settings

To view current application settings:

1. In Killer™ Network Manager, select the **Applications** tab from the navigation menu on the left.

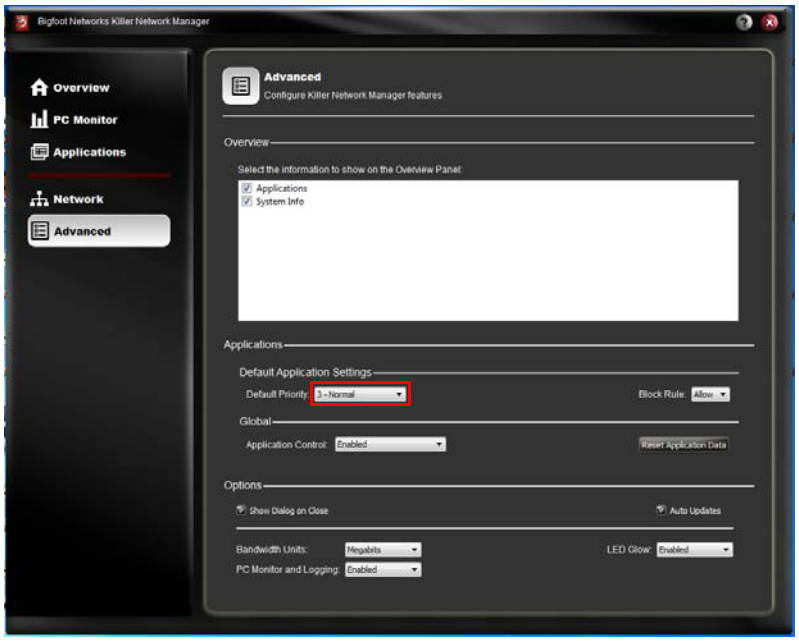


The Applications screen displays network applications and system processes currently using network bandwidth, as well as all applications that have used a network connection previously.

- Active or online applications appear in color with a colored icon.
- Closed or inactive applications appear in gray with a gray icon.

The small number icon to the left of the application icon, is used to convey the current priority level set for the application. Priorities are set automatically by the Game Detect™ functionality. You can override the priority by using the priority drop-down menu contained in each application item in the list.

Applications that are not given a higher priority by Game Detect™ are assigned a default priority based upon the **Default Priority** setting listed under **Default Application Settings** on the **Advanced** menu:



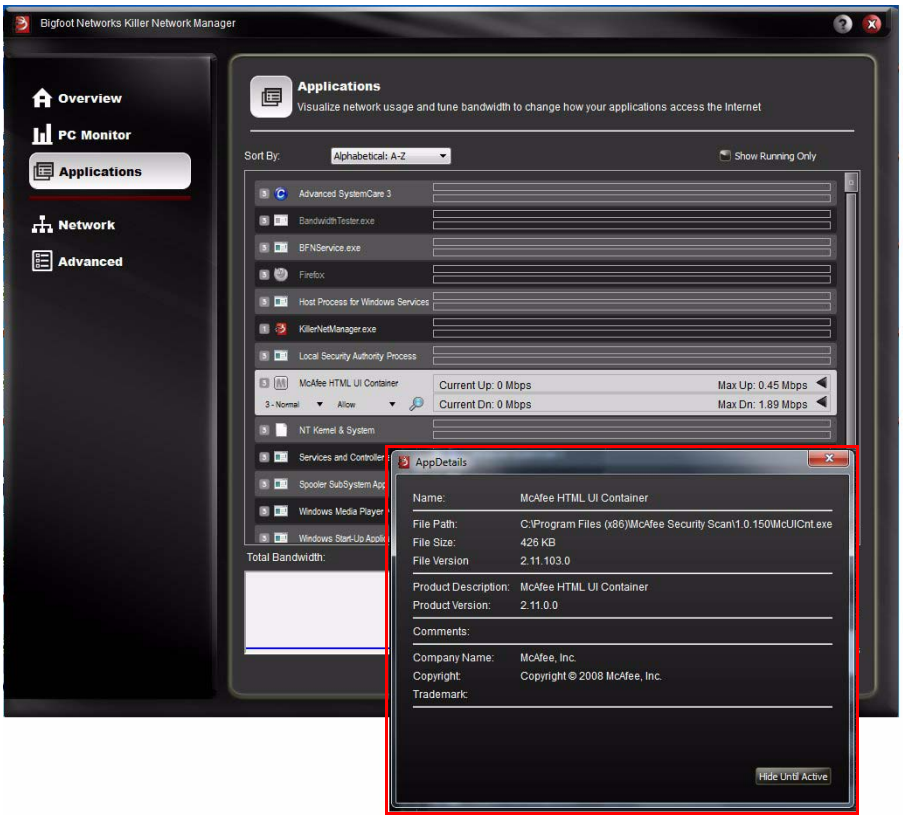
For more information on priority levels, see *Changing Priority for an Application on page 29.*

2. Sort the application list by choosing a preferred view in the **Sort By** drop-down menu. Items may be sorted alphabetically or by current bandwidth usage.
   - **Alphabetical A to Z** or **Z to A**
   - **Upload Min to Max** or **Max to Min**
   - **Download Min to Max** or **Max to Min**
3. Filter the application list to show all network applications and system processes or only the active network applications by toggling the **Show Running Only** check box, shown below:

Viewing Detailed Information about an Application

To view detailed information about a specific application listed:

1. In Killer™ Network Manager, select the **Applications** tab from the navigation menu on the left.
2. Select an application item in the list to expand the view.
3. Select the magnifying glass icon button.

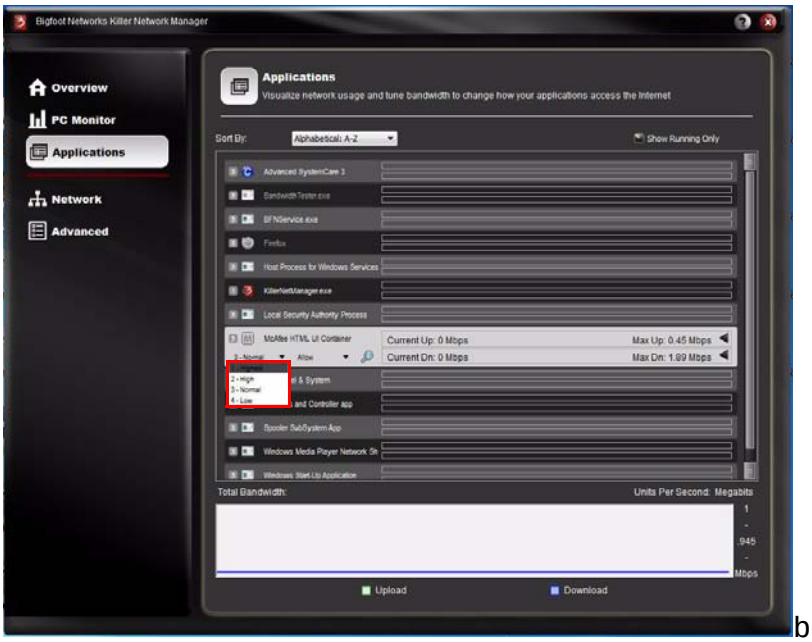


4. A dialog window appears showing detailed information about the application.

Changing Priority for an Application

1. In Killer™ Network Manager, select the **Applications** tab from the navigation menu on the left.
2. Click on an application in the list to expand the view.

3. Observe the Priority level currently set for this application.


b

4. If Killer™ Network Manager detects the application is a game, it is set to **Priority 1 - Highest**.

   Note: If the application is not detected as a game, the software assigns the priority according to your settings configured in the **Advanced** panel. The default priority is **Priority 3 – Normal**.

   If you wish to change the priority level, you may select a different level from the drop-down menu. Higher priority items are given higher priority access to your available bandwidth. Be advised that the Visual Bandwidth Control feature benefits by having applications set at different priority levels. For this reason, users should not attempt to set all applications to the same level or set the default priority too high. Doing so may lead to poor performance.

Assigning Applications to Priority 1 – Highest

Priority 1 — Highest is reserved for special applications such as online games or other multimedia applications that require very low latency. If an application has not automatically been identified as a Priority 1 – Highest by Killer™ Network Manager's Game Detect feature, then you may select this from the drop down list.

Before the **Priority 1 — Highest** setting is recognized by Killer™ Network Manager the first time this priority has been changed, you must close the newly prioritized application and restart it. This is because Killer™ Network Manager handles traffic for these applications in a spe-

cial way to ensure maximum performance and all network connections associated with the open application must be closed so they can be re-directed to this new, fast path.

Changing Bandwidth Limits for an Application

On most network connections, all applications compete for available bandwidth. All too often, one application can easily consume enough bandwidth to negatively affect the network performance of other applications.

Killer™ Network Manager provides advanced control over how your PC manages available bandwidth. With **Visual Bandwidth Control**, you can easily set upper limits that prevent some applications from interfering with others. You can set bandwidth thresholds for large file downloads, multimedia streaming, or torrent-type applications so they don't prevent you from gaming or using other applications at the same time.

1. In Killer™ Network Manager, select the **Applications** tab from the navigation menu on the left.
2. Click on an application to expand the view.
3. Observe the current bandwidth in use as well as the limits set for this application for **Upload** and **Download**.
    - **Current Up** — The current bandwidth at which the application is uploading. This appears in *orange* inside the **Upload** bar.
    - **Current Down** — The current bandwidth at which the application is downloading. This appears in green inside the **Download** bar.
    - **Max Up** — The maximum bandwidth at which the application can upload. This is labeled at the right side of the selected **Upload** bar.
    - **Max Down** — The maximum bandwidth at which the application can download. This is labeled at the right side of the selected **Download** bar.
4. To change the bandwidth limits in either the Upload or Download direction, position your mouse cursor over the arrow on the right side of bar near the arrow icon. Click and drag the setting to the desired level. Release the mouse to select the new bandwidth limit. Internet traffic for this connection is now limited below this new level.

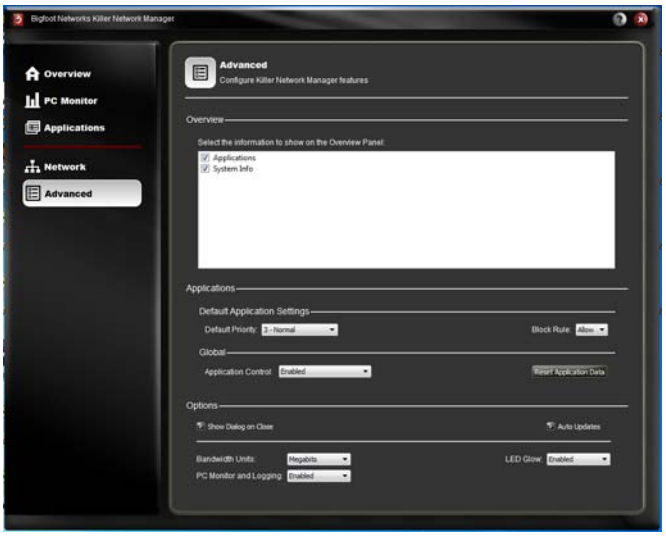
    Note: The default bandwidth limit for each application is set to your maximum-available bandwidth configured on the **Network** tab in the Internet Provider Speed settings.

Blocking or Allowing Applications

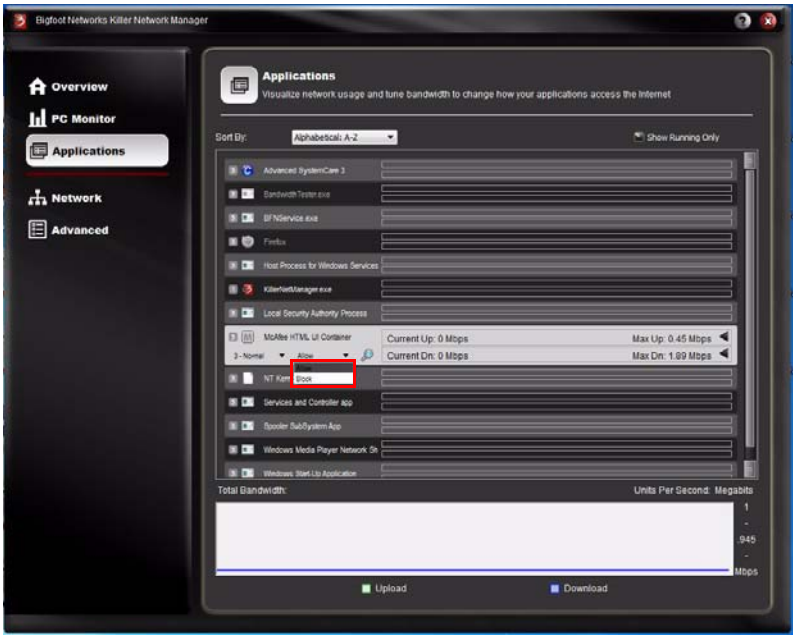
Killer™ Network Manager permits you to block certain applications from accessing network bandwidth. This prevents unwanted applications from accessing the network when you don't want them to and frees up available bandwidth for other applications.

1. In Killer™ Network Manager, select the **Applications** tab from the navigation menu on the left.
2. Click on an application in the list to expand the view.
3. Observe the **Allow / Block** status currently set for this application. By default, applications are set to **Allow** status.

   Note: You can change the default method for handling new network applications by changing the Block Rule setting on the **Advanced** menu located under **Default Application Settings**.



4. To block an application from accessing the network, select **Block** from the drop-down menu.



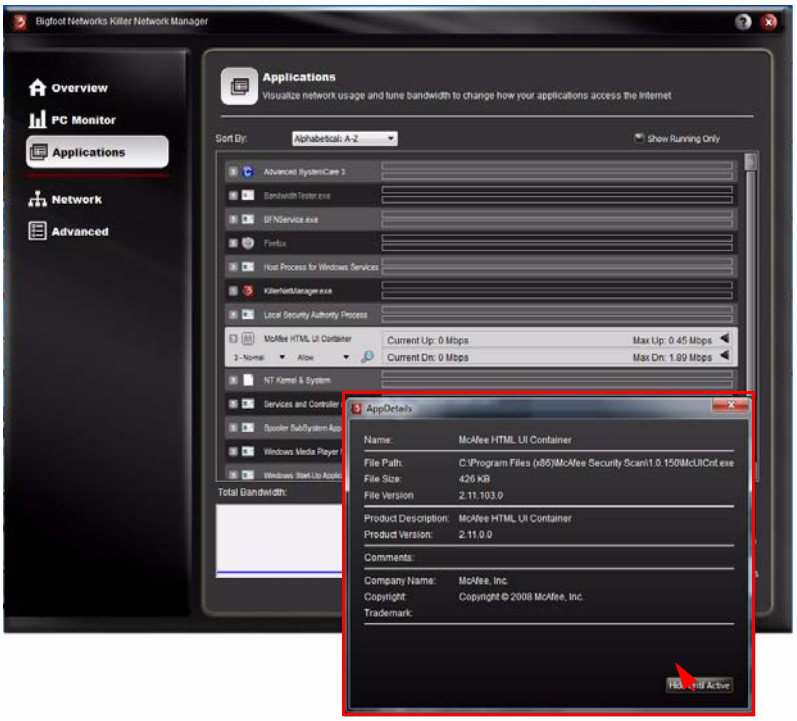
5. To re-enable a Blocked application, select **Allow** from the drop down menu.

Hiding an Application from the List

If the list of applications and system processes gets cluttered and you wish to remove inactive items that are seldom used, you may hide these items from the Applications window.

1. In Killer™ Network Manager, select the **Applications** tab from the navigation menu on the left.
2. Click on an application in the list to expand the view.

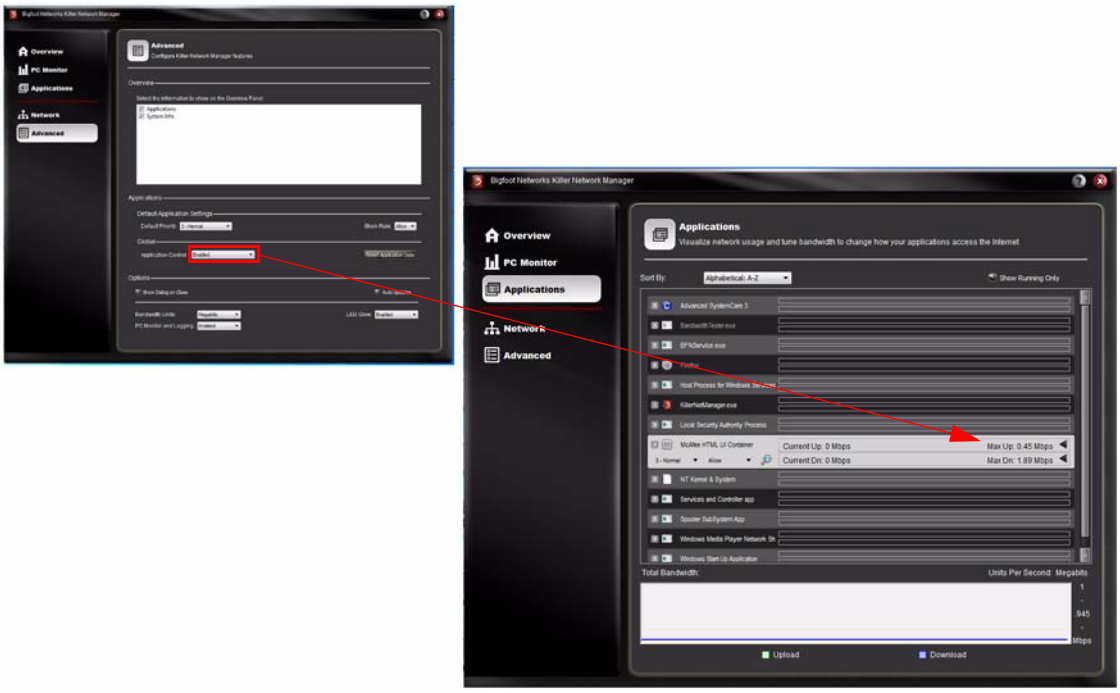
3. Click the magnifying glass image to show additional details.



4. Select the **Hide Until Active** button at the bottom of the dialog window. The item is now removed from the list view. Note that if the application is active on the network, this only resets the application settings and does not remove it from the list.

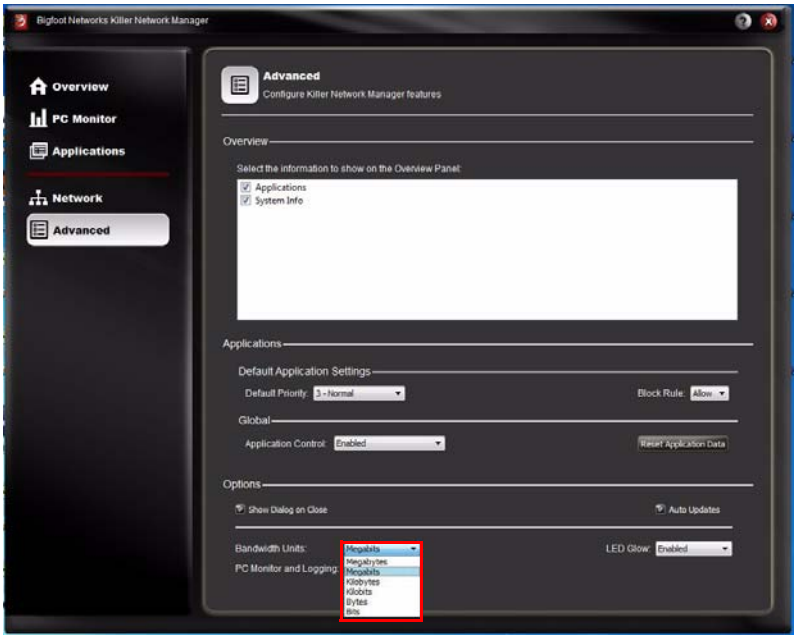
Enabling Global Application Control

The **Global Application Control** setting on the **Advanced** tab enables the **Bandwidth Control Features** on the **Applications** tab.



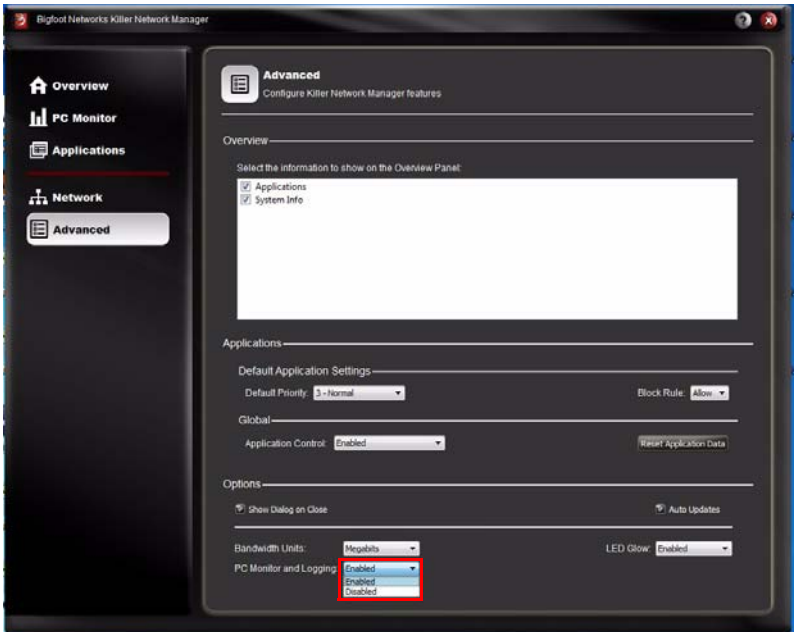
Setting Bandwidth Units

The Bandwidth Units setting modifies the way data is reported in graphs and fields.



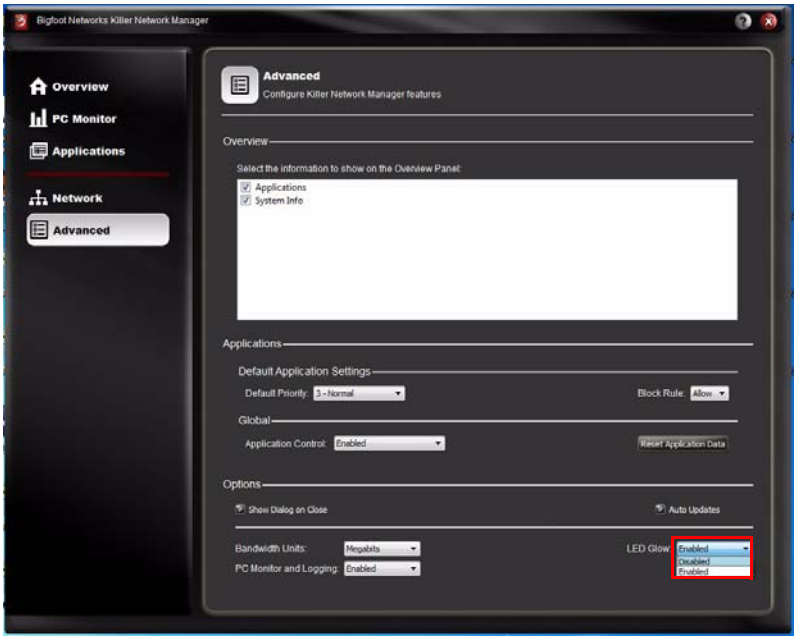
Setting PC Monitor and Logging

The **PC Monitor and Logging** setting enables the PC Monitor feature. It also impacts the statistics shown on the **Overview** window. Enabling this setting provides valuable performance information. Disabling this setting maximizes network performance.



Setting LED Glow

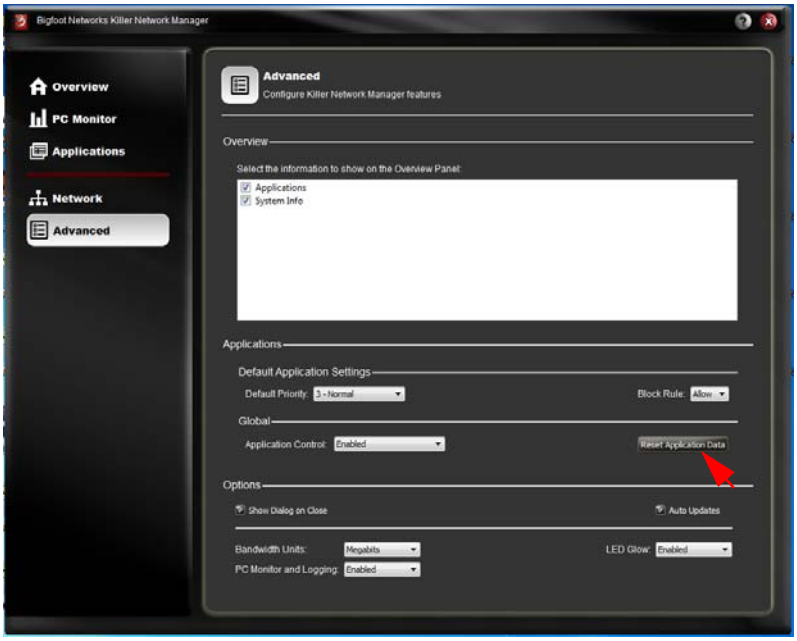
The **LED Glow** feature enables or disables the LED on the Killer™ 2100 gaming network card to light up as a solid red light.



Resetting Application Settings

In the event that you have made multiple changes to the applications settings on the Applications window, you may restore defaults as follows:

1. In Killer™ Network Manager, select the **Advanced** tab from the navigation menu on the left.



2. Select the **Reset Application Data** button to restore default settings for listed applications.

Automatically Checking for Software Updates

Killer™ Network Manager software can automatically check for updates and notify you when new software is available for your Killer™ 2100 gaming network card.

1. Select the Advanced tab from the navigation menu on the left.
2. Select the box to enable Auto Updates.
3. To disable Auto Updates, uncheck the box.

Customizing How the Killer™ Network Manager Closes

1. In Killer™ Network Manager, select **Advanced**.
2. Check the option **Show Dialog on Close** to enable a warning when the application minimizes to the Windows System Tray. This is the default setting.
3. Uncheck this option to minimize the application immediately without showing the warning message.

Quitting Killer™ Network Manager

To completely quit the application, right-click the Killer™ Network Manager icon in the Windows system tray and click **Quit**.

Note: If you quit Killer™ Network Manager, you will not be able to manage priorities, bandwidth control, and blocking features until you re-start the Killer Network Manager from the Windows Start menu.

Support

- Accessing Self-Help Online Support Options
- Contacting Technical Support
- Contacting Bigfoot Networks
- Obtaining Your Software Version
- Common Troubleshooting
- Joining Bigfoot Networks Online Communities
- Receiving Bigfoot Networks Newsletter

Accessing Self-Help Online Support Options

Support Option	How to Contact
Bigfoot Networks Support page	**http://www.bigfootnetworks.com/support**
Knowledgebase	Go to Bigfoot Networks Support and click Knowledgebase to check for answers to common support questions: **http://www.bigfootnetworks.com/support**
User Forums	Join the Killer Online Forum to gain access to the latest beta testing drivers or interact with other customers as new features are developed: **http://www.bigfootnetworks.com/killerforums/**

Contacting Technical Support

For technical support regarding the Killer™ 2100, and online support options, contact the card's manufacturer directly.

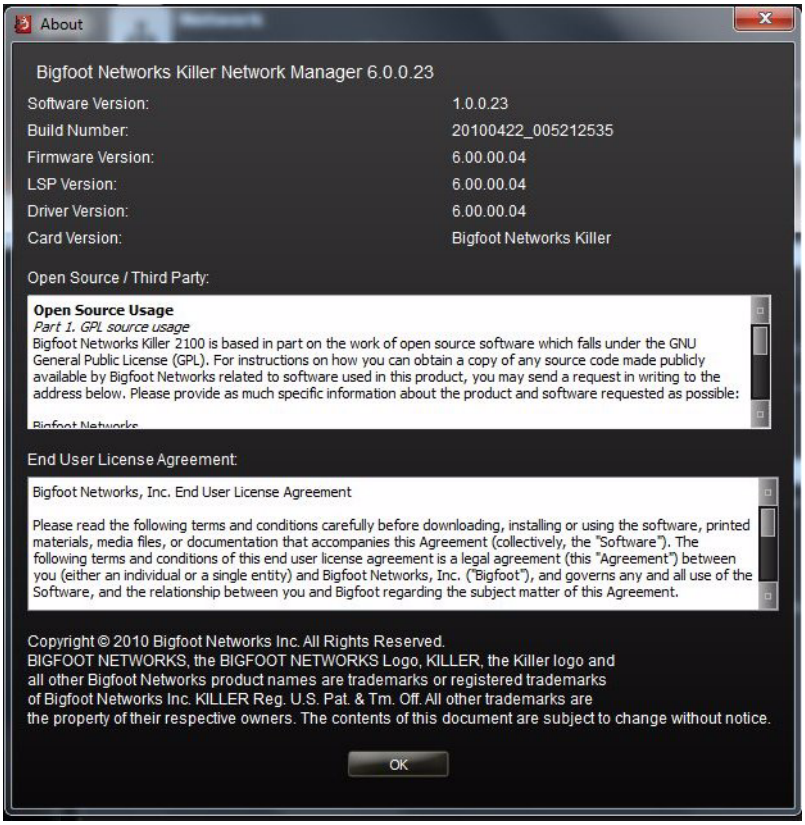
Contacting Bigfoot Networks

Option	How to Contact
E-mail	**support@bigfootnetworks.com**
Mailing address	Bigfoot Networks 12301-B Riata Trace Parkway, Suite 110 Austin, TX 78727

Obtaining Your Software Version

When contacting technical support, you may be asked for your current software version. To locate these:

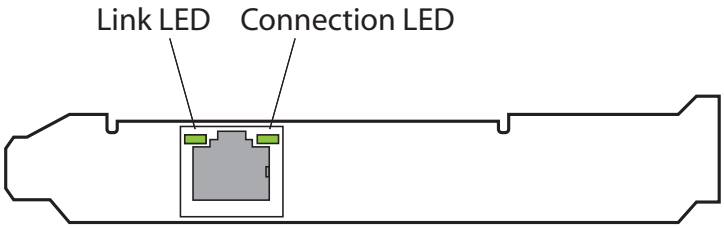
1. Right-click on the **Killer™ 2100 tray icon**.
2. Select the **About** item in the menu.



Common Troubleshooting

Killer™ 2100 LED Indicators

LED indicators are located above the connector where your Ethernet cable connects to the Killer™ 2100. Killer™ 2100 has two LEDs that show link and connection status, as shown below:



LED	Indication	Meaning
LINK LED (on left)	Off	No link
	Green	1000 Mbps full duplex connection
Connection LED (on right)	Off	No connection
	Orange	10 Mbps half/full duplex connection
	Orange + Green	100 Mbps half/full duplex connection
	Green	1000 Mbps full duplex connection
	Blinking	Network activity

Tips & Hints

Issue	Resolution Tip
Cannot connect to the Internet	Verify that your network cable is plugged into the Ethernet port on the Killer™ 2100 and that the Link LED lights. Note: The Killer™ 2100 does not broadcast data to your other network ports. If the Link LED does not light, verify that the other end of the cable is properly secured to your modem or router and that the cable is functioning properly.
The Killer™ 2100 LEDs are not working, or the Killer™ 2100 is not detected	Power off the computer and reseat the Killer™ 2100 in the PCIe slot. Make sure that the Killer™ 2100 is fully seated in the slot and securely fastened to the computer case. If you move the Killer™ 2100 to a different PCIe slot, you must reinstall the driver.
Killer™ 2100 driver problems	Make sure you are running the correct Killer™ 2100 software suite for your operating system. Verify the software suite and version in the Downloads section on the Bigfoot Networks web site: **http://www.bigfootnetworks.com/support**
Installing driver software on a PC that has a previous version of the Killer software installed	Completely uninstall the previous version of the software and driver using the Uninstall or Remove feature located in the original install program. In some cases, you may need to completely purge the old Killer drivers before installing new software. More detailed instructions can be found at: **http://www.bigfootnetworks.com/Support/index.php?_m=knowledgebase&_a=view** If problems persist, contact Technical Support.
BfLLR.dll warnings from security software	This file is used to install a Layered Service Provider (LSP) into the Windows Network Stack to provide Network Stack bypass. Some virus scanners or spyware blockers may detect this file as dangerous because it is “hooking” into the network stack (and has access to all packets sent and received). This is normal, and BfLLR.dll should **not** be removed or blocked by your security software.

Issue	Resolution Tip
Firmware out of sync	If a firmware warning appears indicating that your firmware does not match the driver version, verify that the Killer™ 2100 is installed (the Killer™ 2100 card may have been removed or may be loose in from the PCIe slot). If the Killer™ 2100 is installed and the LED lights are working, click Yes to the firmware warning message. If the warning persists, run this application: C:\Program Files\Bigfoot Networks\Killer Network Manager\KillerFlash.exe. Reboot your computer for the new firmware to take effect.

Joining Bigfoot Networks Online Communities

User Forums

Join the Killer Online Forum to gain access to our latest beta testing drivers or interact with other customers as new features are developed:

http://www.bigfootnetworks.com/killerforums

Facebook Fan Page

Join our Facebook Fan page:

http://www.facebook.com/pages/Killer-NIC/26367351841

Twitter Feed

Find our Twitter feed at:

http://twitter.com/bigfootnetworks

Steam Group

Join our Steam Group at:

http://steamcommunity.com/group/bigfootnetworks

Receiving Bigfoot Networks Newsletter

Register for the Bigfoot Networks Newsletter and receive news about special offers, software updates, and more:

http://www.bigfootnetworks.com

Technical Specifications

Type	Description
Speeds	10/100/1000 Mbps Auto-sensing
Electrical Power Requirements Network Processing Unit Memory Bus Interface Connector	 Max 10W, Typical 3W 400 Mhz 128 MB DDR PC2100 266 MHz PCI Express x1 (compatible with x1, x4, x8, x16 slots) RJ-45 Ethernet
LEDs	2 activity and connection indicators (external) 1 solid red accent glow (on PCB)
Physical Dimensions	4.75” x 4.97” x .875” 11.1cm x 12.6cm x 2.1cm PCIe x1, single slot width
Weight	4 oz
Operating Systems	Microsoft Windows 7 64-bit (latest service pack) Microsoft Windows 7 32-bit (latest service pack) Microsoft Windows Vista 64-bit (latest service pack) Microsoft Windows Vista 32 bit (latest service pack) Microsoft Windows XP 32 bit (latest service pack)
Certification/Compliance Microsoft Certification IEEE Compliance Regulatory	 WHQL for Windows 7, Windows Vista, Windows XP 802.3, 802.3u, 820.3x, 802.3z, 802.3ac, 802.3ab FCC Class B CE For updated information about regulatory certifications, consult the Killer™ 2100 product page at http:// www.bigfootnetworks.com.
Supplied Software and Drivers	Killer™ 2100 Driver and Software Suite contains: Control Panel Application & Tray Indicator Advanced Game Detect™ (traffic classification) Visual Bandwidth Control™ Application Blocker Online Gaming PC Monitor™ UDP traffic offload & acceleration Windows Network Stack bypass

End User License Agreement

View the Bigfoot Networks End User License Agreement at:

http://www.bigfootnetworks.com/eula

Open Source and Third Party Software

Part 1. GPL Source Usage

Bigfoot Networks Killer™ 2100 is based in part on the work of open source software which falls under the GNU General Public License (GPL). For instructions on how you can obtain a copy of any source code made publicly available by Bigfoot Networks related to software used in this product, you may send a request in writing to the address below. Please provide as much specific information about the product and software requested as possible:

Bigfoot Networks
Open Source Administrator
12301-B Riata Trace Parkway
Suite 110
Austin, Texas 78727

You may find a full copy of the GPL 2.0 license here:

http://www.gnu.org/licenses/gpl-2.0.txt

Part 2. Other Source Usage

Bigfoot Networks Killer™ 2100 is based in part on the work of Qt (**http://qt.nokia.com**) under the terms and conditions contained in the GNU LGPL version 2.1 (**http://www.gnu.org/licenses/lgpl-2.1.html**).

Bigfoot Networks Killer™ 2100 is based in part on the work of Qwt project (**http://qwt.sf.net**).

EMC - Electromagnetic Compatibility

AUSTRALIA/NEW ZEALAND

CAUTION

This is a Class A product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

Australian C-tick Label:

N420

The computer in which the Killer 2100 Gaming Network Card is installed should have a label indicating EMC compliance as shown above. If it has an external plug-in power supply, such power supply should have labels indicating EMC and Safety Compliance as shown below:

NXXX Approval Number: xxxxxx