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User Guide

# **12.2 Network Connections**

Your Router supports various local area network (LAN) and wide area network (WAN, on Internet) connections via Ethernet or coaxial cables. The Network Connections screen is used to configure the various parameters of the Router's network and Internet connections, and to create new connections.

To edit your connection settings, from the top navigation menu, select **My Network.** Next, select **Network Connections** in the left submenu. The following screen appears.

Determine which screen you are viewing by looking at the buttons on the bottom of the page. If the third button from the left displays **Advanced**, as shown below, this means you are viewing the basic Network Connections screen. Conversely, if the third button from the left displays **Basic**, this means you are viewing the advanced Network Connections screen. To go to the basic screen, click the **Basic** button.

For example, to go to the advanced Network Connections screen, click the Advanced button.





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The advanced Network Connections screen displays additional links that allow you to access various connection settings in your Router. The following sections describe the different network connections available in the Router, as well as the connection types that can be created.

veri	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main			Netwo	rk Connections		
Network Status	E	1.00	Name		Status	Action
Notwork Connections	Net Net	Vetwork (Home/Office)			cted	<u></u>
Network connections		Ethernet Switch		1 Port	1 Ports Connected	
Logout	ล	Wireless 802.11g Acc	ess Point	Conne	cted	× *
	Sec. Sec.	adband Connection (Et	hernet)	Conne	cted	X
	S Bro	adband Connection (C	oax)	Down		7
	💊 wa	N PPPoE		Conne	cted	N 🗱 🖉
	New Co	nnection				4



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# 12.2.1 Network (Home/Office) Properties

In the **Network Connections** screen, click the **Network (Home/Office)** link to access the Router's local network properties. The Network (Home/Office) connection is a bridge that is used to combine several network devices under one single "virtual network." For example, a home/office network can be created that includes your Ethernet Switch as well as your Wireless computers. Network (Home/Office) is the Router's default setting.

At this screen, do any of the following:

- Click the Ethernet Switch link to edit the Router's Ethernet Switch properties.
- Click the **Coax** link to edit the Router's Coax properties.
- Click the Wireless 802.11g Access Point link to edit the Router's Wireless 802.11g Access Point properties.
- Click the IP Address Distribution link to access the Router's IP Address Distribution settings.





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## 12.2.1.1 COAX

If you click the **Coax** link in the **Network (Home/Office) Properties** screen, the following screen appears. View the coax properties in this screen. If you change the connection name, click **Apply** to save the changes. Then, click **OK** to return to the **Network Connections** screen.

veri	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Connection Properties Configure Connection Logout		Name: Status: Network: Connection Type: Received Packets Sent Packets:	Соа	x Properties	ce) xx (MOCA) Disable	

## **Configure Connection (Coax)**

If you select **Configure Connection** from the left submenu, the following screen appears. In this screen, you can do any of the following:

- Enter the desired properties for the coax connection, and then click **Apply** to save the settings.
- Click the View Coax Node Detailed Stats link to view the Coax statistics page
- Click the **Go to Coax Stat** link to view the coax statistics

Veri Main	Vireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main			Cor	figure Coax		
Connection Properties Configure Connection Logout		General Device Name: Status: Schedule: Network: Connection Type	1	LAN-en2210 Down Always V Network (Home/Office) Multimedia over Coi	ax (MOCA)	
1		MOCA Settings Vendor ID: Channel:		WESTELL 15 (1150 MHz)	~	
		MOCA Privacy: Password:		Enabled 66947388374966		
		CM Ratio: Go to Coax Stats		O Network Coordinator	🔿 Client 💿 Auto	
			и ок	! Apply	icel	



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## Go to Coax Stats

If you clicked the **Go to Coax Stats** link in the **Configure Coax** screen, the following screen appears. This screen displays the Tx/Rx rate between the Router and other devices or nodes in a MoCA network. View the information in this screen, and then click **Close** to return to the **Configure Coax** screen.

Main	Wireless My Net	vork	Firewall Se	ettings	Parental Con	trol	Advanced	Syste	m Monitoring
1				Coa	x Stats				
bax Connection Stats	Coax Settings Channel: MOCA Privacy: Password:				1150 MHz Disabled 669473883	74966			
	Coax Stats	Douton	Davica 1	Davisa 2	Davisa 2	Davica 4	Davica F	Davisa 6	Davisa 7
	MAC Address	NIA	Device 1	N/A	N/A	N/A	Device 5	N/A	N/A
	IR Address	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Pouter	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Device 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Device 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Device 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Device 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Device 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Device 6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
			1970/201	10000	10.00				

## 12.2.1.2 Ethernet Switch Properties

For example, if you click the **Ethernet Switch** link in the **Network (Home/Office) Properties** screen, the following screen appears. View the properties in this screen. If you change the connection name, click **Apply** to save the changes. Then, click **OK** to return to the **Network Connections** screen.





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## 12.2.1.3 Wireless 802.11g Access Point

To view the wireless access properties, in the **Network (Home/Office) Properties** screen, click the **Wireless 802.11g Access Point** link. The following screen appears. View the wireless properties in this screen. If you change the connection name, click **Apply** to save the changes. Click **OK** to return to the **Network Connections** screen.

veri	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Connection Properties Configure Connection		Name: Status: Network: Connection Typ MAC Address:	Wireless 802.11	g Access Point Prop Wireless 802.11g Acce Connected Network (Home/Offi Wireless 802.11g Ac 00:21:19:4e	ce) ccess Point	
Wireless Status Basic Security Settings Advanced Security Settings		IP Address Dist Encryption: Received Packe Sent Packets: Time Span:	ribution: ets:	Disabled WEP 1435 10670 19:51:09		
Advanced Logout	J		( ✓ ОК	? Apply X Car	icel	

## **Configure Connection—Wireless 802.11g Access Point**

If you select **Configure Connection** from the left submenu, the following screen appears. Configure your wireless access point properties, and then click **Apply** to save the settings. Refer to section 11, "Wireless," for details on the following wireless features listed in the left submenu of this screen.

- Wireless Status
- Basic Security Settings
- Advanced Security Settings
- Device List
- Advanced

veri	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main		_	Configure Wirele	ess 802.11g Access	5 Point	
Connection Properties Configure Connection		General Device Name: Status: Schedule: Network:		ath0 Connected Always 💌 Network (Home/Office	)	
Wireless Status Basic Security Settings Advanced Security Settings		Connection Typ Physical Addre MTU:	e: ss:	Wireless 802.11g A 00:21:63:22:19:de Automatic	ccess Point 1500	
Device List			С и ок	t Apply	ncel	
Logout						



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## 12.2.1.4 IP Address Distribution

If you click the **IP Address Distribution** link in the **Network (Home/Office) Properties** screen, the following screen appears. This screen allows you to access your Router's DHCP settings. See section 15.27 for details on DHCP settings.

veri	on								
Main	Wireless	My Network	Firewall Settings	Parental C	Control Advanced	System Monitoring			
Main		IP Address Distribution							
IP Address Distribution		Name Network (Home/Office)	Service DHCP Server	Subnet Mask 255.255.255.0	Dynamic IP Range 192.168.1.1 - 192.168.1.254	Action			
Logout		(	€ Close	Connection List	Access Control				



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# **12.2.2 Broadband Connection (Ethernet)**

The Router's Broadband Connection types describe the interface used to connect your Router to your broadband network. Broadband Connection (Ethernet) means that Ethernet is the hardware used to connect the Router to the Internet. By factory default, Broadband Connection (Ethernet) is Disabled in the Router. However, you can Enable this connection type. To Enable Broadband Connection (Ethernet) you must (1) connect your Router to your existing network device using an Ethernet cable, as described in section 5.1, and (2) configure your Router's network connection settings for the physical connection type.

**NOTE:** After you have installed the Router to your network and turned on the Router, it will automatically detect which connection protocol type is being used.

In this example, the Router is connected to the broadband network using the Router's **WAN** port. Remember, when you use the Router's **WAN** port, you must also configure the Router's network connection settings.

To configure the Router's network connection settings, click the **My Network** icon in the top navigation menu, and then click **Network Connections** in the left submenu. In the **Network Connections** screen, click the **Broadband Connection (Ethernet)** link.

Main	Wireless My Network Firewall Setting	gs Parental Control	Advanced	System Monitoring
in	Ne	twork Connections		
etwork Status	Name		Status	Action
etwork Status	Vetwork (Home/Office)	Connecte	ed	<u> </u>
etwork Connections	💧 Coax	Down		<u>\</u>
	Sethernet Switch	1 Ports C	onnected	1
gout	Wireless 802.11g Access Point	Connecte	d	N 🗱 🖉
	Broadband Connection (Ethernet)	Connecte	ed .	1
	Broadband Connection (Coax)	Down		1
	S WAN PPPOE	Connecte	d	N 🗱 👘
	New Connection			4



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The following screen appears. View the connection setting properties in this screen. If you change the connection name, click **Apply** to save the changes.



## 12.2.2.1 Configure Connection—Broadband Connection Ethernet

In the **Broadband Connection (Ethernet) Properties** screen, select **Configure Connection** in the left submenu. The following screen appears. Next, click the **Quick Setup** button.

ver	on					_
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Connection Properties <b>Configure Connection</b> QoS Advanced		General Device Name: Status: Schedule: Network: Connection Ty Physical Addr MTU:	Configure Broadb pe: ess:	eth1 Connected Nways WAN Ethernet 00 : 18 : 3a Automatic	thernet) 	
Logout		( ✓ ок	T Apply	X Cancel Quick S	ietup) 🕜 Refres	h



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The following screen appears. Select **Ethernet** from the **WAN Interface** drop-down list. Selecting **Ethernet** Enables the **WAN** port on the rear of your Router. When the WAN port is Enabled, this means you are connecting from the **WAN** port on the Router to another device on your network, for Internet access. Click **Apply** to save the settings.

**NOTE:** Verizon provides the protocol mode for your connection to the Internet. Depending on your connection type, a login user name and password may be required. These values are provided by Verizon.

Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Quick Setup Logout		Broadband Co WAN Interface Internet Conn Broadband Co Protocol Mode Continue Broadba Current Protoc Name: Status: IP Address: DNS Server Login User Na Login User Na Login Jasswoi Click Here for A	Q nnection Device e: ections nnection Protocol wide and Protocol detect nd Detect Default: col Type: v: me: rd: dvanced Settings Press the Refrest Vok (1 Apple)	Auto AUTO DETECTION Auto AUTO DETECTION AUTO DETECTION MONCA Auto Automatic IP (DHCP) • Point-to-Point Protoco WAN PPPOE WAN PPPOE WAN PPPOE Unif-90.1 10.16.10 10.16.10 10.10	viol over Ethernet (PF	PPoE)



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## 12.2.2.2 QoS—Broadband Connection Ethernet

NOTE: This section is only intended to be modified by a Verizon technician. Any changes to this section may result in a disruption of service.

If you select **QoS** in the left submenu of the **Broadband Connection** (Ethernet) **Properties** screen, the following screen appears.

	۲	22	55	٩	<b>N</b>	
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
		Br	oadband Conne	ction (Ethernet) Pr	operties	
Main		WI AN California				
Connection Properties		Ingress Policy:	Untagged (Do	Not Add VLAN Header) 🔽		
Confirme Constanting		VLAN ID	Egress Pol	icy Action		
Configure Connection		New Entry				
QoS		Egress Rate Lin	nit			
		Enabled				
Advanced		QoS Classifiers				
Logout		V 8021p				
Logodt		le ascp				
		port				
			<b></b>			
			VOK	T Apply X Car	icel	
	-					

You may use this section to remove VLAN tags to your incoming (Ingress) packets, or to allow specific tagged packets to enter. To add a new entry, click the **New Entry** link. The following screen appears. Enter the desired port in the **VLAN ID** in the field, and then select an Egress Policy from the drop-down list. Click **OK** to continue.

ver	ion					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Add Port to a VLAN Logout		VLAN ID: Egress Policy:	Add F	Port to a VLAN Untagged (Remove V Tagged (Do Not Remove V Untagged (Remove V X Cancel	AN Header) V vve VLAN Header) AN Header)	
						,



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After you click **OK**, the following screen appears, indicating that your management console might require reloading. Click **OK** to continue, and then please wait a brief moment while the page reloads.



The following screen appears. The VLAN ID displays the port that you added and the policy assigned to the port. Click **Apply** to save the settings.

ver	izon							
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring		
Main		VLAN Setting	Broadband Conne s	ction (Ethernet)	Properties			
Connection Properties		Ingress Polic	y: Untagged (Do	Not Add VLAN Header)	1			
Configure Connection		VLAN ID	Egress Poli	cy Actio	n			
		7	Untagged (Remove VLAN	Header)				
QoS		8	Untagged (Remove VLAN	Header)				
Advanced		New Entry	Limit					
Logout	Egress Rate Limit  Enabled QoS Classifiers  8021p  dscp port							
			( ✓ ок ) (	T Apply	Cancel			

For outgoing (Egress) packets you may enable a **Rate Limit** by checking the rate limit check box, and you may also enable the pass through of standard QoS classifiers. These are 802.1p, DSCP, and port tags. **Note that any changes to your egress setting will likely result in a disruption of your FiOS service.** 



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## 12.2.2.3 Advanced—Broadband Connection Ethernet

If you select **Advanced** in the left submenu of the **Broadband Connection (Ethernet) Properties** screen, the following screen appears. To add a new IP address, click the **New IP Address** link.

ver	i <mark>zon</mark>					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Connection Properties Configure Connection QoS		I Additional IP	Broadband Conner Addresses	Ction (Ethernet) Pr New IP Address ! Apply	operties	-
Logout						

The following screen appears. Enter the desired IP Address and Subnet Mask in the fields provided. Then, click **Apply** to allow the settings to take effect.

vei	ri <mark>zon</mark>					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Additional IP Address Settings Logout		IP Addr Subnet	Additional ess: Mask:	IP Address Setting 0.0.0.0	s .0 .0	
				! Apply	ncel	



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The entry will be added to the list of broadband connection IP addresses.

	30				
Main W	/ireless My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main		Broadband Conne	ction (Ethernet) Prop	erties	
	Additional IF	Addresses			
Connection Properties		IP Address	Subnet Mask	Action	
Configure Connection	10.16.90.28		255.255.255.0	A 🕺	
	10.16.90.29		255.255.255.0	A 🗶	
QoS	New IP Addr	ess		4	

## 12.2.3 Broadband Connection (Coax)

To access the Router's broadband configurations (Coax), click the **My Network** icon in the top navigation menu. Then, click **Network Connections** in the left submenu. The following screen appears. This screen displays the interfaces that can be used to connect the Router to your broadband network. In this setup, Coax is Connected and Ethernet is Disabled. This means that Coax is the hardware used to connect the Router to the Internet. To access the settings for broadband connection (Coax), click the **Broadband Connection (Coax)** link.

veri	on				
Main	Wireless My Netwo	rk Firewall Settings	Parental Contro	Advanced	System Monitoring
Main		Netwo	ork Connections	;	
Natural Chatur		Name		<u>Status</u>	Action
Network Status	Network (Home/Of	fice)	c	Connected	<u> </u>
Network Connections	<u>Coax</u>		C	Down	
	Settlernet Swite	<u>ch</u>	1	Ports Connected	<u> </u>
Logout	Wireless 802.	11g Access Point	C	Connected	🔨 🗱 –
	Broadband Connec	ction (Ethernet)	0	Disabled	<u> </u>
	Broadband Conner	tion (Coax)	c	Connected	<u>\</u>
	WAN PPPOE		C	Connected	🔨 🎇
	New Connection				-



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The following screen appears. This screen displays the properties for broadband connection coax. If desired you can change the connection name. To change the name, type your desired name in the **Name** field. Click **Apply** to save the change.



## 12.2.3.1 Configure Connection —Broadband Connection Coax

To configure the Router's Broadband Connection (Coax) settings, click **Configure Connection** in the left submenu. The following screen appears. Enter the desired settings for your broadband (coax) connection, and then click **Apply** to save the settings.

ver	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main		C	onfigure Broad	band Connection	(Coax)	
Connection Properties Configure Connection QoS Advanced		General Device Name: Status: Schedule: Network: Connection Type Physical Address MTU:	:	WAN-en2210 Down Aways V WAN Multimedia over Co 00 : [18 : ]3a Automatic	▼ a× (MOCA) : a3 : 0c : 5b ▼ 1500	
Logout	J	MOCA Settings Vendor ID: Channel:		WESTELL 9 (1000 MHz)		
		Auto Detection: MOCA Privacy: Password:		Cn     Enabled     Cn     Enabled     G6947388374966     Nature als	⊖ off	
		CM Ratio: Last Operating F Go to Broadband C	requency: Connection (Coax) St	O Network Coordinator 0 MHz ats	🔿 Client 💿 Auto	
			! Apply	X Cancel Quick	Setup	



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## Go to Broadband Connection (Coax) Stats

If you click the **Go to Broadband Connection (Coax) Stats** link in the preceding **Configure Broadband Connection (Coax)** screen, the following screen appears. To display the most current values, click **Refresh**. To return to the **Configure Broadband Connection (Coax)** screen, click **Close**.

Main	Wireless My Net	vork	Firewall S	ettings	Parental Cor	itrol	Advanced	Syste	m Monitoring
in <b>-</b>			Broad	oand Coni	nection (C	oax) Stat	5		
Constantion Chains	Coax Settings								
oax connection Stats	Channel:				1000 MHz				
agout	MUCA Privacy:				Enabled	ting			
Juni	Coax Stats				Auto Detec	ung			
	Connection Speed	Router	Device 1	Device 2	Device 3	Device 4	Device 5	Device 6	Device 7
	MAC Address	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	IP Address	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Router	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Device 1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Device 2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Device 3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Device 4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Device 5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Device 6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Device 7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

12.2.3.2 QoS—Broadband Connection Coax

NOTE: This section is only intended to be modified by a Verizon technician. Any changes to this section may result in a disruption of service.

If you select **QoS** in the left submenu of the **Broadband Connection** (**Coax**) **Properties** screen, the following screen appears. You may use this section to remove VLAN tags to your incoming (Ingress) packets, or allow specific tagged packets to enter. To add a new entry, click the **New Entry** link.

		22		4	a)		
Main	Wireless	My Network	Firewall Setti	ngs Parental	l Control	Advanced	System Monitoring
· · · · · · · · · · · · · · · · · · ·	<i>r</i>						
n			Broadband	Connection (C	Coax) Prop	erties	
naction Properties		VLAN Settin	gs				
inection Properties		Ingress Pol	icy: Untag	ged (Do Not Add VLA)	Action		
figure Connection		7	Untagged (Remov	e VLAN Header)			
5		8	Untagged (Remov	VLAN Header)	*		
		New Entry			-		
ranced		Egress Rate	e Limit				
out		Enabled					
		✓ 8021p	lers				
		dscp					
		🔲 port					
			• ок	Apply	Cane	cel	



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The following screen appears. Enter the desired port in the VLAN ID field, and then select an Egress Policy from the drop-down list. Click **OK** to continue.



After you click **OK**, the following screen appears, indicating that your management console might require reloading. Click **OK** to continue, and then please wait a brief moment while the page reloads.

ver	on							
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring		
Main Add Port to a VLAN			Add F	Port to a VLAN				
Logout	Brows	Attention      Browser Reload: Wireless Broadband Router Management Console might require reloading.      Press OK to confirm.						
			<ul><li>✓ ок</li></ul>	X Cancel				



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The VLAN ID table will display the port that you added. Click Apply to save the settings.

ver	izon					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Connection Properties		VLAN Settin Ingress Pol	Broadband Con	Not Add VLAN Header)	Properties	
		VLAN ID	Egress Pol	icy Actio	n	
Configure Connection		7	Untagged (Remove VLAN	l Header) 🛛 🙀		
QoS		8	Untagged (Remove VLAM	l Header) 🛛 🙀		
		5	Untagged (Remove VLAM	l Header) 🛛 🗱		
Advanced		New Entry		· · · · · · · · · · · · · · · · · · ·		
Logout		Egress Rate	e Limit			
		☐ Enabled QoS Classifi ♥ 8021p ♥ dscp ☐ port	iers			
				* Apply	Cancel	

For outgoing (Egress) packets you may enable a **Rate Limit** by checking the rate limit check box, and you may also enable the pass through of standard QoS classifiers. These are 802.1p, DSCP, and port tags. **Note that any changes to your Egress setting will likely result in a disruption of your FiOS service.** 

## 12.2.3.3 Advanced—Broadband Connection Coax

If you select **Advanced** in the left submenu of the **Broadband Connection** (**Coax**) **Properties** screen, the following screen appears. To add a new IP address, click the **New IP Address** link.

Main Wireless	My Network Firewall Se	ttings Parental Control	Advanced	System Monitoring		
1ain	Broadban	d Connection (Coax) Prope	rties			
Connection Properties	Additional IP Addresses					
	IP Address	Subnet Mask	Action			
Configure Connection	10.16.90.20	255.255.255.0				
2oS	New IP Address	255.255.255.0				
	New IT Address					
Advanced						
	0		1			



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The following screen appears. Enter the desired IP Address and Subnet Mask in the fields provided. Then, click **Apply** to allow the settings to take effect.

ver	i <b>zon</b>					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Additional IP Address Settings Logout		IP Addr Subnet	Additional ess: Mask:	IP Address Setting:	s . 0 . 0	
			<u> ок</u>	T Apply	ncel	

The entry will be added to the list of broadband connection IP addresses.

Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main			Broadband Con	nection (Coax) Prop	erties	
Connection Properties		Additional IP Addresses				
		10.16.90.28	IP Address	Subnet Mask 255, 255, 255, 0	Action	
Configure Connection		10.16.90.29		255.255.255.0	1	
QoS		10.16.90.14		255.255.255.0	1 1	
Advanced		10.16.90.25		255.255.255.0	1.2	
Advanced		New IP Addre	ess			
Logout						
			✓ OK	! Apply	el	



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# **12.2.4 WAN PPPoE**

WAN Point-to-Point Protocol over Ethernet (PPPoE) is a protocol used to connect the Router to the Internet. PPPoE enables Ethernet-networked computers to exchange information with computers on the Internet.

**NOTE:** The protocol used for your Internet connection is determined by Verizon. The Router is capable of automatically detecting the protocol used for your Internet connection.

If you are configuring your Router's protocol setting for WAN PPPoE, in the **Network Connections** screen, select the **WAN PPPoE** link.

Main	Wireless My	Network Firewall Settings	Parental Control	Advanced	System Monitoring
ain		Netwo	rk Connections		
Natural Castro		Name		Status	Action
Network Status	😽 Network (Ho	me/Office)	Connec	ted	A 26
letwork Connections	💧 Coax		Down		7
Second Second	S Etherne	t Switch	1 Ports	Connected	1
logout	Wireles	s 802.11g Access Point	Connec	ted	N 🗱
	Sroadband (	Connection (Ethernet)	Connec	ted	7
	A Broadband	Connection (Coax)	Down		7
	S WAN PPP6E		Connec	ted	X 🗱
	New Connectio	1			4

The following screen appears. View the details in this screen. If desired, you can change the connection name. To change the name, type your desired name in the **Name** field. Then, click **Apply** to save the changes. Select an option in the left submenu to access that configuration page:

- Select Configure Connection to access the WAN PPPoE Properties screen.
- Select **Routing** to configure the Routing properties for your WAN PPPoE. Refer to section 15.23 for details on Routing.
- Select **PPP** to configure the Router's PPP settings.

The following sections describe these options.

Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
in			WAN P	PPoE Properties		
n nnection Properties nfigure Connection sting b nout		Name: Status: Network: Underlying Devi Connection Typ Default Gaewa DNS Server: Service Name: User Name: Received Packets: Time Span:	ce: 21 /: 15:	WAN PPPsE Connected WAN Broadsand Connect Prof. 6 0.12 10.16.90.1 10.16.16.6 10.16.16.6 username@yoursp. 0 0 0.08.18	ion (Ethernet) net	



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## **Configure Connection—WAN PPPoE**

To configure the WAN PPPoE properties, click **Configure Connection** in the left submenu of the **WAN PPPoE Properties** screen. The following screen appears. Enter the desired settings and click **Apply** to save the settings.

	3	2	55	۲	3	
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
ain			Config	ure WAN PPPoE		
connection Properties		General	-			
0		Status:	6	Connected		
oningure connection		Schedule:		Always M		
outing		Connection T	ype:	PPPoE		
P		MTU:		Automatic M 1492		
		Internet Pro	tocol uboat Marks	Obtain an IP Address A		
gaut		DNS Server	opper maak.	Obtain DNS Server Ad	dress Automatically	

## **Routing—WAN PPPoE**

To configure the Router's Routing properties, click **Routing** in the left submenu screen. The following screen appears. If you change the settings in this screen, click **Apply** to save the settings. To configure the advanced Routing properties, select **Advanced** from the **Routing** drop-down list.





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If you selected **Advanced** in the preceding screen, the following screen appears. Enter the desired values and click **Apply**. To add a new route, click the **New Route** link.

verizo	n				
Main W	reless My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main		WAN PP	PoE Properties		
Connection Properties	Routing		Advanced V		
Configure Connection	Device Metric		1		
Routing	Default Rout	e GMP Provy Default			
PPP	Routing Info	rmation Protocol (RIP)			
Logout	Listen to Send RIF	RIP Messages: Messages:	None V		
Logour	Routing Table	Tressagest	New Route		
		( VOK	? Apply		

If you clicked New Route in the preceding screen, the following screen appears. Enter the desired routing values and click **OK** to save the settings.

ver	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Route Settings Logout		Name: Destinat Netmask Gateway Metric:	Ro :: :	WAN PPPOE           0         0         0         0         0         255         255         255         255         0	55 · 0 • 255 • 0	
			(_√ок	X Cancel		



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## PPP-WAN PPPoE

NOTE: The settings in the screen are provided by Verizon. Do not change the settings unless instructed by Verizon.

To configure the Router's PPP properties, click **PPP** in the left submenu screen. The following screen appears. If you change the settings in this screen, click **Apply** to save the settings. The new Route will be added to the Routing table.

ver	i <mark>zon</mark>					
	2	22	-	۲	$\geq$	
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main			WAN P	PPoE Properties		
Connection Properties		PPP PPP Authentic	ration			
Configure Connection		Login User Name: usemame@yourisp.net				
Routing		Login Passwo Support Une	rd: encrypted Password (PA	P)		
PPP		Support Ch	allenge Handshake Auth	entication (CHAP)		
Logout		Support Mic	rosoft CHAP (MS-CHAP) rosoft CHAP Version 2 (	MS-CHAP v2)		
Logoat		PPP Compres	sion			
		BSD:		Allow 🗠		

## 12.2.5 Status

To view the status of the Router's connections, in the **Network Connections** screen, click the **Status** button at the bottom of the page.

Main	Wireless My Network	Firewall Settings	Parental Control	Advanced	System Monitorin
Main		Netwo	rk Connections		
Network Status		Name	Cine	Status	Action
Network Connections	Coax		Down	cted	<u></u>
Network connections	Setternet Switch		1 Ports	Connected	5
Logout	Wireless 802.11g /	Access Point	Conne	cted	1
	Broadband Connection	(Ethernet)	Conne	cted	7
	Sroadband Connection	(Coax)	Down		7
	S WAN PPPOE		Conne	cted	N 18
	New Connection				4



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The following screen appears. This screen displays connection information for devices connected to your Router. At this screen, do any the following:

- Click the Automatic Refresh On/Off button to turn on/off Automatic Refresh. When Automatic Refresh is On, the screen will be updated automatically to display the most current statistics.
- Click the **Refresh** to manually refresh this screen.
- Click the links in this screen to access the Router's connection settings.
- Click **Close** to return to the **Network Connections** screen.

Main	wi	reless	My Network	Firewall Setti	ngs Parer	ntal Control	Advanced	System Monitoring
			Full State	ıs/System w	ide Monitori	ng of Connecti	ons	
us/System	Name	Network (Home/Office)	Ethernet Switch	Broadband Connection (Ethernet)	Coax	Broadband Connection (Coax)	Wireless 802.11g Access Point	WAN PPPoE
toring of	Status	Connected	1 Ports Connected	Connected	Down	Down	Connected	Connected
ut	Network	Network (Home/Office)	Network (Home/Office)	WAN	Network (Home/Office)	WAN	Network (Home/Office)	WAN
Und Dev Con Type	Underlying Device	Ethernet Switch Coax Wireless 802.11g Access Point						Broadband Connection (Ethernet)
	Connection Type	Bridge	Hardware Ethernet Switch	Ethernet	Multimedia over Coax (MOCA)	Multimedia over Coax (MOCA)	Wireless 802.11g Access Point	PPPoE
	MAC	00:18:3a:a3:0c:5a	a 00:18:3a:a3:0c:5a	00:18:3a:a3:0c:	5b	00:18:3a:a3:0c:5b	00:21:63:22:19:de	
	IP Address	192.168.1.1						10.16.90.12
	Subnet Mask	255.255.255.0					verizonfios	
	Default Gateway							10.16.90.1
	DNS Server							10.16.16.8 10.16.16.2
	IP Address Distribution	DHCP Server	Disabled	Disabled			Disabled	
	Service							
	User Name							username@yourisp.net
	Received Packets	17302	18964	44681	0	0	2237	0
	Sent Packets	94558	71920	40409	0	0	14802	0
	Time Span	24:53:44	24:53:44	0:32:25			21:39:57	0:15:28



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# **13. FIREWALL SETTINGS**

The **Firewall Settings** section provide access to all your Router's security functions. Click **Firewall Settings** in the top navigation menu to enter the settings menu.

CAUTION: Only Advanced Users should access the firewall settings.

ve	eri <b>zo</b> n		1.12			
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main				General		
General Logout		Modifyir	ng configuration options o I Do yo	on the following page may performance. u want to proceed?	affect the Router's	
			Var	No		



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# **13.1** General Firewall Security Settings

This section explains how to configure your Router's firewall security features. The Router's firewall security settings allow you to reduce the risk of unauthorized access to your network by prohibiting certain types of inbound and outbound network traffic and by allowing you to configure specific firewall rules.

**IMPORTANT:** If you need help, click **Main** in the top navigation menu to go to the home page. In the **Quick Links** section of the home page, click **Verizon Help**. Clicking this link takes you to Verizon's Online Help site, where you can access additional information about your Router.

To change your firewall security level, click the option button next to the desired security setting. Next, click **Apply** to allow the changes to take effect.

veri	on						
	۲		25	۹	3		
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring	
Main				General			
General		O Maximur	n Security (High)				
Access Control		Inbound Policy: <b>Reject.</b> Remote Administration settings will override the security inbound policy: <b>Reject.</b> Outbound access is allowed to the following services: Telnet, FTP, HTTPS, DNS, IMAP, IPSec, POP3, SIP, H323 and SNTP.					
Port Forwarding							
DMZ Host							
Port Triggering		Typical 9	Security (Medium)				
Remote Administration		Inbound Policy: Reject. Remote Administration settings will override the security inbound policy: Outbound Policy: Accent					
Static NAT							
Advanced Filtering							
Security Log		O Minimum Inbour	n Security (Low)		150	A	
Connections		Outbo	und Policy: Accept.		N/P	*	
Logout		Block IP F	ragments				
				••••			
			- OK	: Apply	cel		

	General Firewall Settings
Maximum Security	High security level only allows basic Internet functionality. Only Mail, News, Web,
(High)	FTP, VoIP/SIP and IPSEC traffic is allowed. All other traffic is prohibited.
Typical Security	Like High security, Medium security only allows basic Internet functionality by
(Medium)	default. However, Medium security allows customization of Network Address
	Translation (NAT) so you can enable certain types of traffic. This is the factory
	default security level.
Minimum Security	Low security setting will allow all traffic except for known malicious attacks. With
(Low)	Low security, your Router is visible to other computers on the Internet.
Block IP Fragments	This option can prevent hackers from using fragmented data packets to possibly
	sabotage your network. Note: Some VPN and UDP services use IP fragments, and
	this feature may need to be disabled. If you have questions about this feature, check
	with Verizon technical support. It is disabled (box is unchecked) by default.



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# 13.2 Access Control

If you select **Firewall Settings** in the top navigation menu and then select **Access Control** in the left submenu, the following screen appears.

Access Control is used to block specific computers within the local network (or even your entire network) from accessing certain services on the Internet. For example, one computer can be prohibited from surfing the Internet, another computer from transferring files using FTP, and the whole network from receiving incoming E-mail. Access control defines restrictions on the types of requests that can pass from the local network out to the Internet, and thus may block traffic flowing in both directions.

To add an Access Control rule, click the New Entry link or, alternatively, you can click the plus icon.



Adding a new entry will allow you to choose a device from the known network devices (For example, your computers) or enter a MAC address of a new device. Then you must choose the Protocol (or service) to be blocked.



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# **13.2.1 Selecting an Address**

From the Address drop-down list, select the desired computer to which you want to apply this rule.

veri	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Add Access Control Rule			Add Acc	ess Control Rule		
Logout	j í	Address Protocols		Any  Any User Defined CALLE VP2		
	5	Reply an HTML Page to t chedule	he Blocked Client	SALLE-XP3 Always		_
			( ✓ ок	X Cancel		

If your computer or device is not listed in the drop-down list, you may create a new Network Object manually by choosing the **User Defined** option. Please see section 15.11, "Network Objects," for more details on setting up a network object.

After you have selected a computer, the following screen appears. Next, proceed to section 13.2.2 to select a protocol.

Add Access Control Rule Add Access Control Rule Address Addres	
Logout Address Action DHCP SALLE-XP3 Add.	
Name         Address         Action           DHCP         SALLE-XP3         Image: Control of the second	
Add	
A00 Y	
Protocolo Any A	
Reply an HTML Page to the Blocked Client	
Schedule Aways 🗸	



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# **13.2.2 Selecting an Protocol**

From the **Protocols** drop-down list, select the desired option that you want to prohibit the computer from using. To notify the user of this blockage via an HTML (Web) page, click the check box (a check mark will appear in the box). Note: This feature only works for HTTP services.

To see more than the basic listed services choose **Show All Services** from the **Protocols** drop-down. This will show you many pre-defined services such as games and IM clients.

Main     Main       Main     My Network       Main     Advanced       Add Access Control Rule       Logout       Address       DHCP       SALLE-XP3       Add       Protocols       Ary       Were Replay an HTML Page to the Blocked Client       Stow Al Services       Schedule	
Add Access Control Rule          Address       Address         Logout       Address         Add       Image: Control Rule         Add       Image: Reply an HTML Page to the Blocked Client         Schedule       Image: Reply an HTML Page to the Blocked Client         Image: Reply an HTML Page to the Blocked Client       Stow All Services         Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page to the Blocked Client         Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page to the Blocked Client         Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page to the Blocked Client         Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page to the Blocked Client         Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page         Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page         Image: Reply an HTML Page       Image: Reply an HTML Page         Image: Reply an HTML Page       Image: Reply an HTML Page         Image: Reply an HTML Page       Image: Reply an HTML Page         Image: Reply an HTML Page       Image: Reply an HTML Page         Image: Reply an HTML Page       Image: Reply an HTML Page         Image: Reply an HTML Page       Image: Reply an HTML Page         Image: Reply an HTML Page: Re	System Monitoring
Address Name Address DHCP SALLE-XP3 Add.  Protocols Ary V BerDefined Schedule HTTP HTTPS IMAP LZTP Prig	
DHCP     SALLE-XP3       Add     Image: Constraint of the Blocked Client       Protocols     Any       Image: Constraint of the Blocked Client     Show All Services       Schedule     FTP       HTTPs     IMAP       L2TP     Prog	Action
Add   Protocols  Ary  Protocols  Protoc	
Protocols     Any       Image: Reply an HTML Page to the Blocked Client     User Val Services       Schedule     Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client       Image: Reply an HTML Page to the Blocked Client     Image: Reply an HTML Page to the Blocked Client     Im	
Reply an HTML Page to the Blocked Client     Sour Al Services     HTTP     HTTPS     MAP     LZTP     Png	
HTTP HTTPS IMAP LZTP Png	
IMAP LZTP Prig	
L21P Ping	
✓ OK PPOP3 SMTP	
SNMP	
Teinet TFIP	
Traceroute	

After you have selected the protocol, the following screen appears. Proceed to section 15.21 to configure a schedule rule.

veriz	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Add Access Control Rule			Add Acc	ess Control Rule		
Logout	Add	Iress		Address		Action
	DHO	CP CP	SALLE-XP3	, au coo		*
	Add	···· ·· ·				
	Pro	tocols				
		Name		Ports		Action
	FTP	- File Transfer	TCPAny -> 21			*
	Add					00
		Reply an HTML Page to	the Blocked Client			
	Sch	edule		Always 💉		
			( √ок	X Cancel		



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# 13.2.3 Configuring a Schedule Rule

After you have selected the protocol, the following screen appears. If desired, select a schedule from the **Schedule** drop-down menu. If you select **User Defined**, refer to the procedure explained in section 15.21, "Scheduler Rules," to set up a schedule rule. Otherwise, select **Always**, and then click **OK** to continue.

- Select **Always** to allow the rule to be active all the time.
- Select **User Defined** to allow the rule to be active only at certain time, as defined by the rules you set up.

veri	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Add Access Control Rule		trace	Add Acc	ess Control Rule		
Logout	DH Ad Pro	Name CP d	SALLE-XP3	Address		Action
	Sci	Reply an HTML Page to t nedule	the Blocked Client	Always Always User Defined		
			Слок	X Cancel		

After you have set up a User Defined rule, the following screen will display the rule. Click **OK** to save the settings.

Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitorir
n I Access Control Rule			Add Acc	ess Control Rule		
paout		ddress				
1. <b></b>		Name		Address		Action
		HCP	SALLE-XP3			×
	7	Add 💌				
	P	rotocols				
		Name		Ports		Action
	F	TP - File Transfer	TCPAny -> 21			<b>X</b>
		Add 💌				
		Reply an HTML Page to	the Blocked Client			
	5	chedule				
		Name		Settings		Action
	S	cheduler Rule	Sun between 14:3	80-16:30		1 2



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If the **Status** field displays **Resolving**, this means that the Router is attempting to locate the restricted Web site. Click **Resolve Now** to resolve the Web site.

ver	i <mark>lon</mark>		A		
Main	Wireless My N	Network Firewall Settings	Parental Control	Advanced	System Monitoring
Main General		Block access to I	Access Control	he LAN.	
Access Control	Local Host	Local Address	Protocols	Status	Action
Port Forwarding	SALLE-XP3	SALLE-XP3 (Unresolved)	FTP - TCP Any -> 21	Resolving	<b>N</b>
DMZ Host	New Entry				4
Port Triggering Remote Administration Static NAT		✓ ОК ТАррly	X Cancel Resolve	Now Refres	h
Port Triggering Remote Administration Static NAT Advanced Filtering		✓ OK I Apply	Cancel Resolve	Now Refres	h
Port Triggering Remote Administration Static NAT Advanced Filtering Security Log		✓ OK Apply	Cancel Resolve	Now Sefres	h
Port Triggering Remote Administration Static NAT Advanced Filtering Security Log Connections		JOK Poply	Cancel Resolve	Now Refres	h

The restricted Web site will be resolved into the IP address (or device name) that you have specified, and the **Status** field will display **Active.** 

ver	i <b>7</b> 0n				
Main	Wireless M	y Network	ings Parental Control	Advanced	System Monitoring
Main General		Block access	Access Control	the LAN.	
Access Control	Local Hr	ost Local Address	Protocols	Status	Action
Port Forwarding	SALLE-XP3	SALLE-XP3	FTP - TCP Any -> 21	Active	1
DMZ Host	New Entry				4
Port Triggering Remote Administration Static NAT		✓ ок ! Арріу	Cancel Resolv	ve Now Refre	sh
Port Triggering Remote Administration Static NAT Advanced Filtering		✓ ОК Арріу	Cancel Resolv	ve Now Refre	sh
Port Triggering Remote Administration Static NAT Advanced Filtering Security Log		C ✓ OK C I Apply	Cancel Resolv	re Now Refre	sh
Port Triggering Remote Administration Static NAT Advanced Filtering Security Log Connections		✓ ОК З Apply	Cancel Resolv	ve Now 🤇 🧟 Refre	ah J



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# **13.2.4** Completing the Access Control Rule Configuration

If you clicked **OK**, the following screen appears. The rule has been added to the list of security rules. To disable the security rule for an entry, click the adjacent check box, and then click **Apply**. To add additional access control rules, click the **New Entry** link.

veri	on				
Main	Wireless M	y Network	ettings Parental Control	Advanced	System Monitoring
Main General		Block acces	Access Control	the LAN.	
Access Control	Local Ho	ost Local Address	Protocols	Status	Action
	SALLE-XP3	SALLE-XP3	FTP - TCP Any -> 21	Active	N 🗶
Port Forwarding	C. Critere rive				
Port Forwarding DMZ Host	New Entry				4
Port Forwarding DMZ Host Port Triggering Remote Administration Static NAT	New Entry	( ✓ ОК ) ( 1 Аррі	y X Cancel Resolv	ve Now Refre	sh
Port Forwarding DMZ Host Port Triggering Remote Administration Static NAT Advanced Filtering	New Entry	( ✓ ОК ) ( 1 Аррі	y X Cancel Resolv	ve Now Refre	sh
Port Forwarding DMZ Host Port Triggering Remote Administration Static NAT Advanced Filtering Security Log	New Entry	( ✓ OK ) ( ł Appl	y X Cancel Resolv	re Now ) 🕜 Refre	sh
Port Forwarding DMZ Host Port Triggering Remote Administration Static NAT Advanced Filtering Security Log Connections	New Entry	( ✓ OK ) ( Appl	y X Cancel Resolv	ve Now ) 🕜 Refre	sh



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# **13.3 Port Forwarding**

If you select **Firewall Settings** in the top navigation menu and then select **Port Forwarding** in the left submenu, the following screen appears.

By default the Router blocks all external users from connecting to your network. However, you can configure specific applications on your network to be accessible from the Internet. Port Forwarding allows the Router to enable applications (Games, Webcams, IM & Others) by opening a tunnel between remote (Internet) computers and a specific device port inside your local area network (LAN). Services on the LAN will be exposed to external Internet users.

Main	Wireless	My Networ	k Fire	wall Settings	Parental Control	Advanced	System Monitoring
L 1			Expos	Port se services on th	t <b>Forwarding</b> ne LAN to external Internet us	ers.	
neral							
ccess Control	Local	Local	Network	Public IP	Protocols	Status	Action
ort Forwarding	✓ localhost	127.0.0.1	Any	Any	Verizon FiOS Service - TCP	Active	
MZ Host	New Entry						4
rt Triggering							
emote Administration							
tatic NAT		<	ок	Apply	X Cancel Resolve Nov	v Refre	sh
lvanced Filtering							
a subject and							
ecurity Log							
Connections							



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# **13.3.1 Setting Up a Predefined Port Forwarding Rule**

To set up a predefined port forwarding rule, at the **Security** screen, click the **New Entry** link.

veriz	on						
Main	Wireless	My Networ	'k Fire	wall Settings	Parental Control	Advanced	System Monitoring
Main General			Expos	Por se services on th	t Forwarding ne LAN to external Internet us	ers.	
Access Control	Local	Local	Network	Public IP	Protocols	Status	Action
Port Forwarding	✓ localhost	127.0.0.1	Any	Any	Verizon FiOS Service - TCP	Active	
DMZ Host	New				,, ·		4
Port Triggering							
Remote Administration							
Static NAT		-	ок	Apply	X Cancel Resolve No	N C Refre	sh
Advanced Filtering	L	_					
Security Log							
Security Log Connections							

If you clicked **New Entry**, the following screen appears. In the **Local Host** field, enter a local host name or the IP address of the computer providing the service. If you will use a public IP address, click the check box next to **Specify Public IP Address**.

**NOTE:** Only one computer can be assigned to provide a specific service or application. If you want use public IP addresses in your Router's configuration, you must first obtain them from Verizon.

veri	on						
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring	
Main			Add Port	t Forwarding Rule			
Add Port Forwarding Rule		Specify Public IP Address	5				
		Protocols Forward to Port:	555	Add  Same as Incoming Por	. 🗸		
		Schedule		Piways			
			<ul><li>✓ ок</li></ul>	Cancel			



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Next, select a predefined service from the **Protocol** drop-down list.

**NOTE:** For your convenience, the Router provides predefined protocols for applications, games, and VPN-specific programs.

The screen below displays the protocols of basic services provided in the Router. If you select **Show All Services** from the **Protocols** drop-down list, all available services will be displayed in the drop-down list.

veri	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main			Add Port	Forwarding Rule		
Add Port Forwarding Rule	in the second se	Specify Public IP Addres al Host: Specify Network IP Addr tocols ward to Port: edule	s ress I OK	Add Add User Defined Show Al Services FTP HTTPS IMAP L2TP POP3 SMTP SMMP Telnet	×	

Select a predefined service from the **Protocols** drop-down list.

veri	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Add Port Forwarding Rule Logout	Lo Pr Fo Sc	Specify Public IP Address cal Host: Specify Network IP Addre otocols ward to Port: hedule	Add Port	Add Add Add User Defined Services Alter vs. Predator CuSeMe Dark Reign Dark Reign Dark Reign 2 Decent 3 Decent Treespace DHCP ALG Dealor, StarCh(Battle nr) DirectX Games DHCP ALG Dialor, StarCh(Battle nr) DirectX Games DHCP ALG Dialor, StarCh(Battle nr) DirectX Games DHCP ALG Dialor, StarCh(Battle nr) DirectX Games DHCP ALG Dialor, StarCh(Battle nr) DirectX Games DHCP ALG DIRECT GAMES DHCP ALG DHCP AL	x)	



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After you have selected a predefined service, the following screen appears. Next select an option from the **Forward to Port** drop-down list to indicate the port to which traffic will be forwarded.

veri	on						_
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring	
Main Add Port Forwarding Rule			Add Port	Forwarding Rule			
Logout		Specify Public IP Address cal Host: Specify Network IP Addr	s ess				
	Pr	Name		Ports		Action	
	AI	ien vs. Predator	TCPAny -> 2300- Any -> 7000- UDPAny -> 2300- Any -> 7000- Any -> 80	4000 10000 4000 10000		*	
	A	dd	~				
	Fo	orward to Port:		Same as Incoming Port	~		
	S	hedule		Same as Incoming Port			
			( √ок	X Cancel			

If you selected **Same as Incoming Port** from the **Forward to Port** drop-down list, the following screen appears. Click **OK** to continue.

	Add Port For	warding Rule	
Specify Public IP Address			
Local Host:			
Specify Network IP Address			
Protocols			
Name		Ports	Action
Alien vs. Predator	TCPAny -> 2300-4000 Any -> 7000-10000 UDPAny -> 2300-4000 Any -> 7000-10000 Any -> 80	) )	*
Add	<b>~</b>		
Forward to Port:		Same as Incoming Port 💌	
Schedule		Always 🗸	
	✓ <u>ok</u>	Cancel	



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Next, set up a schedule rule using the instructions explained in section 15.21 "Scheduler Rules." After you have set up a schedule, enter the address of the local Host, and then click **OK** to save the settings.

Specify Public IP Address			
Local Host:			
Specify Network IP Address			
Protocols			
Name		Ports	Action
Alien vs. Predator	Any -> 2300-4000 Any -> 7000-10000 UDPAny -> 2300-4000 Any -> 7000-10000 Any -> 80	)	*
Add 💌			
Forward to Port:		Same as Incoming Port 💌	
Schedule			
Name		Settings	Action
Scheduler Rule	Fri between 14:30-16:3	0	<b>X</b>
	Lov	X Cancel	

If you clicked **OK** the following screen appears. The predefined port forwarding rule has been assigned.

<b>Port Forwarding</b> Expose services on the LAN to external Internet users.									
Local Host	Local Address	Network Address	Public IP Address	Protocols	Status	Action			
Iocalhost	127.0.0.1	Any	Any	Verizon FiOS Service - TCP Any -> 4567	Active				
✓	(Unresolved)	Any	Any	Alien vs. Predator - TCP Any -> 2300-4000 TCP Any -> 7000-10000 UDP Any -> 2300-4000 UDP Any -> 7000-10000 UDP Any -> 80	New	<b>\ #</b>			
New Entry						-			
New Entry	New Entry         7000-10000 UDP Any -> 80								



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# **13.3.2 Setting Up a User Defined Port Forwarding Rule**

To set up a user-defined port forwarding rule, in the Port Forwarding screen, click the New Entry link.

veri	on						
Main	Wireless	My Networ	k Fire	wall Settings	Parental Control	Advanced	System Monitoring
Main General			Expos	Port	t Forwarding ne LAN to external Internet us	ers.	
Access Control	Local Host	Local Address	Network	Public IP	Protocols	Status	Action
Port Forwarding	✓ localhos	t 127.0.0.1	Any	Any	Verizon FiOS Service - TCP Any -> 4567	Active	
DMZ Host	New Entry						4
Remote Administration Static NAT			ок	Apply	X Cancel Resolve No	w Refre	sh
Security Log							
Connections							
Logout							

The following screen appears. In this screen, do the following to add a port forwarding rule:

- Specify the local computer to which you want to apply port forwarding rule. This is done in the **Local Host** field. The field will accept either your computer name (the NetBios name; for example DADS-PC) or the computer IP address. These values can be found on your **My Network page.**
- If you are setting up a NAT/NAPT rule you must also specify the public IP address that data will be coming in on. Check the **Specify Public IP Address** check-box and enter a specific external IP address such as the WAN IP address of the router or a Static NAT IP address.
- Optionally, you can specify a remote network (to forward packets to (this is a network that it outside the control of your Router). This is common in a small business or advanced configuration that uses multiple routers. Select the **Specify Network IP Address** check-box if you would like to apply this rule to send packets to a host IP address outside the local network (such as a remote gaming server). The screen will refresh and present you with a field in which to insert this IP address.

**NOTE:** Only one computer can be assigned to provide a specific service or application. If you use public IP addresses in your Router's configuration, you must first obtain them from Verizon.



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veri	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main			Add Port	Forwarding Rule		
Add Port Forwarding Rule		Specify Public IP Address al Host:	s			
	Pro	vard to Port:		Add Same as Incoming Port	×	
			<ul><li>✓ ок</li></ul>	Cancel		

Next, choose the protocol that you want to forward. You can select from many common applications provided in the **Forward to Port** drop-down list. If you want to define your own port forwarding rule, select **User Defined.** 

on					
Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Loc Pro Sci	Specify Public IP Addres: :al Host: Specify Network IP Addr otocols ward to Port: nedule	Add Port	Forwarding Rule Add Add Add Add User Defined Show Basic Services Alien vs. Predator CurSeeMe Dark Reign Dark		
	ON Wireless	OT Wireless My Network Specify Public IP Address Local Host: Specify Network IP Address Forward to Port: Schedule	ON Wireless Wy Network Firewall Settings Add Port Specify Public IP Address Cocal Host: Specify Network IP Address Protocols Forward to Port: Schedule	OT         Wireless       Wirelwork         My Network       Firewall Settings         Add Port Forwarding Rule         Specify Public IP Address         Local Host:         Specify Network IP Address         Protocols         Forward to Port:         Schedule         Schedule         Image: Construct Set Set Set Set Set Set Set Set Set Se	Off         Wireless       Wirelwork         Image: Specify Public IP Address         Image: Specify Network I



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If you selected **User Defined** in the preceding screen, the following screen appears. If desired, you can name your service by typing the desired name in the **Service Name** field. Next, click the **New Server Ports** link to define the ports for your newly created service.

**NOTE:** At least one server port entry must be defined before you can enter a service name.



The following screen appears. From the **Protocols** drop-down list, select the desired protocol.

Main Wireless	My Network		٨	$\mathbf{X}$	
			Parental Control	Advanced	System Monitoring
Main Edit Service Server Ports		Edit Serv	ice Server Ports		
Logout	Protocols Protocol Numbe	er:	Other 💌 0		
		<ul><li>✓ ок</li></ul>	Cancel		

NOTE: Protocol information should be provided by your application developer or documentation.

Next, enter your protocol number in the Protocol Number field. Click OK to continue.

ver	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Edit Service Server Ports			Edit Ser	vice Server Ports		
Logout		Protocols Protocol Num	ber: V OK	Other V UDP ICMP GRE ESP AH Cher Cancel		



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For example, if you selected **TCP**, from the drop-down list, the following screen appears. Select the desired source and destination port settings from the drop-down lists.

ve	ri <b>zon</b>					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Edit Service Server Ports			Edit Ser	vice Server Ports		
Logout		Protocols Source Ports: Destination P	orts:	Any V Any V		
			€ ✓ ок	Cancel		

To set up a range of ports, select "Range" from the Source Ports and Destination Ports drop-down lists.

ver	i <b>zon</b>					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Edit Service Server Ports			Edit Serv	vice Server Ports		
Logout		Protocols Source Ports: Destination Po	rts:	TCP V Range V Range V 0	- 65535 - 65535	
			С 🗸 ок	X Cancel		

Next, enter the desired port range values in the fields provided, and then click **OK** to continue.

veri	<u>on</u>					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Edit Service Server Ports			Edit Ser	vice Server Ports		
Logout		Protocols Source Ports: Destination Por	ts:	TCP   2     Range   6	- <u>4</u> - <u>8</u>	
			€ ик	X Cancel		



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If clicked **OK** in the preceding screen, the following screen appears. If desired, click the **New Server Port** link to add additional server ports. Then, click **OK** to save the settings.

Ve	eri <mark>z</mark> on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
			-	lit Camilar		
Main			E	alt Service		
Edit Comulas	Service Na	me:	Application			
Eult Service						
Logout	Server Por	ts natocols		Server Ports		Action
	тср	otocols	2-4 -> 6-8	Server roles		
	New Serve	r Ports				4
	New Serve	r Ports	<ul><li>✓ ок</li></ul>	X Cancel		*

Now you must specify a local host for which you to assign this user-defined port forwarding rule. To assign the rule to a public IP address, click the **Specify Public IP Address** check box.

**NOTE:** Only one computer can be assigned to provide a specific service or application. If you want use public IP addresses in your Router's configuration, you must first obtain them from Verizon.

At the Add Port Forwarding Rule screen, you can enter the name of a local host or click the Specify Public IP Address check box to indicate the host or IP Address to which the port forwarding rule will be assigned.

veri	on							
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring		
Main			Add Port	Forwarding Rule				
Add Port Forwarding Rule Logout	Specify Public IP Address Local Host: Specify Network IP Address							
	Pro	Name		Ports		Action		
	Apr	lication	TCP2-4 -> 6-8	TOILS				
	Ad	ł	~					
	For	ward to Port:	house of the second sec	Same as Incoming Port	~			
	Scl	nedule		Always 💉				
			€ ис	X Cancel				



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To assign the port forward rule to a NAT policy (or external IP address) click the **Specify Public IP Address** check box, and enter the appropriate IP address.

veri	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main			Add Port	Forwarding Rule		
Add Port Forwarding Rule Logout	♥s Pub Loca Pro	pecify Public IP Addres lic IP Address: al Host: specify Network IP Addr tocols	s ess	0.0.0	. 0	
		Name		Ports		Action
	App	ication	TCP2-4 -> 6-8		A 🗶	
	Add		~			
	For	ward to Port:		Same as Incoming Port	*	
	Sch	edule		Always 💟		
			( ✓ ок	X Cancel		

From the **Forward to Port** drop-down list, select the desired option to indicate the port to which traffic will be forwarded. This is almost always the same as the incoming port. You may define a custom port map by specifying a new port to send this traffic to. (For example you could forward all the incoming traffic, coming in on Port 80, to an external IP address assigned to your internal computer, except Port 81).

veri	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main			Add Port	Forwarding Rule		
Add Port Forwarding Rule	, P Lo	Specify Public IP Address <b>iblic IP Address:</b> <b>ical Host:</b> Specify Network IP Addre	ss	0.0.0	.0	
	P	otocols				-
		Name	TCP2-4 -> 6-8	Ports		Action
		dd	V			~ ~
	E E	orward to Port:	10200	Same as Incoming Port	~	
	s	hedule		Same as Incoming Port		
			√ ok	Cancel		



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If desired, set up schedules for your port forwarding rules. To add a schedule rule, select an option from the **Schedule** drop-down menu.

- Select **Always** to allow the rule to be active all the time.
- Select **User Defined** to allow the rule to be active only at certain time, as defined by the rules you set up.

If you select **User Defined**, refer to the procedure explained in section 15.21, "Scheduler Rules," to set up a schedule rule. Otherwise, select **Always**, and then click **OK** to continue.

veri	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Add Port Forwarding Rule			Add Port	Forwarding Rule		
Logout		Specify Public IP Address Public IP Address: Local Host: Specify Network IP Addre	55	0.0.0	. 0	
		Protocols Name Application	TCP2-4 -> 6-8	Ports		Action
		Add		Same as Incoming Port	<b>X</b>	
		Schedule		Always Always User Defined		
			🗸 ок	Cancel		

After you have entered the desired values in the preceding screen and clicked **OK**, the following screen appears. Your port forwarding rule will be added to the list of rules. You may need to click **Resolve Now** while the Router is attempting to save the rule to the local host. To disable a port forwarding rule, clear the check box next to the appropriate host name or IP address. Then, click **Apply** to save the setting.

veri	on		_			(	
Main	Wireless	My Network	Firew	all Settings	Parental Control	Advanced	System Monitoring
Main General			Expose	Port services on the	Forwarding	sers.	
Access Control	Local	Local	Network	Public IP	Protocols	Status	Action
Port Forwarding	✓ localhost	127.0.0.1	Any	Any	Verizon FiOS Service - TO	Active	
DMZ Host	any	any (Unresolved)	Any	Any	Application - TCP 2-4 ->	Resolving	N 🗱
Port Triggering	New						4
Remote Administration							
Static NAT							
Advanced Filtering		10	K I	Apply	X Cancel Resolve No	w Refre	sh
Security Log							
Connections							



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# 13.4 DMZ Host

If you select **Firewall Settings** in the top navigation menu and then select **DMZ Host** in the left submenu, the following screen appears. The DMZ (Demilitarized) Host feature allows the user to forward unsolicited inbound WAN traffic to any single IP on the LAN. One computer on your LAN will be fully exposed to the Internet. The designated computer will be connected to your network without regard to firewall security or restrictions. Use this feature in cases where you want to use Internet services that are not available in the Port Forwarding list, such as Web games or video-conferencing.

WARNING: The computer that is configured as a DMZ Host will not have security or firewall protection.

To configure a computer for DMZ Host, click the **DMZ Host IP Address** check box, and then enter the IP Address of the computer that you want to be accessible from the Internet. The computer will answer to the default WAN IP address of the Router. Click **Apply** to save the settings.

To disable DMZ Host (if previously enabled), click to clear the check box. Then click **Apply** to save the settings.

ver	on									
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring				
Main General		A	low a single LAN compu	DMZ Host ter to be fully exposed to	the Internet.					
Access Control Port Forwarding		DMZ Host IP Address: 192 . 168 . 1 . 0								
DMZ Host Port Triggering		✓ OK ? Apply X Cancel								
Static NAT										
Advanced Filtering										
Connections										
Logout										



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# 13.5 Port Triggering

If you select **Firewall Settings** in the top navigation menu and then select **Port Triggering** in the left submenu, the following screen appears. You can define port triggering rules to dynamically open the firewall for specific protocols or ports. The specified ports will be opened for incoming traffic. Port triggering can be used for dynamic port forwarding configuration. By setting port triggering rules, you can allow inbound traffic to arrive at a specific LAN host, using ports different than those used for the outbound traffic. This is called port triggering because the outbound traffic triggers the ports to which inbound traffic is directed.



# 13.5.1 Setting Up a User Defined Port Triggering Rule

To set up a user-defined port triggering rule, in the Add drop-down list, select User Defined.

	20012						
Main V	Wireless	My Network	Firewall Settings	Parental C	control Advanc	ed S	ystem Monitoring
Main General			Port 1 Trigger opening of	<b>Friggerin</b> ports for in	g coming data.		
Access Control		Protocols	Outgoing Trigge	er Ports	Incoming Ports to C	pen	Action
Port Forwarding	L2TP - Lay	yer Two Tunneling P	rotocol UDP Any -> 1701	UD	P Any -> Same as Initia	ting Ports	*
DMZ Host	TFTP - Tri	ivial File Transfer Pro	otocol UDP 1024-65535 -	-> 69 UD	P Any -> Same as Initia	ting Ports	*
Port Triggering Remote Administration Static NAT	Add Add User Defined Show Basic Se CuSeeMe Delta Force ICQ	ervices	✓ ок !	Apply	X Cancel		
Advanced Filtering	Rainbow Six Tiberian Sun						
Security Log							
Connections							
Logout							



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## 13.5.1.1 Configuring Outgoing Trigger Ports

If you selected **User Defined** in the preceding screen, the following screen appears. Enter the desired name in the **Service Name** field. Next, click the **New Trigger Ports** link to configure outgoing trigger ports.

veri	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main			Edit Por	t Triggering Rule		
Edit Port Triggering Rule	Servic	e Name:	Application			
Logout	Outgoi	ng Trigger Ports		Server Ports		Action
	New T	rigger Ports		Server Forts		
	Incom	ing Ports to Open				
	Incom	Protocols		Opened Ports		Action
	New O	pened Ports				-
			( √ ок	X Cancel		

If you clicked **New Trigger Ports**, the following screen appears. Select the desired protocol from the **Protocol** dropdown list.

Ver Main	i on Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Edit Service Server Ports Logout		Protocols Protocol Numi	Edit Ser	Vice Server Ports		-
			(√ok	X Cancel		



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For example, if you selected **TCP** from the **Protocol** drop-down list, the following screen appears. Select the desired source and destination settings from the drop-down lists.

veri	on						
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring	
Main Edit Service Server Ports Logout		Protocols Source Ports: Destination Po	Edit Ser	Vice Server Ports		-	
			( √ ок	Cancel			

For example, if you selected **Single**, the following screen appears. Enter the desired source port and destination port values, and then click **OK** to save the settings.

veri	i <b>-o</b> n		*			
Main	Wireless	My Network	Firewall Settings Edit Ser	Parental Control	Advanced	System Monitoring
Edit Service Server Ports Logout		Protocols Source Ports: Destination P	orts:	TCP     ▼       Single     ♥       0     0	]	
			(_ ✓ ок	X Cancel		



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If you entered source and destination port values clicked **OK** in the preceding screen, the following screen appears. If you desire to configure incoming trigger port, proceed to section 13.5.1.2. Otherwise, click **OK** to continue.

veri	on					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main			Edit Por	t Triggering Rule		
Edit Port Triggering Rule	Servic	e Name:	Application			
	Outgoi	ng Trigger Ports				
Logout		Protocols		Server Ports		Action
2	TCP		20 -> 23			A 🗛 🦉
	New T	rigger Ports				*
	Incom	ing Ports to Open				
		Protocols		Opened Ports		Action
	New O	pened Ports				÷
			€ √ок	Cancel		

If you clicked **OK**, the following screen appears. Click **Apply** to save the settings. If you want to edit a rule, click the pencil icon next to the rule that you want to edit. To delete a rule, click the "X" icon next to the rule that you want to delete.

veriz	on					
Main	Wireless	My Network Fire	wall Settings Parent	al Control	Advanced	System Monitoring
Main General			Port Trigge Trigger opening of ports fo	ring or incoming data.		
Access Control		Protocols	Outgoing Trigger Ports	s Incoming Po	rts to Open	Action
Port Forwarding	L2T	P - Layer Two Tunneling Protoco	UDP Any -> 1701	UDP Any -> Same	as Initiating Ports	*
	TFT	P - Trivial File Transfer Protocol	UDP 1024-65535 -> 69	UDP Any -> Same	as Initiating Ports	*
DMZ Host	App	lication	TCP 20 -> 23			🔨 🗶
Port Triggering	Add	*				
Remote Administration						
Charles MAT						
Static NAT		C	(av. ) ( • • • •			
Advanced Filtering			Y UK PPIY	Cancel		
Security Log						
Connections						
Logout						
L.						



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## 13.5.1.2 Configuring Incoming Trigger Ports

To configure incoming trigger ports, in the Edit Port Triggering Rule screen, click the New Opened Ports link.

veri	on					_
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main			Edit Por	t Triggering Rule		
Edit Port Triggering Rule	Servic	e Name:	Application			
Locaut	Outgoi	ng Trigger Ports				
Logout	New T	Protocols		Server Ports		Action
	incu i	rigger rorts				
	Incom	Protocols		Opened Ports		Action
	New O	pened Ports				4
			Гок	Cancel		

If you clicked **New Opened Ports**, the following screen appears. Select a protocol from the **Protocol** drop-down list.

ver	i <mark>zon</mark>					
Main	Wireless	My Network	Firewall Settings	Parental Control	Advanced	System Monitoring
Main Edit Service Opened Ports			Edit Serv	ice Opened Ports		
Logout		Protocols Protocol Num	ber: ✓ OK	Other V TCP ICMP ICMP GRE ESP AH Other Cancel		