8x8, Inc.

Edgewater Routers User Guide

For use with 8x8 Service

Version 1.0, March 2011

The Champion
For Small Business
Communications

Table of Contents

8x8 offers two Edgewater routers that integrate with 8x8 Virtual Office service:

- EdgeMarc 200AE1-10 router for the home office to small business environment
- EdgeMarc 4550 routers for small to medium businesses

To get started with your router setup, you should initially refer to the appropriate EdgeWater product documentation:

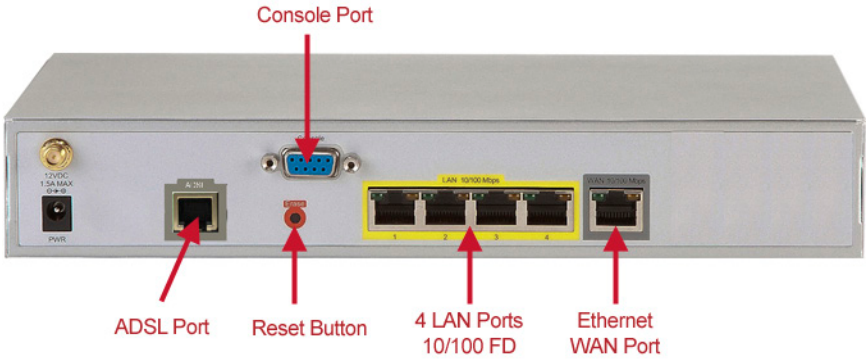
- EdgeMarc 200AE1 Quick Start Guide
- EdgeMarc 200AE1 Hardware Installation Guide
- EdgeMarc 4550 Quick Start Guide
- EdgeMarc 4550 Hardware Installation Guide
- EdgeMarc Voice Operating System (VOS) Manual

EdgeMarc 200AE1-10 Router Overview

The 200AE1-10 is recommended for 10-25 users with minimal VPN requirements.

- Up to 10 heavy users (for example, call center workers or heavy data users, such as those using video/image intensive applications)
- Up to 25 normal users (for example, 10 concurrent calls, with each user having occasional video/image high data rate use)
- Supports modest VPN requirements – up to 3 Mbps VPN traffic and up to two concurrent VPN tunnels

The 200AE1 is a good choice where significant location growth is not planned.

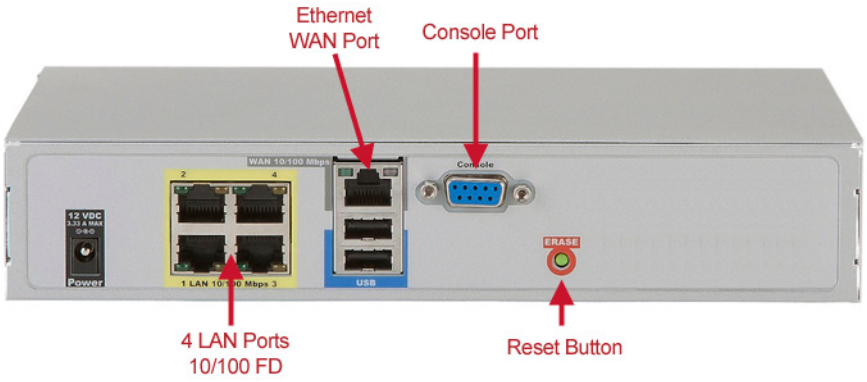


The EdgeMarc 200AE1 router is a flexible, application-ready network services gateway that can be deployed as a low-cost WAN access router and includes applications such as hosted VoIP and video over IP. The 200AE1 is an all-in-one box for DSL router, Ethernet switch, VLANs, firewall, and VoIP – with a single management interface. Quality of Service capability includes packet prioritization and data traffic shaping for VoIP calls. The 200AE1 also includes one Ethernet WAN or one ADSL WAN as an interface to your broadband service and four LAN interfaces to connect your office network to the Internet.

EdgeMarc 4550-15 Router Overview

The 4550-15 is recommended for 10-100 users.

- Up to 30 heavy users (for example, call center workers or heavy data users, such as those using video/image intensive applications)
- Up to 100 normal users (30 concurrent calls, with each user having occasional video/image high data rate use)
- Supports heavy VPN requirements – up to 75 Mbps VPN Traffic and up to 22 concurrent VPN tunnels)
- Good for smaller businesses that plan to grow to these levels

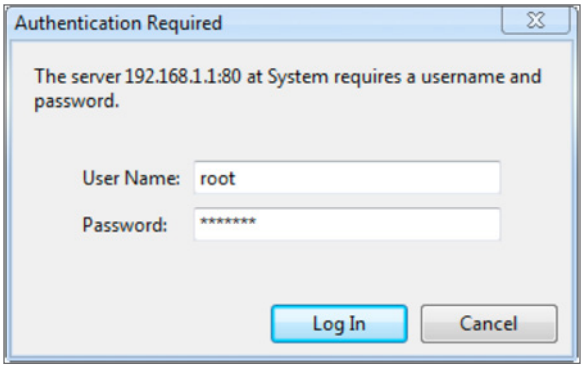


The EdgeMarc 4550 router is a flexible, application-ready network services gateway that can be deployed as a low-cost WAN access router and includes applications such as hosted VoIP and video over IP. The 4550 is an all-in-one box for DSL router, Ethernet switch, VLANs, firewall, and VoIP – with a single management interface. Quality of Service capability includes packet prioritization and data traffic shaping for VoIP calls. The 4550 also includes one Ethernet WAN or one ADSL WAN as an interface to your broadband service and four LAN interfaces to connect your office network to the Internet.

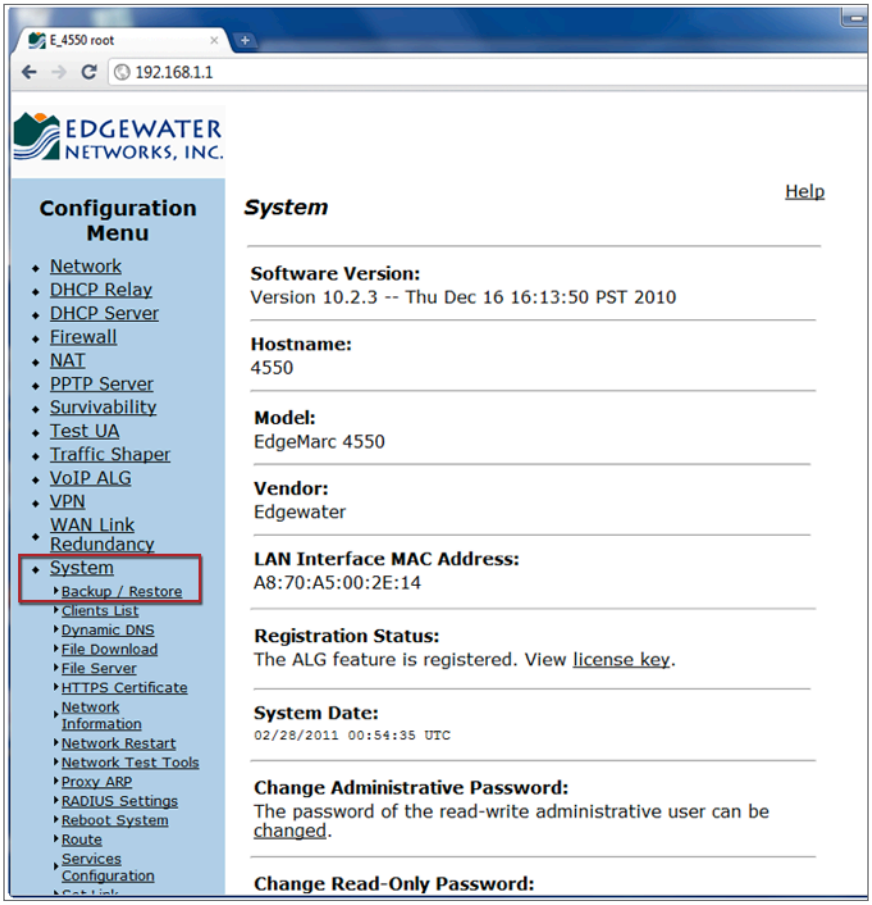
Basic Setup of the 200AE1 and 4550

(Router Access via Web Browser)

1. Connect your PC or Laptop to **LAN port 4** on the 200AE1 router or to **LAN port 1** on the 4550 router.
2. Connect your router WAN port to an Internet connection.
3. Power up your router.
4. Open a browser and point it to http://192.168.1.1 The following screen appears:



5. Type **root** in the User Name field and **default** in the Password field and click on **Log In**. The system screen appears.



6. Be sure that you have software version 10.2.3 pre-installed. If software version 10.2.3 is not installed, contact 8x8 support to upgrade the firmware to 10.2.3.

Note: Your router should also arrive pre-configured for 8x8 service. If for any reason you need to restore the router to the 8x8 default configuration, you can restore it using the procedure described in Restoring the Router to 8x8 Default QoS Settings Configuration on page 16.

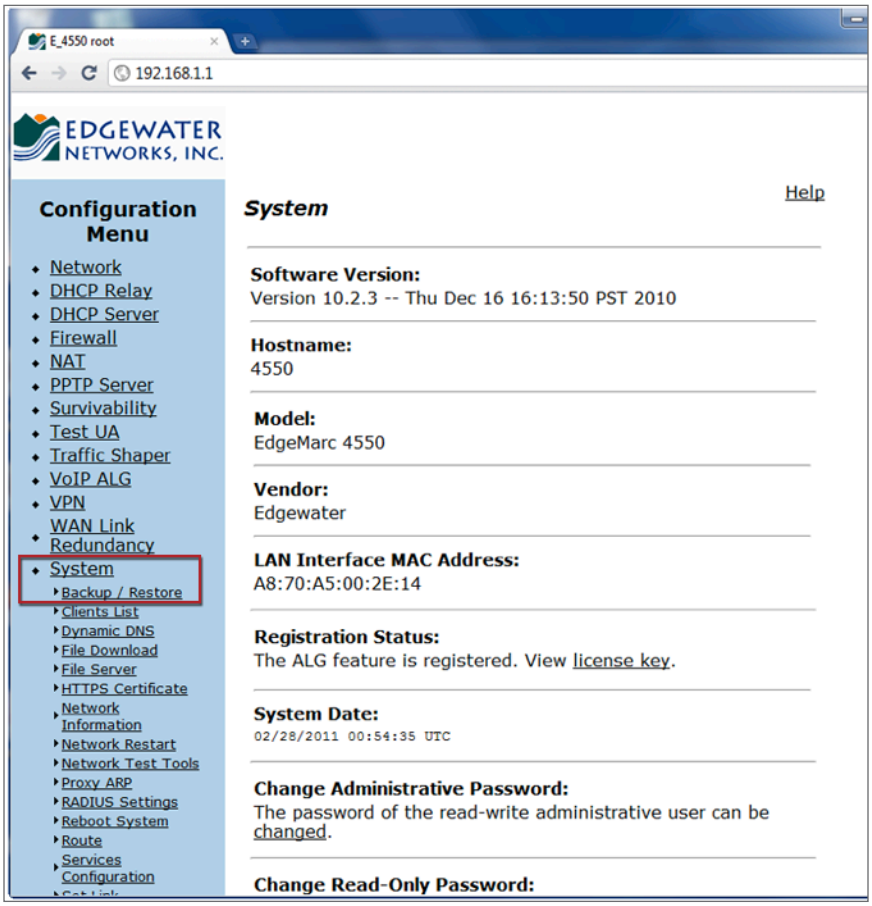
As you customize the configuration of your router, for example to configure your router to connect to your Internet service, you should routinely back up your configuration and save that configuration to a separate location. These procedures are described in Backing Up and Restoring Your Configuration on page 7.

Backing Up and Restoring Your Configuration

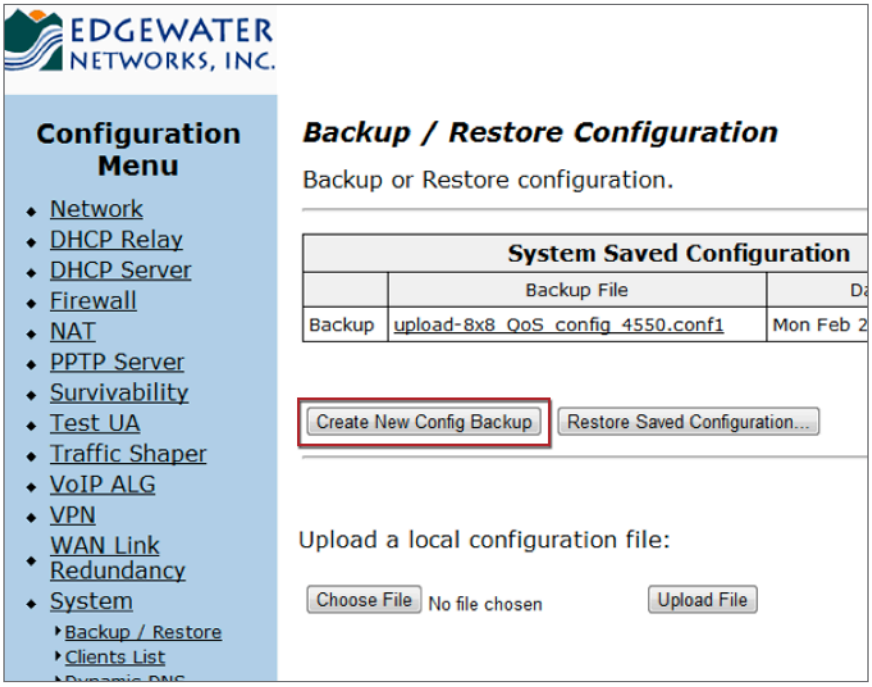
When you make further changes to your EdgeMarc router (for example, entering the Network settings to access the Internet via your Internet Service Provider, configuring traffic shaping settings for your Internet connection speed, changing the firewall settings or setting up VPNs), you will want to create a backup of your configuration so that you can restore it in the event of a failure.

To back up your current configuration

1. Log in to the EdgeMarc router.

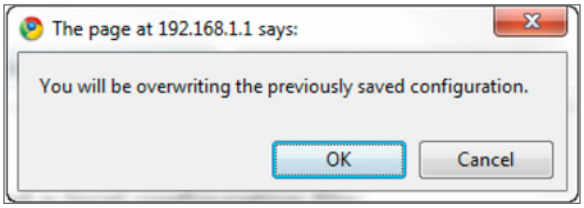


2. Under **System** in the left column, click **Backup/Restore**.
   The Backup/Restore screen appears:

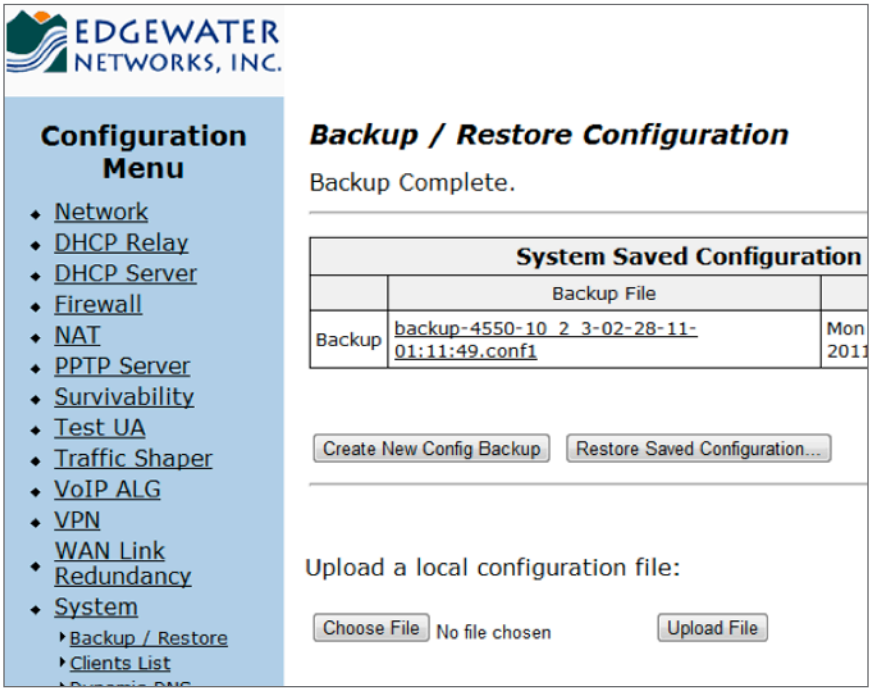


3. Click Create New Config Backup.

Note: This will overwrite your current backup.

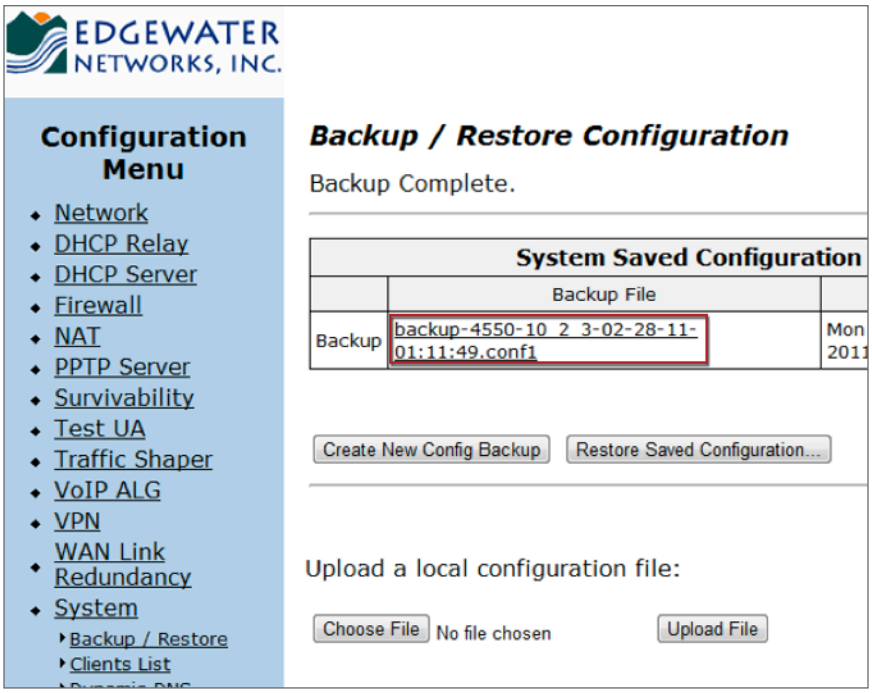


4. Click **OK**.
   The new backup file is created.

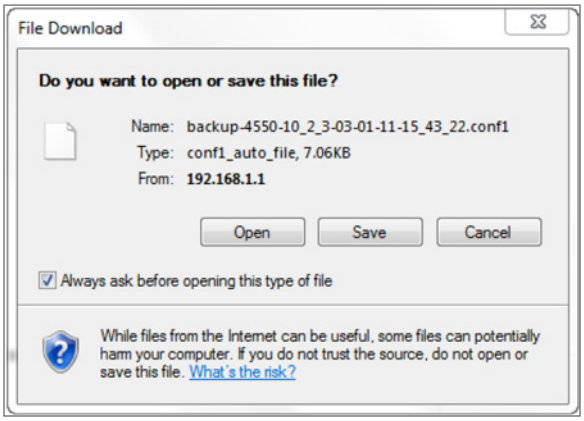


To save a local copy of your configuration

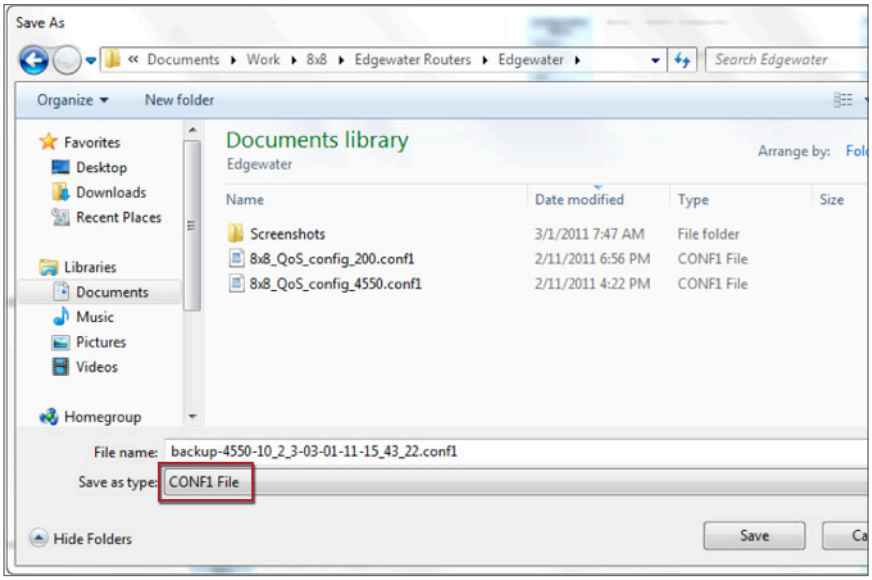
On the **Backup/Restore Configuration** page, click on the name of the backup configuration file.



1. The **File Download** screen opens, asking whether you want to save the file.



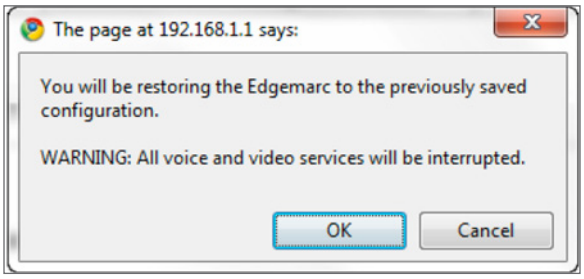
2. Click **Save**.
   The Save As dialog opens.



3. Select the location to save the file and type the filename that you want the configuration file to have. Be sure the filename has an extension of **.conf1**.
4. Click **Save**.

To restore your EdgeMarc router to a saved configuration

1. On the **Backup/Restore Configuration** page, verify that the current backup is the configuration you want to restore to.
2. If you want to restore to another saved configuration, upload a local configuration file by clicking **Browse**, selecting the desired configuration file, then clicking **Upload File**.
3. Click **Restore Saved Configuration**.



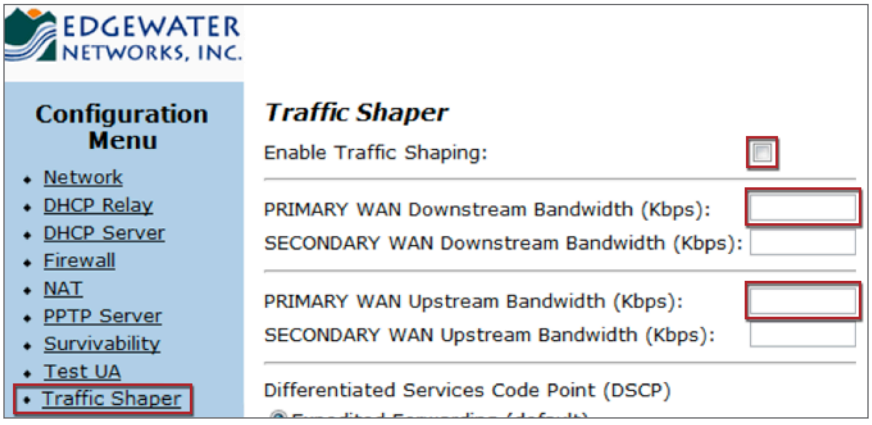
This will restore your EdgeMarc to your currently saved backup file.

Configuration Settings Specific for 8x8 Virtual Office Service

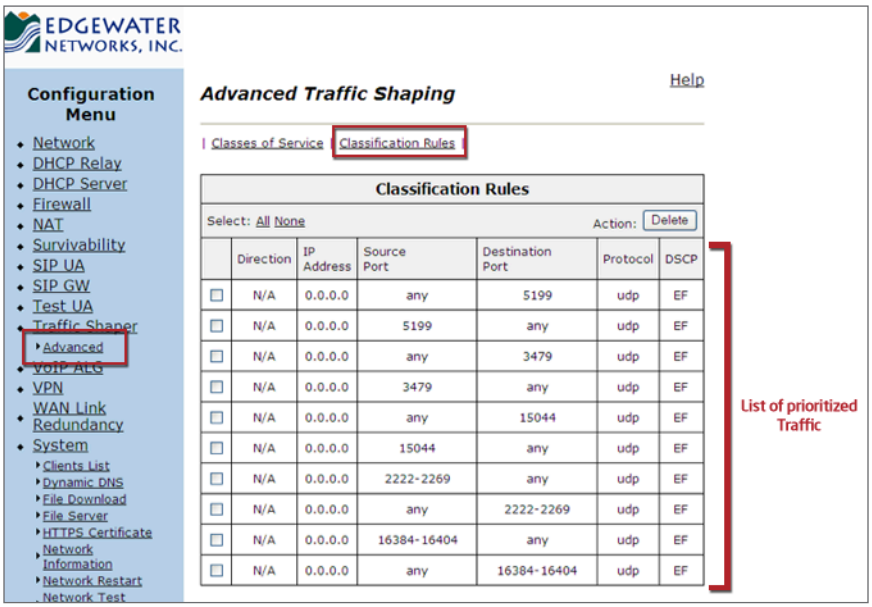
The 8x8 default configuration provides the basic settings you need to get your EdgeMarc router up and running with Virtual Office. You can of course make further modifications to the router configuration to meet your specific business needs. However, there are a few configuration settings that can affect the Virtual Office service:

To configure the **Traffic Shaper**:

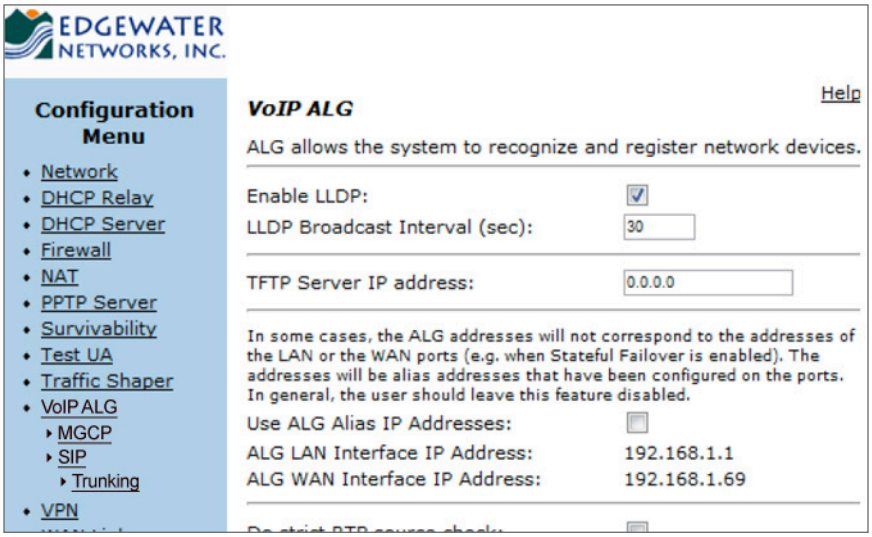
1. Check the **Enable Traffic Shaping** checkbox
2. Use the link http://www.8x8.com/Resources/Tools/VoIPTest.aspx and enter the average of a few readings for your **WAN Downstream** and **WAN Upstream** bandwidth. These values **MUST** be entered for the Traffic Shaping part of the QoS to function. This is important for voice quality.



WARNING: Do NOT make any changes to the Advanced Traffic Shaper configuration. These settings are pre-defined in the default 8x8 configuration.



WARNING: Do NOT configure VoIP ALG (Application Layer Gateway) settings. These are not recommended, supported, or required.

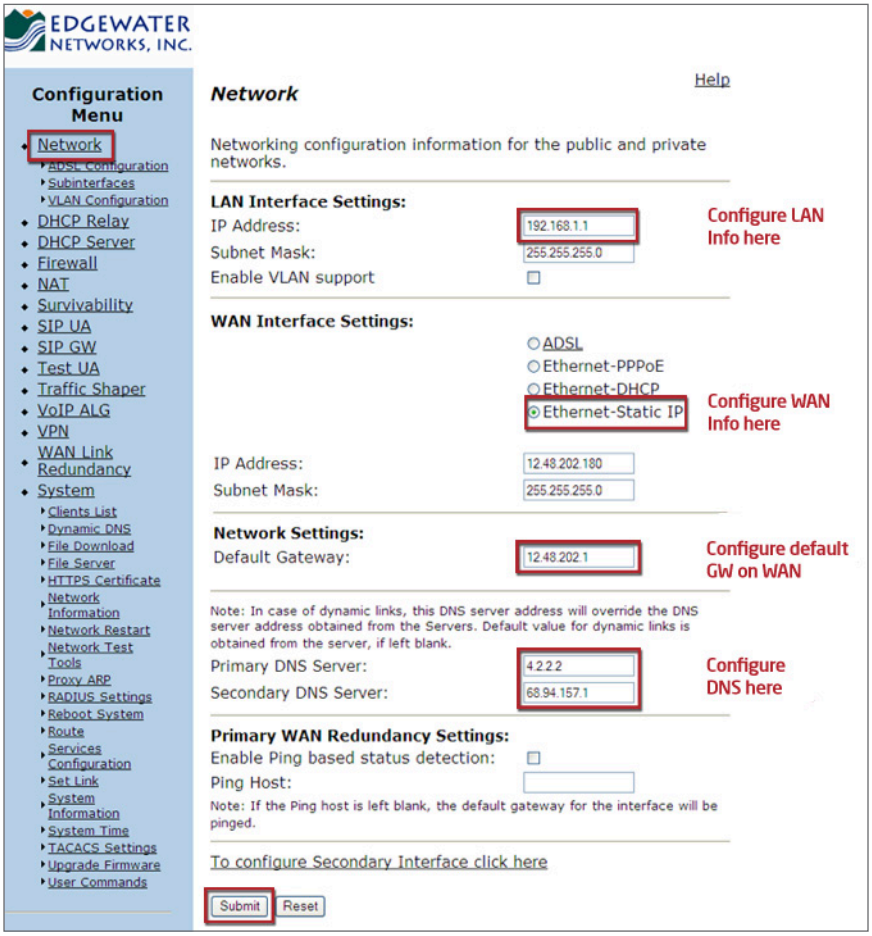


Standard Configuration Settings

This section describes standard configuration settings available on your router. These settings will manage your connection to the Internet (provided by your Internet Service Provider). Your ISP will provide your settings for connecting to the Internet. For detailed treatment of all the settings and advanced settings available, refer to the EdgeMarc Voice Operating System (VOS) Manual on page 3.

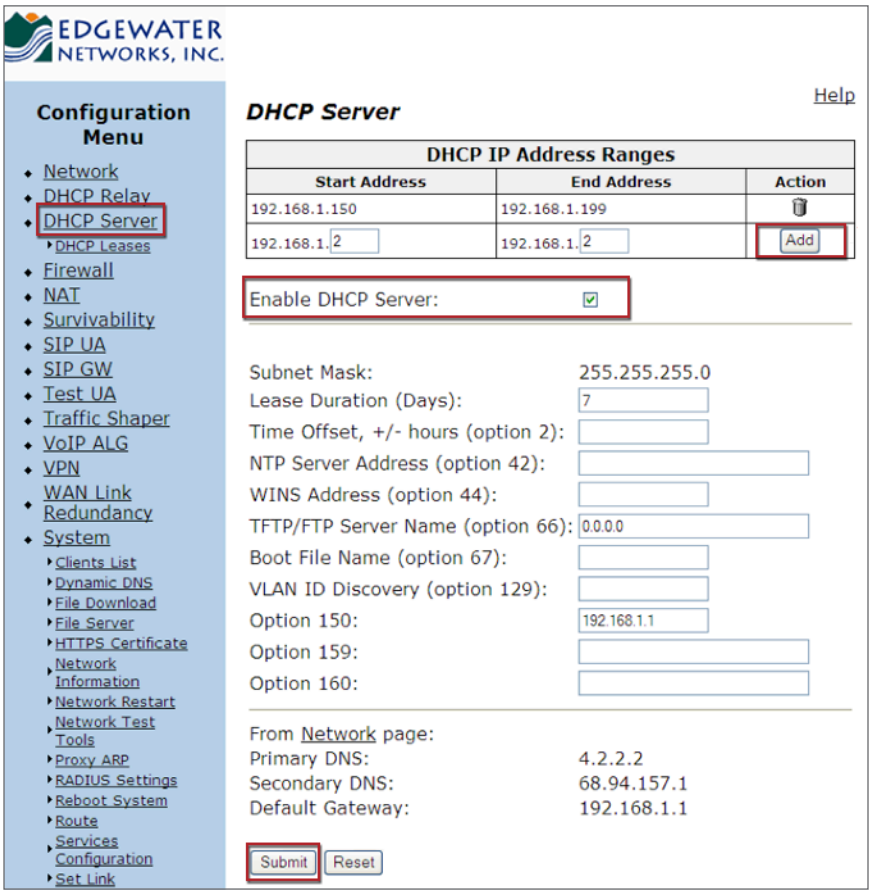
Network

Use this page to configure the LAN interface, the WAN interface (including interface type), the default gateway, and DNS settings.



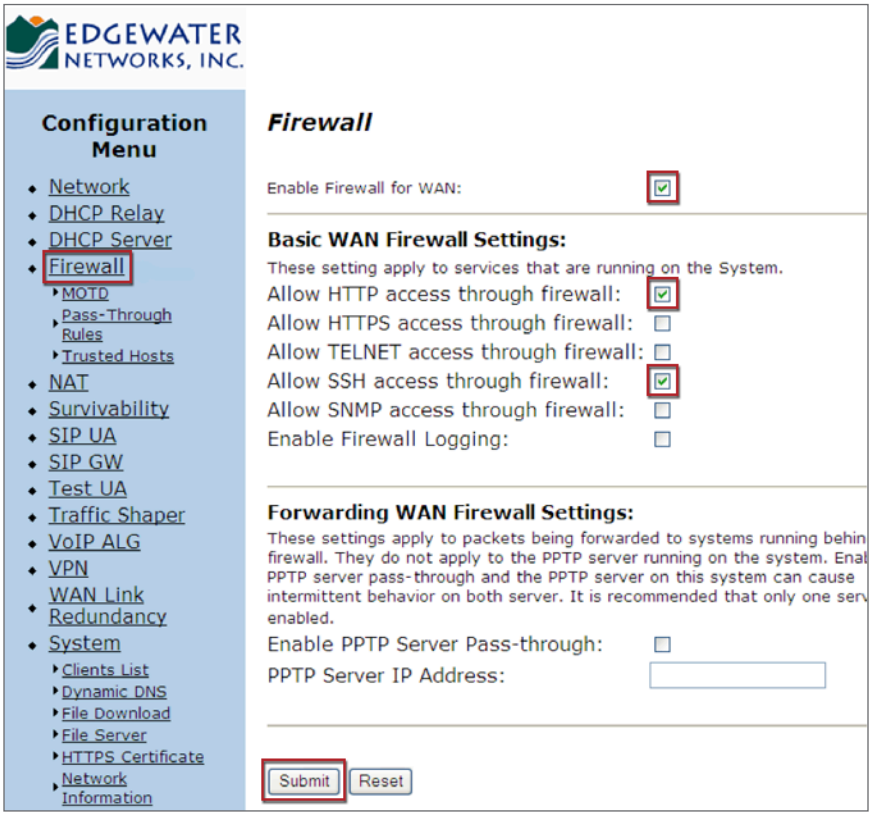
DHCP Server

Use this page to define the DHCP server on the router. If you change the LAN subnet on the router, you must come here to configure new IP address ranges so that the router can serve out IP addresses in the new LAN block.



Firewall

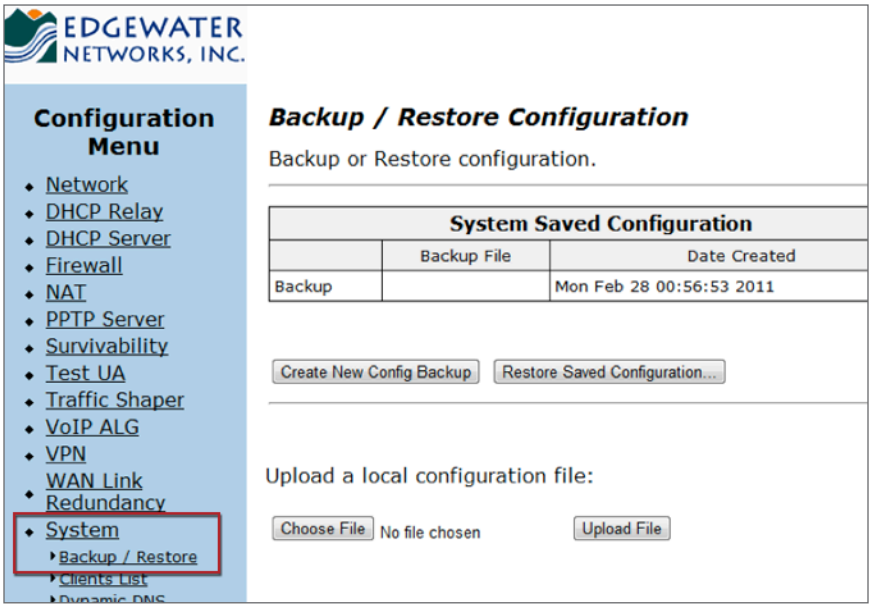
On the **Firewall** page, enable HTTP and SSH access through the firewall to allow remote management of the router.



Restoring the Router to 8x8 Default QoS Settings Configuration

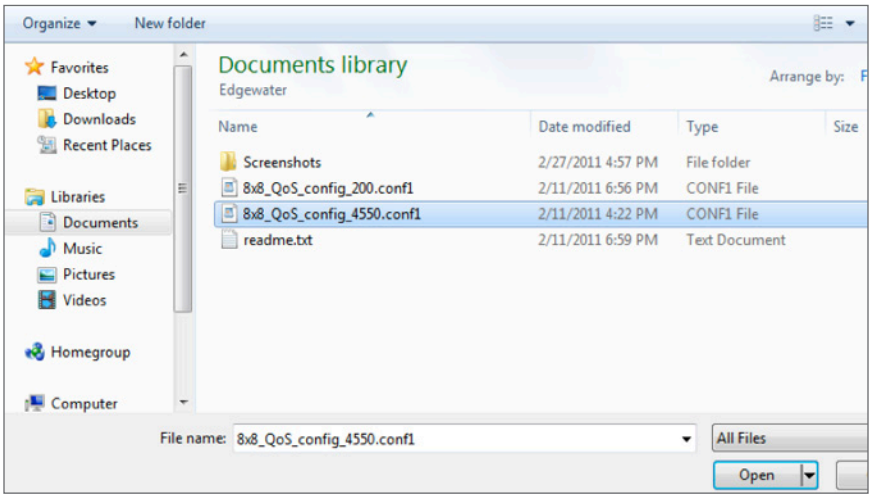
Note: If your router does not have the 8x8 default configuration pre-installed or if you need to reinstall it because the settings have been damaged, download the file for the appropriate router at: http://www.8x8.com/support/BusinessSupport/Downloads.aspx. You may keep this file on hand along with your own router settings and configuration backups in case you need to restore your EdgeMarc router to the default configuration. Restoring the router to the 8x8 default configuration will overwrite your current custom configuration; so be sure to make backups of your good working configurations along the way.

1. Under **System** in the left column, click **Backup/Restore**.

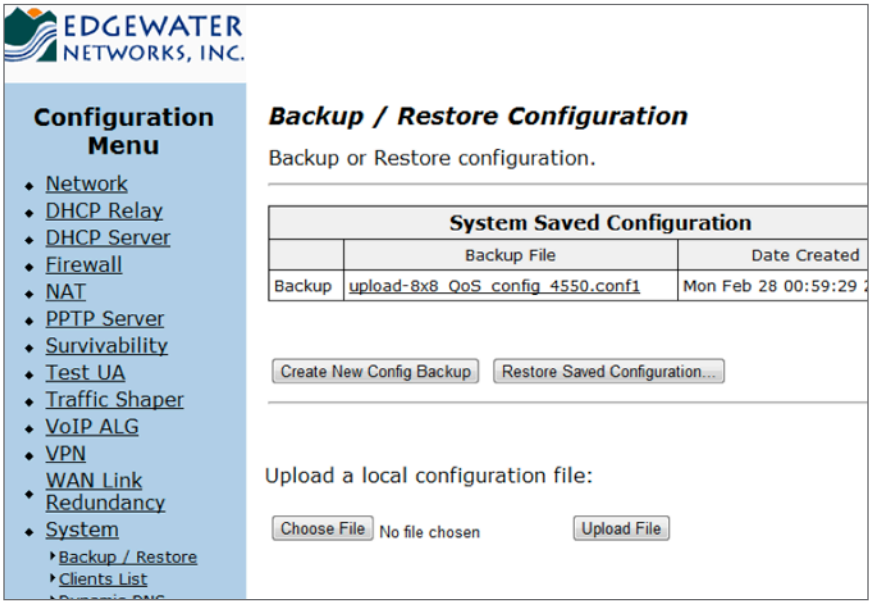


The **Backup/Restore** screen appears:

2. Click **Choose File** to upload the appropriate 8x8 default configuration file.
3. Select the appropriate 8x8 default configuration file for your model of router and click **Open**.

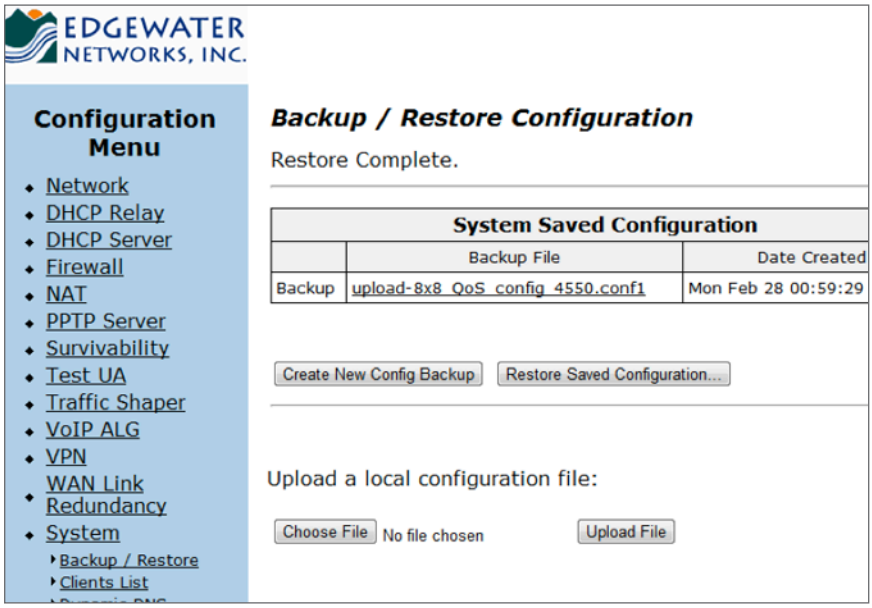


4. Click **Upload File**.



The 8x8 default configuration file appears as the backup file.

5. Click Restore Saved Configuration.



6. The 8x8 default configuration is now loaded on your EdgeMarc router.