



How the Router Works

Version: 3337

Copyright 2007-2010 ImageStream Internet Solutions, Inc., All rights Reserved.

Table of Contents

Router Installation and Configuration Manual/How the Router Works.....	1
Summary.....	1
Booting the ImageStream Router.....	1
ImageStream Router Initialization.....	1
Router Security and User Management.....	2
Logging In for the First Time.....	2
LAN/WAN Port Status.....	3

Router Installation and Configuration Manual/How the Router Works

Summary

This chapter summarizes ImageStream router operation and capabilities so you can choose how to configure your system. Consult the glossary or Command Reference for definitions of unfamiliar terms.

This chapter discusses the following topics:

- ◇ Booting the ImageStream Router
- ◇ ImageStream Router Initialization
- ◇ Router Security and User Management
- ◇ LAN/WAN Port Status

See the Command Reference for more detailed command descriptions and instructions.

Booting the ImageStream Router

When you start up the ImageStream router, it carries out the following functions during the booting process:

1. Self-diagnostics are performed. The results are displayed to the integrated video or the console port, depending on the product you are installing.
2. A selection dialog is displayed that allows the router to be booted into its standard operating mode, failsafe, or the memory test module.
3. If no boot option is chosen, Enterprise Linux will load in normal operating mode.
4. The user configuration is loaded from nonvolatile flash memory.

ImageStream Router Initialization

Once the ImageStream router has successfully booted, it does the following:

1. Ethernet chipset support is loaded.
2. The syslog utility starts.
3. The klog utility starts.
4. Services enabled on boot are started.

5. Ethernet interfaces are started.
6. Inetics-enabled ports are started.
7. iptables commands are executed, if enabled.
8. QoS commands are executed, if enabled
9. User-defined commands in rc.local are executed.
10. Continuous dial-out connections are started.
11. Broadcasting and listening for routing packets are initiated on routed interfaces. The router listens for TCP connections on any ports configured as network devices.
12. The router listens for activity on TCP and UDP ports, such as for administrative
13. Telnet sessions on TCP port 23, ssh sessions on TCP port 22, and SNMP requests on UDP port 161.
14. The ImageStream router is now ready to begin providing service.

Router Security and User Management

ImageStream Linux provides security through a "shadowed" password file. When an administrative user attempts to authenticate at the login prompt or via telnet, the router refers to the entry in the shadowed password file that corresponds to the user. If the password entered by the user does not match, the router denies access with an "Invalid Login" message. If an administrative user attempts to authenticate via secure shell (ssh), the router performs the authentication procedure under a special secure user process and refers to the entry in the shadowed password file that corresponds to the user. If the password entered by the user does not match, the router denies access with an "Invalid Login" message.

Access is denied with the message "Unable to connect to remote host: Connection refused," if the host is down or otherwise not responding to the login request. If an access filter is configured on the port and the login host for the user is not permitted by the filter, the router refuses service with an "Unable to connect to remote host: Connection refused" message.

Logging In for the First Time

The first step in the installation is to Login to the router either by; console using a keyboard and monitor, a direct serial connection, or by connecting over your network using telnet or ssh. The router is shipped with a factory default IP address of 10.10.199.199 with a netmask of 255.0.0.0.

ImageStream routers are configured using a standard menu-based interface. The first time you log in to your router, you may want to browse the various menus to familiarize yourself with the menu navigation. The factory default login is **root** with no administrator password. Type **root** at the *Login* prompt and press **Enter**. Press **Enter** at the *Password* prompt when accessing the router for the first

time.

After logging in, the main menu is displayed (your menu may look slightly different):

```
ISis-Router main menu
1. Configuration menu
2. Show interface status
3. Advanced
4. Router software management
5. Backup/Restore
6. halt/reboot
0. Log off
```

Your first step should be to configure the global configuration settings on the router, described in Chapter 4, "Configuring Global Settings: the AAA and Global Configuration Menus".

WHENEVER YOU MAKE CHANGES TO THE CONFIGURATION ON YOUR ROUTER, REMEMBER TO SAVE THE CHANGES USING THE "Save configuration to flash" MENU OPTION OR THE "backup flash" COMMAND FROM THE BASH SHELL.

FAILURE TO SAVE ANY CONFIGURATION CHANGES YOU MAKE TO THE ROUTER WILL RESULT IN THE LOSS OF ANY CHANGES IF THE ROUTER IS REBOOTED OR LOSES POWER FOR ANY REASON.

LAN/WAN Port Status

From the main menu, choose option 2, "Interface statistics" and press **Enter** to display ImageStream's real-time "stats" utility. This utility is used to display the current status, active configuration, and default configuration of each port.

See Chapter 27, "Understanding The Interface Statistics (stats) Program" for more information about this utility.

