Appendix D - Upgrades and Troubleshooting

Upgrades

Users should upgrade the Secure Console Port Server SSH whenever there is a bug fix or new features that they would like to have. Below are the six files added by Black Box to the standard Linux files in the /proc/flash directory when an upgrade is needed. They are:

- boot_ori - original boot code

- boot_alt - alternate boot code

- syslog - event logs (not used by Linux)

- config - configuration parameters, only the boot parameters are used by the boot code

- zImage - Linux kernel image

- script - file where allSecure Console Port Server SSH configuration information is stored

The Upgrade Process

To upgrade the Secure Console Port Server SSH, follow these steps:

Step 1: **Log in to the Secure Console Port Server SSH as root.**
Provide the root password if requested.

Step 2: **Go to the /proc/flash directory using the following command:**

```
cd /proc/flash
```

Step 3: **FTP to the host where the new firmware is located.**
Log in using your username and password. Go to the directory where the firmware is located. Select binary transfer and "get" the firmware file.

Note: The destination file name in the /proc/flash directory must be zImage. Example (hostname = server; directory = /tftpboot; username= admin; password = adminpw; firmware filename on that server = zImage.134).

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```
ftp

> open server

> user admin

> Password: adminpw

> cd /tftpboot

> bin

> get zImage.134 zImage

> quit
```

> **Note:** Due to space limitations, the new zImage file may not be downloaded with a different name, then renamed. The Secure Console Port Server SSH searches for a file named zImage when booting and there is no room in flash for two zImage files.

Step 4: Run zImage.

To make sure the downloaded file is not corrupted or that the zImage saved in flash is OK the user should run:

```
md5sum –b /proc/flash/zImage
```

Step 5: Check text file information.

Now the user should check with the information present in the text file saved in the Black Box site (e.g. zImage.134.md5sum). If the numbers match, the downloaded file is not corrupted.

Step 6: Issue the command reboot.

```
reboot
```

Step 7: Confirm that the new Linux kernel has taken over.

After rebooting, the new Linux kernel will take over. This can be confirmed by typing the following to see the Linux kernel version:

```
cat /proc/version
```