Appendix A

Flash Tools

A-1 Overview

This section provides instructions on how to use AMI Flash Tools. The Flash Tools allow the user to use Command_Line (CL) utility programs to upgrade or update firmware via different channels such as KCS, USB and LAN connections. We are going to focus on the following tools in this section.

- RWinFlsh (Renesas Windows Flash)
- RLinFlsh (Renesas Linux Flash)
- RKCSFlsh (Keyboard Controller Style Flash)

RWinFlsh and RLinFlsh allow the user to flash the BMC in a Windows (RWinFlsh) or a Linux (RLinFlsh) environment via network or USB connections. You can choose to use network connections or USB connections to flash the BMC based on how you use the flash tools.

RKCSFlsh is used to flash the firmware in the DOS environment via the KCS (Keyboard Controller Style) interface.

A-2 Flashing the BMC Firmware in the DOS Environment

RKCSFlsh is the tool used to flash the BMC firmware in DOS through the KCS interface. To flash the BMC, follow the instructions below:

Warning: Avoid any interruption during the firmware update process. Any interruption may result in device failure.

1. Copy RKCSFlsh.exe into a bootable USB.
2. Run the RKCSFlsh utility.

3. Use the settings as listed below.

- Format:

RKCSFlsh [OPTION] [FW_IMAGE_FILE]

[OPTIONS]

Options Commands	
-info	This option displays information regarding existing and current firmware.
-auto	This option allows for automatic upgrades by comparing flash module headers.
-full	This options allows for full upgrades.
-force-boot	Select this option to force the boot loader to be upgraded during full upgrade. The boot loader is "preserved" by default.
-c	This option preserves configuration modules during full upgrade.

[FW_IMAGE_FILE]

The firmware-image file name is [rom.ima].

Examples

- **Example 1**

/RKCSFlsh -info rom.ima

Description: This command displays the details of both existing and new firmware.

- **Example 2**

/RKCSFlsh -full rom.ima

Description: This command starts flashing the new rom.ima to the firmware.

- **Example 3**

/RKCSFlsh -full -force-boot rom.ima

Description: This command starts flashing the new rom.ima to the firmware using "FORCE BootLoader upgrade."

A-3 Flashing the BMC Firmware in the Windows Environment

RWinFlsh is used to flash the BMC firmware in Windows through USB or Network connections. To flash the BMC in Windows, follow the instructions below.

Warning: Avoid any interruption during the firmware update process. Any interruption may result in device failure.

1. Open Command Prompt. Go to RWinFlsh\Windows\path.
2. The following two files will be displayed:

- RWinFlsh.exe
- LIBIPMI.dll

3. Run "RWinFlsh.exe" in the command prompt.
4. Use the settings as listed below.

- Format:

RWinFlsh [OPTION] [MEDIUM] [FW_IMAGE_FILE]

[OPTIONS]

Options Commands	
-info	This option displays information regarding existing and new firmware.
-auto	This option allows for automatic upgrades by comparing flash module headers.
-full	This options allows for full upgrades.
-force-boot	Select this option to force the boot loader to be upgraded during full upgrade. The boot loader is "preserved" by default.
-c	This option preserves configuration modules during full upgrade.

[MEDIUM]

Medium Options	
-cd	Select this option to use USB connections.
-nw & ip	Select this option to use network with -ip (followed by the IP address).

[FW_IMAGE_FILE]

The firmware-image file name is [rom.ima].

Examples

Using Network as a Medium

- **Example 1**

RWinFlsh -nw -ip 155.166.132.12 -info rom.ima

Description: This command displays the details of both existing and new firmware using the network connection with the ip address of 155.166.132.12.

- **Example 2**

RWinFlsh -nw -ip 155.166.132.12 -full rom.ima

Description: This command starts flashing the new rom.ima to the firmware using the network connection with the IP address of 155.166.132.12.

- **Example 3**

RWinFlsh -nw -ip 155.166.132.12 -full -force-boot rom.ima

Description: This command starts flashing the new rom.ima to the firmware with FORCE BootLoader Upgrade via the network connection using the IP address of 155.166.132.12.

Using USB as a Medium

To use USB as a medium, you must first mount USB as a virtual media (see Chapter 2, section 2.6.1.e, #5 and #6). Also, ensure that the Virtual Media Attach Mode is set to "Attach" (see Chapter 2, section 2.5.12, #3).

- **Example 1**

RWinFlsh -cd -info rom.ima

Description: This command displays the details of both existing and new firmware using a USB connection.

- **Example 2**

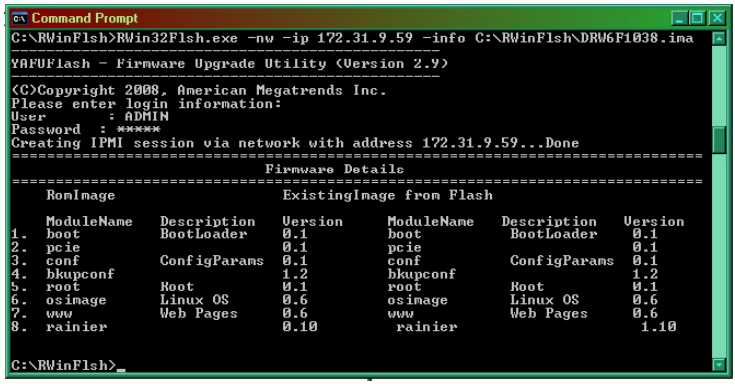
RWinFlsh -cd -full rom.ima

Description: This command starts flashing the new rom.ima to the firmware using a USB connection.

- **Example 3**

RWinFlsh -cd -full -force-boot rom.ima

Description: This command starts flashing the new rom.ima to the firmware with FORCE BootLoader Upgrade using a USB connection.



A-4 Flashing the BMC Firmware in the Linux Environment

RLinFlsh is used to flash the BMC firmware in the Linux environment using network or USB connections. To flash the BMC in Linux, follow the instructions below.

Warning: Avoid any interruption during the firmware update process. Any interruption may result in device failure.

1. Open the Terminal. Go to RLinFlsh/Linux path.

2. The file libipmi.so 1 should be accessible to a Linux system. Usually when running an application, Linux will search for a file in dependent libraries in default locations, such as usr/lib/lib folders.

3. Copy libipmi.so.1 to /lib or /usr/local/lib. Run "1dconfig"

   or

   Copy libipmi.so.1 to a folder and issue the following command:

   #LD_LIBRARY_PATH=<location_of_libipmi_so>/RLinFlsh

   Note: You may have to create a link to libipmi.so.1.0 (ln-sf libipmi.so.1.0 libipmi.so.1).

4. Use the settings as listed below.

- Format:

/RLinFlsh [OPTION] [MEDIUM] [FW_IMAGE_FILE]

[OPTIONS

Options Commands	
-info	This option displays information regarding existing and new firmware.
-auto	This option allows for automatic upgrades by comparing flash module headers.
-full	This options allows for full upgrades.
-force-boot	Select this option to force the boot loader to be upgraded during full upgrade. The boot loader is "preserved" by default.
-c	This option preserves configuration modules during full upgrade.

[MEDIUM]

Medium Options	
-cd	Select this option to use USB connections.
-nw & ip	Select this option to use network with -ip (followed by the IP address).

[FW_IMAGE_FILE]

The firmware-image file name is [rom.ima].

Examples

Using Network as a Medium

- **Example 1**

/RLinFlsh -nw -ip 155.166.132.12 -info rom.ima

Description: This command displays the details of both existing and new firmware using the network connection with the IP address of 155.166.132.12.

- **Example 2**

/RLinFlsh -nw -ip 155.166.132.12 -full rom.ima

Description: This command starts flashing the new rom.ima to the firmware using the network connection with the IP address of 155.166.132.12.

- **Example 3**

/RLinFlsh -nw -ip 155.166.132.12 -full -force-boot rom.ima

Description: This command starts flashing the new rom.ima to the firmware with FORCE BootLoader Upgrade via the network connection using the IP address of 155.166.132.12.

Using USB as a Medium

To use USB as a medium, you must first mount USB as a virtual media (see Chapter 2, section 2.6.1.e, #5 and #6). Also, ensure that the Virtual Media Attach Mode is set to "Attach" (see Chapter 2, section 2.5.12, #3).

- **Example 1**

/RLinFlsh -cd -info rom.ima

Description: This command displays the details of both existing and new firmware using a USB connection.

- **Example 2**

/RLinFlsh -cd -full rom.ima

Description: This command starts flashing the new rom.ima to the firmware using a USB connection.

- **Example 3**

/RLinFlsh -cd -full -force-boot rom.ima

Description: This command starts flashing the new rom.ima to the firmware with FORCE BootLoader Upgrade using a USB connection.