SKA4/SPKA4/SRKA4

BIOS, BMC Firmware, FRU/SDR File, and HSC Firmware Update Instructions

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Revision History

Date	Revision Number	Modifications
11/10/00	1.0	Initial release.
3/23/01	1.1	Updated instruction per latest software revisions. Added HSC firmware update instructions.
9/12/01	1.11	Updated instruction for SKA4, SPKA4, SRKA4

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Table of Contents

1.1 Introduction

1.2 Purpose of this Document

This document describes the recommended procedure for updating the SKA4 server board system BIOS, Baseboard Mangement Controller (BMC) Firmware, and FRU/SDR files.

1.3 Update Process

1.4 Recommeded Update Order

The only ordering requirement for updating of the SKA4 server board system BIOS, BMC Firmware, and FRU/SDR files is that the FRU/SDR files must always be updated following a BMC Firmware update. This is because performing a BMC Firmware update erases the FRU files and the SDR repository.

A recommended order for performing a full update is as follows:

1. HSC
2. BMC Firmware
3. FRU/SDR Files
4. BIOS

1.5 Updating the HSC Firmware SPKA4,SRKA4 systems

The SPKA4 SRKA4 both use the Hudson Hot Swap controllers and the SC5000 SAF-TE board (**Skip this step if you are not using the SPKA4 or SRKA4 chassis.**)

To perform the HSC firmware update .

1. Extract the HSC firmware .ZIP file to a floppy diskette. Check to make sure that the floppy diskette contains the firmware update utility (fwupdate.exe) and the HSC firmware .hex file (filename.hex).
2. Make the floppy diskette bootable to DOS, or plan to boot to DOS from a hard drive.
3. Power on the SPKA4/SRKA4 server and boot to DOS from the floppy diskette or a hard drive.
4. Change to the A: floppy drive. (type A: <Enter>)
5. At the A:\> DOS prompt, type the following: FWUPDATE filename.hex /upload <Enter>, where filename.hex is the name of the particular .hex file you are updating. The HSC firmware update will begin.
6. A message will be displayed prompting you to update the "Primary " or " Secondary" controller. Press "Primary", the HSC code will be updated for that controller.
7. The BMC Firmware update process will now start. Do not power down the system during the BMC Firmware Update process!
8. If you are using the SPKA4 chassis with Dual Hot Swap Controllers repeat this process for the "Secondary " controller.
9. When the BMC Firmware update is successfully completed, press any key to power down the system. This will complete the BMC firmware update process. Remove the diskette from the floppy drive.

Reboot   the system. During boot, confirm that the BMC Firmware update was completed proceed to UPDATING the BMC firmware

1.6   Updating the BMC Firmware

1.6.1   Making a BMC Firmware Update Floppy

1. Place a formatted floppy diskette in the floppy drive.
2. Extract the contents of the BMC firmware update .EXE file onto the floppy diskette. There is no need to make the floppy diskette bootable.

1.6.2   Updating the BMC Firmware

1. Boot the system using a DOS boot disk.
2. Place the floppy diskette containing the BMC Firmware update files into the floppy drive of the system that you want to upgrade and boot the system while the floppy diskette is in the drive.
3. The following prompt will appear:

    1. A>

    2. Type DIR and make a note of the files on the disk, i.e. FWUPDATE.exe, KOABMC1.1X.hex etc;

    3. At the A> prompt   type the following command: FWUPDATE KOABMC1.xx.hex . **Unless specifically instructed by the release notes answer NO when prompted to update the boot block.**

    4. If the boot block must be updated, move the BMC update jumper to the high position and follow process above, but answer YES when prompted to update the boot block. After the boot block and the BMC has been updated, shut the system down and move the BMC update jumper to the low (original position). Use Extreme care when updating the boot block.

4. When the BMC has been programmed the A>prompt will appear. At this point the system must be issued a CMOS clear before proceeding to the next step.
5. There are three methods that can be used to clear CMOS
    1. Reboot the system, - Press F2, when the setup screen appears press F9 (resets the system default values. (Be sure to reset any custom values when you have all flash procedures completed.)
    2. Press and hold the reset button while pressing the power switch CMOS will be cleared as the system is started.
    3. Use the CMOS CLEAR jumper on the baseboard. – Set the CMOS clear jumper to high and power on the system.   During post the system will display the message "NVRAM CLEARED BY JUMPER". Shutdown the system using the power switch and reset the CMOS CLEAR Jumper to the low position. **Using this method absolutely guarantees that CMOS has been cleared.**
    4. **FRUDSR must be re-flashed each time the BMC is updated The SDR files are cleared during BMC update.**

1.7 Updating the BIOS

1.7.1 Creating a Bootable Floppy Diskette

You must use a DOS system to create the bootable floppy.

1. Place an unformatted floppy diskette in the floppy drive and format the floppy using the /s option. For example: "format a: /s".
2. Alternatively, place a formatted floppy in the floppy drive and use the "sys" command. For example: "sys a:".

1.7.2 Making a BIOS Upgrade Floppy

1. Follow the instructions (above) for creating a bootable floppy to create a bootable floppy diskette.
2. Insert the bootable floppy into the floppy drive.
3. Extract the contents of the BIOS.EXE file onto the bootable floppy. To do this, simply type the filename (with or without the extension) at the a:\ prompt, for example "BIOS.EXE".
4. You will be prompted to confirm a folder in which to store the extracted files. The BIOS upgrade image is extracted in the specified folder.

1.7.3 Updating the BIOS

1. Make note of any specialized settings of your BIOS SETUP parameters if you have previously changed them from the default values. To do this, enter BIOS SETUP by hitting the F2 key during boot. Write down the settings for each of parameters. At the end of the BIOS update process you should set the parameters to default values by hitting the F9 key, and then re-enter these values you have written down.
2. Place the bootable floppy containing the BIOS update files into the floppy drive of the system that you want to update and boot the system while the floppy diskette is in the drive.
3. At this point you have a choice of two options. Press 1 and ENTER to automatically update the system BIOS. This will update the system BIOS and reset the system. Press 2 and ENTER to update the User Binary and reset the system.
4. Wait while the BIOS files are updated. Do not power down the system during the BIOS update process! The system will reset automatically when the BIOS update process is completed. Remove the diskette from the floppy drive.
5. Check to make sure the BIOS version displayed during POST is the new version as the system reboots.
6. Enter Setup by pressing the F2 key during boot. Once in Setup, press the F9 and ENTER to set the parameters back to default values.
7. Re-enter the values you wrote down at the beginning of this process. Press F10 and ENTER to exit BIOS Setup and Save Changes.
8. If you do not set the CMOS values back to defaults using the F9 key, the system may function erratically.

Note: you may encounter a CMOS Checksum error or other problem after reboot. Try shutting down the system and booting up again. CMOS checksum errors require that you enter Setup, check your settings, save your settings, and exit Setup.

Base Board Management Controller

IPMI Version:1.0   Firmware version:01.1X

1.8   Updating the FRU/SDR Files

1.8.1   Making a FRU/SDR File Update Floppy (Does not need to be a bootable diskette)

1. Place formatted floppy diskette in the floppy drive.
2. Extract the contents of the SKA4_FRU_SDR.EXE file onto the floppy diskette. There is no need to make the floppy diskette bootable; this is done automatically when the files are extracted to the floppy diskette.

1.8.2   Updating the FRU/SDR Files

1. Place the floppy diskette containing the FRU/SDR update files into the floppy drive of the system that you want to upgrade and boot the system while the floppy diskette is in the drive.
2. The following prompt will appear:

   Select the Chassis that you have:

   1. SPKA4

   2. SRKA4

   3. Other

   4. Exit

3. Select the numbered option for chassis that you are using with the SKA4 server board.
4. The following prompt will appear:

   Select the function you desire to perform:

   1. Update FRUs and the SDR repository

   2. Update just the SDR repository

   3. Modify the Asset Tag

   4. Exit

   For a standard update, select option 1 to update the FRU and the SDR repository.

5. Answer the questions on the screen to update the SDR repository appropriately for your chassis configuration.
6. When the update is complete, you will be returned to the DOS prompt. Remove the diskette from the floppy drive.
7. Reboot the system to complete the update process.

Appendix A: Glossary

This appendix contains important terms used in the preceding chapters.

Word / Acronym	Definition
BMC	Baseboard Management Controller
FRU	Field Replaceable Unit
SDR	Sensor Data Record