

Most important BIOS Settings :

Refer to the document *ConfigurationRules.pdf* to have more details and to optimize the Bios Settings according to the type of server.

Console Serial Redirection

Device Manager >> Advanced >> Miscellaneous Configuration >> Console Serial Redirection

Value = always must be OFF

Max NUMA Nodes per module

Device Manager >> Advanced >> Memory RAS Configuration >> go on the line Numa Nodes per modules >> Select the wanted value >> hit "Enter" to change the value

Default value = 4

- bullion mono-module → Max NUMA Nodes = 4
- bullion bi-modules → Max NUMA Nodes = 4
- bullion quadri-module → Max NUMA Nodes = 2

Kawela Enabling

Device Manager >> Advanced >> Boxboro Configuration >> General Configuration

go on the line Kawela (Module i IOHj) >> 2 possible values PXE Enable/iSCSI Enable (hit "Enter" to toggle the value to "enable")

Default = All the Ethernet Kawela Controllers are disabled except the first one (kawela0 of IOH0 of Module0) which is 'Enable'

NOTE: on a mono-module server, the kawela 1 can always be enabled.

Note the Boot List order

NOTE : a BIOS update can change the boot list media and order. So, it is necessary to note the values before to update the BIOS, in case of loss of the correct boot order.

From the "Remote Console", enter in the BIOS interface by pressing [Space bar] when the 'Hit [Space] for Boot Menu' message is displayed.

1. Select 'Boot Manager'
2. Note the media used to boot, and their order

1) Firmware update

Procedure to update BIOS & EMM in two steps:

- Step 1: update of EMM.
- Step 2 update of the BIOS.

Note: a restart of the serveur under EFI Shell environment is required.

***** Begin procedure *****

- unzip the BIOS/EMM/FPGA package in a local directory (1) or at the root of a USB key (2).

- **STEP 1 Update of EMM** to version 11.15.00

. **NOTE 1:** With this version , EMM is the unique firmware of the ILB to change, so the update may be done simply using the graphical interface of the SHC (folder 'Maintenance' > Firmware Update > BMC)

. **NOTE 2:** On multi-modules configuration , repeat the EMM firmware update on each module.

. From a Windows station (able to communicate with the BMC)

- Open a DOS command window and Change Directory to the directory used to uncompress the package.
- enter the command: upgradeFW.bat <IP_BMC> <USER> <PASSWORD> <Module N°>
example : upgradeFW.bat 10.10.10.1 super pass 0 (all parameters are mandatory)
- the update of EMM is done, then a BMC reset is initialized.

. From a Linux station (able to communicate with the BMC)

- Open a terminal window and Change Directory to the directory used to uncompress the package.
- enter the command: upgradeFW.sh <IP_BMC> <USER> <PASSWORD> <Module N°>
example : upgradeFW.sh 10.10.10.1 super pass 0 (all parameters are mandatory)
- the update of EMM is done, then a BMC reset is initialized.

Wait for the BMC reboot, then reopen a System Hardware Console session.

- STEP 2 Update BIOS to version 02.14.4.016:

(1) if the BIOS/EMM package has been unzipped to a local directory :

- . Mount the directory containing the unzipped files as a Virtual drive thru the Remote Console:
 - click on "Virtual Media" icon,
 - select "Local Folder" tab and use the "Browse" button to select the local directory and connect it as a "Virtual Drive"

(2) if the BIOS/EMM package has been unzipped to a USB key :

- . plug the USB key in a USB port of the novascale bullion server

continuing:

- . reboot the novascale bullion server
- . press "space" on the keyboard when this message is displayed :
" Hit [Space] for boot Menu "
- . In the BIOS menu, enter the Boot Manager entry:
The Boot Manager screen displays the boot list,
move the cursor on the line "EFI Internal Shell", press Enter.
- . The BIOS update procedure will start automatically
The server is rebooted at the end of the BIOS update.

Remove/disconnect the media containing the bios package to avoid starting another recovery.

3) After the update

Restoring the BIOS setting :

Depending on the versions, a BIOS update can change the values of the BIOS Settings.

According to the type of system and the client configuration, some of these settings have to be restored after this update.

