

Numascale

Integrating NumaConnect hardware with Supermicro H8QGL-iF+

Revision **1.0**, July 30, 2014

Revision History

Rev	Date	Author	Changes
0.1	2013-01-30	Ola J. Presterud	First version
0.5	2013-12-02	Ola J. Presterud	Updates to BIOS settings
0.6	2014-03-10	Ola J. Presterud	Added screenshots of BIOS settings
1.0	2014-07-30	Espen Carlsen	Updates to BIOS settings and version

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1 HARDWARE INSTALLATION

1.1 Preparing the computer

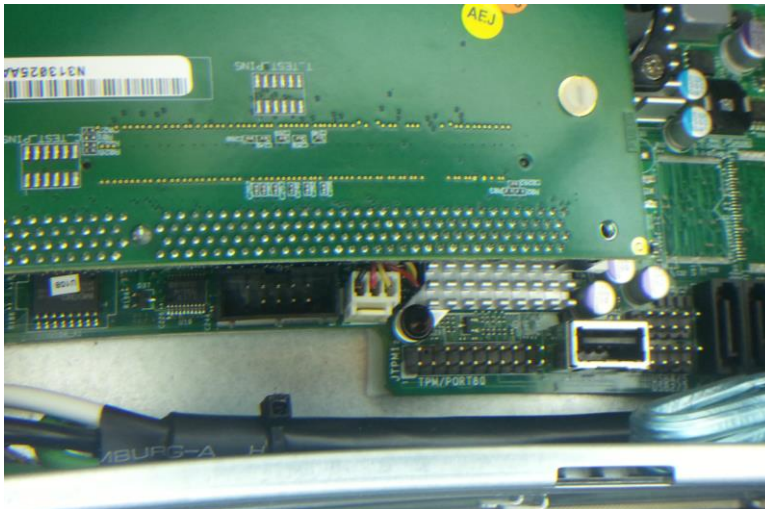
Ensure that the HTX riser card is installed, Supermicro part number for this is RSC-RR1U-HT (rev 3.02). Using HTX requires that a CPU must be present in the CPU #3 position. For a 2 CPU system, please install CPU in sockets #1 and #3. For a 3 CPU system, install in #1, #2 and #3. Socket #4 is not used when used together with a NumaConnect card.

Memory is recommended to be installed with equal amounts on each CPU socket, and Supermicro also recommends to use the same kind of DIMM modules in the DIMM slots connected to the same CPU socket.

1.2 Installing the NumaConnect N313 card

The NumaConnect card is quite big, so please keep attention to components on the motherboard that might be in the way and damaged during the physical installation.

In particular, this fan header will obstruct the insertion path of the card:



It is advised to take extra care so that the fan cable is not damaged, or eventually temporarily remove it until the card is properly fitted.

Also please ensure that the guidance tap is correctly through the hole at the top of the mounting bracket:



1.3 Finalizing physical setup

The NumaConnect card should now be correctly installed, and no further steps are needed to be performed inside the computer.

Please refer to the NumaConnect setup guides on further guidelines for cabling.

2 BIOS SETTINGS

2.1 Firmware versions

The NumaConnect solution is tested and certified on Supermicro H8QGL-iF+ motherboard running the following firmware versions:

- **BIOS 3.5 (release BIOS)**



- **IPMI Firmware 2.06 (can be found by logging in to the web-page of the IPMI interface)**

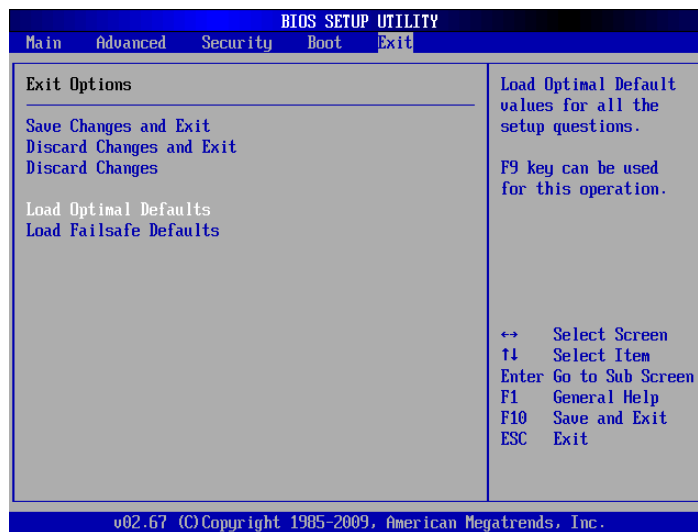
They can be obtained from the Supermicro web-site, eventually special custom builds by contacting Numascale support.

2.2 BIOS settings for use with NumaConnect

There are certain BIOS settings that must be set to have the system fully working with the NumaConnect solution. The essentials are that CC6 and C1E modes must be disabled, and that it is set to boot through the network card as the first boot item (PXE boot). For the master node/first node that contains the operating system on disk, this disk should be set as the second boot option.

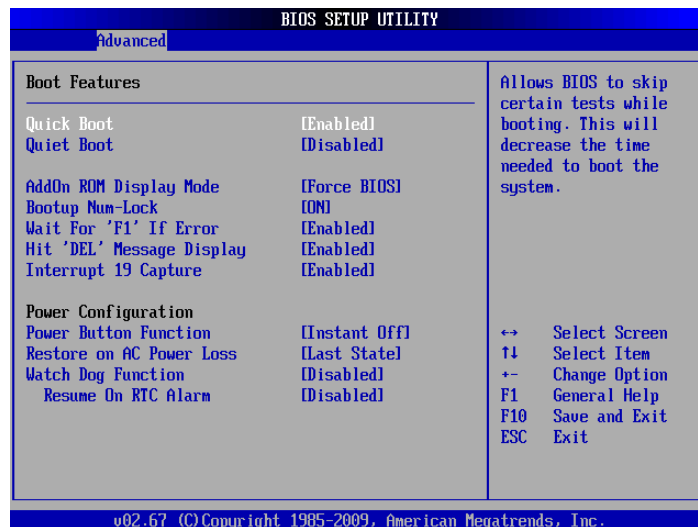
It is also important that BIOS versions and settings are consistent across all the nodes in the system.

On each machine, please run "Load Optimal Defaults" to be sure that all settings are set to default.



Then set the following options:

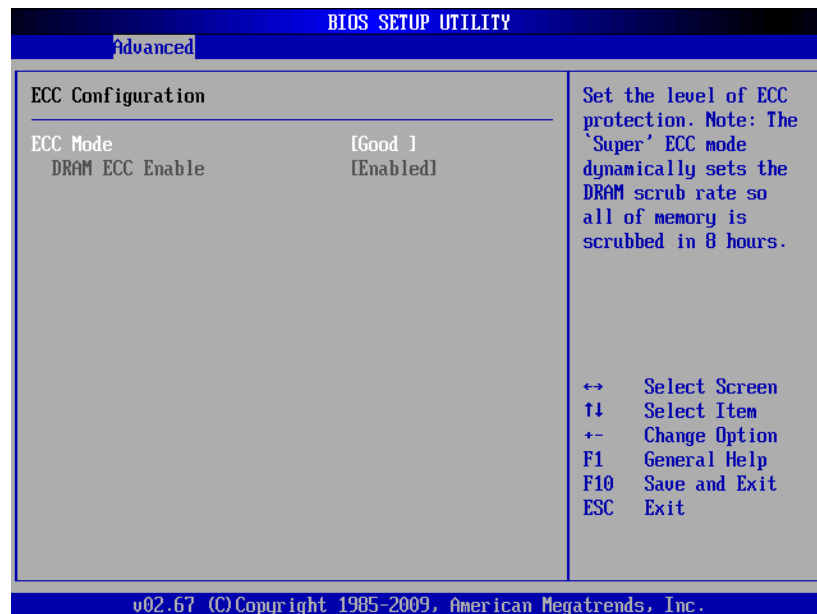
- Advanced
 - Boot Features
 - "Quiet Boot" to Disabled



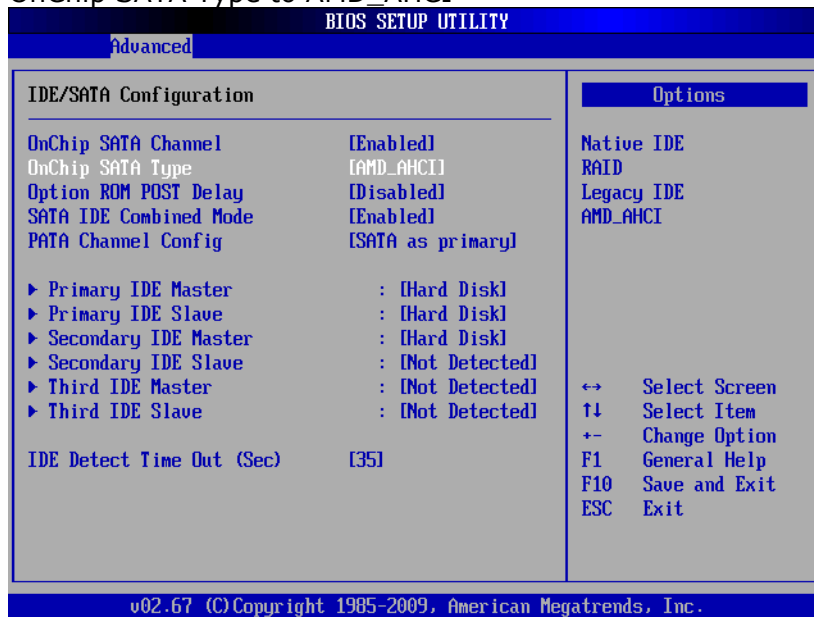
- Processor & Clock Options
 - "C State Mode" to Disabled (only for Opteron 63xx)
 - "C1E Support" to Disabled
 - "HPC Mode" can be set according to own preference (but must be equally set on all machines in the system)



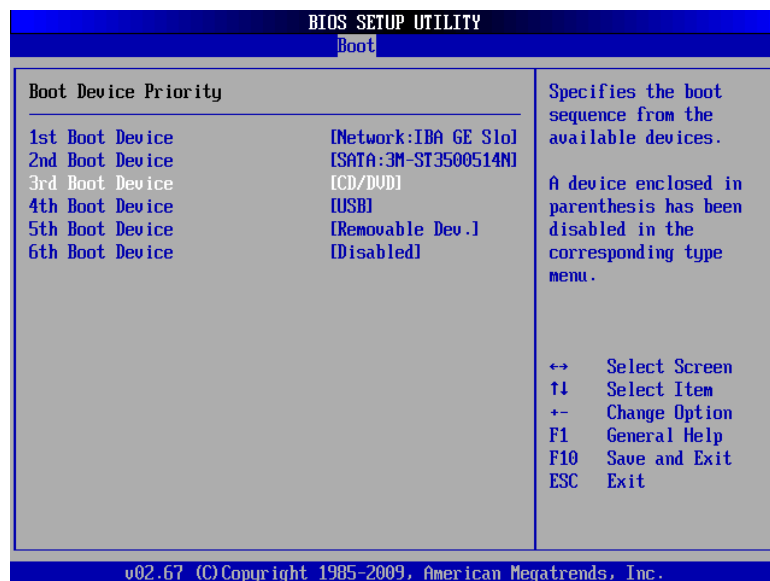
- Advanced Chipset Control
 - NorthBridge Configuration
 - ECC Configuration
 - "ECC Mode" to Good



- IDE/SATA Configuration
 - OnChip SATA Type to AMD_AHCI



- Boot
 - Boot Device Priority
 - 1st Boot Device should be Network
 - 2nd Boot device should be SATA



Now the BIOS should have proper and certified settings for running NumaConnect. Please save settings and restart the machine.