Installing SuSE using the Embedded SATA Controller with the megaSR swraid driver for common Device Usage

Contents

Introduction

When trying to install on M4 series or M5 series rack mount servers, the OS has trouble with the embedded raid controller and installing to the correct drives.

this document will help resolve the issue of the correct modules, and drives being loaded for SuSE operating Systems.

This procedure simplified the steps to install SuSE. it allows you to map the SuSE installation ISO as a virtual CD/DVD and dd.img driver file as a virtual floppy disk or virtual removable disk at the same time. please note, upon installation wizard initialization the disk may show up as a separate disk / partition then what is wanted for install. this can cause confusion due to how linux modules are loaded on installer. to resolve this please follow the steps at the bottom of this document to preserve the disk nomenclature for M.2 install.

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Before you begin

Before you install this driver on an embedded controller, you must configure a RAID drive group on the embedded controller that controls the drives where you will install the OS (pSATA and/or sSATA).

To access the configuration utility, open the BIOS Setup Utility, go to the **Advanced** tab, and then choose the utility instance for the embedded controller:

For pSATA, select LSI Software RAID Configuration Utility (SATA)

For sSATA, select LSI Software RAID Configuration Utility (sSATA)

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Procedure

Installing the SUSE Linux Enterprise Server Driver For LSI MegaSR Software RAID

For the specific supported OS versions, see the Hardware and Software Compatibility Matrix for your server release.

This topic describes the fresh installation of the SLES driver on systems that have the embedded MegaRAID stack.

Note	If you use an embedded RAID controller with Linux, both the pSATA (if enabled) and the sSATA controller must be set to LSI SW RAID mode.
Step 1	To install from *virtual* disk, download the Cisco UCS C-Series drivers' ISO, then continue with the step. Extract the dud.img file that contains the driver: a) Burn the ISO image to a disk.
Step 2	b) Browse the contents of the drivers folders to the location of the embedded MegaRAID drivers /<OS>/Storage/Intel/C600-M5/... c) Within the SLES folder for your version, the dud-<*driver version*>.img file is packaged in a compressed .gz file. Extract the .img file from the .gz file. d) Copy the dud-<*driver version*>.img file to a temporary location on your workstation.
Step 3	Start the Linux driver installation. Log in to the server's Cisco IMC interface. Launch a Virtual KVM console window and click the **Virtual Media** tab. a) Click **Add Image** and browse to select your remote SLES installation ISO file. Note: An ISO file can be mapped only as a virtual CD/DVD.
Step 4	b) Click **Add Image** again and browse to select your dud-<*driver version*>.img file. Note: An IMG file can be mapped only as a virtual floppy disk or a virtual removable disk. c) Check the check boxes in the **Mapped** column for the media that you just added, then wait fo mapping to complete.
Step 5	Power-cycle the target server.
Step 6	Press **F6** when you see the F6 prompt during bootup. The Boot Menu window opens.
Step 7	On the Boot Manager window, select the SLES installation ISO and press **Enter**. The SLES installation begins when the image is booted.
Step 8	When the first SLES screen appears, select **Installation**.
Step 9	Press **e** to edit installation parameters.
Step 10	Append the following parameter to the end of the line that begins with **linuxefi**: brokenmodules=ahci
Step 11	**Optional**: To see detailed status information during the installation, add the following parameter t line that begins with **linuxefi**: splash=verbose Press **Ctrl+x** to start the installation.
Step 12	The installation proceeds. The installer finds the LSI driver automatically in the dud-<*driver version*>.img file that you provided. With verbose status messages, you see the drive being installed when LSI MegaRAID SW RAID Module is listed. Follow the SLES installation wizard to complete the installation. Verify installation of the driver wh you reach the **Suggested Partitioning** screen: a) On the **Suggested Partitioning** screen, select **Expert Partitioner**.
Step 13	b) Navigate to **Linux > Hard disks** and verify that there is a device listed for the LSI - LSI MegaSR driver. The device might be listed as a type other than sda. For example: dev/sdd: LSI - LSI MegaSR If no device is listed, the driver did not install properly. In that case, repeat the steps above.
Step 14	When installation is complete, reboot the target server.

Cisco UCS reference documentation for M4/M5 servers with M.2 /Embedded SATA raid controller and linux

B-series

B200-m5 with M.2 storage install linux

B480-m5 with M.2 storage install linux

C-Series

C220-m4 M.2 storage install linux

C220-M5 with M.2 storage install linux

C240-m4 with M.2 install linux

C240-m5 with M.2 Storage install linux

C480-m5- with M.2 Storage install linux

C480-m5-ML with M.2 Storage install linux

S-Series

S3260-M5 with m.2/SSD embedded SATA controller