

## **Instructions on how to create and install the mpt2sas driver binary RPMs from SRPMS**

### **Requirements:**

#### 1. gcc compiler

You'll need to compile the drivers from the source code. The gcc C compiler is required. Note that this compiler is not installed by default on most systems. Often it has to be explicitly installed when first installing your OS, or by other means (like the compiler RPM package) afterward.

#### 2. Kernel source or kernel header tree for compiling driver

To compile the drivers, you will need the kernel source/headers on your machine. You may need to specify during install of the OS that the kernel source should be put onto your machine. If this is not available, you may need to get the kernel source from other means, such as a source RPM for the particular kernel.

The driver source code on the RHEL distribution cannot be installed by default. You will need to install the devel RPMs available on the media in order to compile the drivers. Uni-processor support, for example, requires the installation (for 32-bit) of kernel-devel-2.6.18-164.el5.i686.rpm. This does not place all the source code of the kernel on the drive, but rather only the header files of the kernel. The driver only requires these header files to compile properly.

For Suse the kernel-syms package also has to be installed in addition to kernel-source/kernel-devel packages.

#### 3. rpm utility

The rpm utility is needed to install the software. This is available on most systems.

#### 4. rpmbuild utility

This is needed to create the binary RPM file from the source RPM.

### **Creating the binary RPM:**

Log in as root. Download the source RPM to your drive. Install the source RPM by running rpm -ivh command.

The rpm name for SuSE will be in format: lsi-mpt2sas-<version>-<release>.src.rpm

The rpm name for RedHat will be in format: mpt2sas-kmod-<version>-<release>.src.rpm

Replace version, release, and architecture (arch) with those of the driver you want to install.

The following files should be placed on your system:

For Red Hat 5 users:

```
/usr/src/redhat/SOURCES/lsi-mpt2sas-<version>-<release>.tar.gz
```

```
/usr/src/redhat/SPECS/mpt2sas.spec
```

For Red Hat 6 users:

```
/root/rpmbuild/SOURCES/mpt2sas-<version>_rhel6.X.tar.bz2
```

```
/root/rpmbuild/SPECS/mpt2sas.spec
```

For SuSE users:

```
/usr/src/packages/SOURCES/lsi-mpt2sas-<version>-<release>.tar.bz2
```

```
/usr/src/packages/SPECS/lsi-mpt2sas
```

Next, you need to build the binary RPM to create and compile the drivers:

1. cd into the directory where the spec file was installed.

On Red Hat this is `/usr/src/redhat/SPECS`. On SuSE this is `/usr/src/packages/SPECS`.

2. You may need to open the spec file and check the kernel version mentioned in that is matching for the kernel for which you want to create and install the binary RPM. If it is not matching then edit the spec file to have proper kernel version.

3. Use the rpmbuild utility to build the binary RPM. This is done by the command

On Red Hat this is `rpmbuild -bb mpt2sas.spec`. On SuSE this is `rpmbuild -bb lsi-mpt2sas`.

If the architecture of the running kernel is not supported by the driver (the supported kernel architectures and flavor can be found in the spec file) then the targeted kernel architecture has to be passed using the option `--target <arch>`

4. When the build is finished the RPM will be located, on Red Hat, at `/usr/src/redhat/RPMS/<arch>` or `/root/rpmbuild/RPMS/arch`, on SuSE, `/usr/src/packages/RPMS/<arch>` o. (Run a `uname -m` to get the architecture).

#### Installing the drivers from the created binary RPM:

After the binary RPM is created, it can then be installed. Use `rpm -ivh` command to install the RPM. Make sure to reboot the system post installation.

To uninstall, use: `rpm -e` command. The name of the installed mpt2sas rpms can be found using `rpm -qa | grep mpt2sas`.