

Requirements and General Information

DELL's PowerEdge RAID Controller (PERC) is a special LSI Logic SAS/SATA RAID Controller and thus the LSI management utility called MegaCli also works for this controller. For older controllers like PERC4 and PERC3 please refer to <http://linux.dell.com/storage.shtml> (keyword DellMgr).

MegaCli is available for Linux, DOS, Windows, Netware and Solaris.

You can get it from LSI's website (search for MegaRAID SAS) or download it here: http://www.lsi.com/support/downloads/megaraid/miscellaneous/linux/1.01.40_Linux_Cli.zip. Inside the ZIP file you'll find an RPM archive which contains the MegaCli and MegaCli64 binaries (will be installed to /opt/MegaRAID/MegaCli).

MegaCli conventions

Adapter parameter -aN

The parameter -aN (where N is a number starting with zero or the string ALL) specifies the PERC5/i adapter ID. If you have only one controller it's safe to use ALL instead of a specific ID, but you're encouraged to use the ID for everything that makes changes to your RAID configuration.

Physical drive parameter -PhysDrv [E:S]

For commands that operate on one or more physical drives, the -PhysDrv [E:S] parameter is used, where E is the enclosure device ID in which the drive resides and S the slot number (starting with zero). You can get the enclosure device ID using „MegaCli -EnclInfo -aALL“. The E:S syntax is also used for specifying the physical drives when creating a new RAID virtual drive (see 5).

Virtual drive parameter -Lx

The parameter -Lx is used for specifying the virtual drive (where x is a number starting with zero or the string all).

Gather information

Adapter information

```
MegaCli -AdpAllInfo -aALL
```

Configuration information

```
MegaCli -CfgDsply -aALL
```

Events Information

```
MegaCli -AdpEventLog -GetEvents -f events.log -aALL && cat events.log
```

Enclosure information

```
MegaCli -EnclInfo -aALL
```

Virtual drive information

```
MegaCli -LDInfo -Lall -aALL
```

Physical drive list

```
MegaCli -PDList -aALL
```

Physical drive list

```
MegaCli -PDInfo -PhysDrv [E:S] -aALL
```

Battery backup information

```
MegaCli -AdpBbuCmd -aALL
```

Controller management

Silence active alarm

```
MegaCli -AdpSetProp AlarmSilence -aALL
```

Disable alarm

```
MegaCli -AdpSetProp AlarmDsbl -aALL
```

Enable alarm

```
MegaCli -AdpSetProp AlarmEnbl -aALL
```

Virtual drive management

Create RAID 0, 1, 5 drive

```
MegaCli -CfgLdAdd -r(0|1|5) [E:S, E:S, ...] -aN
```

Create RAID 10 drive

```
MegaCli -CfgSpanAdd -r10 -Array0[E:S,E:S] -Array1[E:S,E:S] -aN
```

Remove drive

```
MegaCli -CfgLdDel -Lx -aN
```

Physical drive management

Set state to offline

```
MegaCli -PDOffline -PhysDrv [E:S] -aN
```

Set state to online

```
MegaCli -PDOOnline -PhysDrv [E:S] -aN
```

Mark as missing

```
MegaCli -PDMarkMissing -PhysDrv [E:S] -aN
```

Prepare for removal

```
MegaCli -PdPrpRmv -PhysDrv [E:S] -aN
```

Replace missing drive

```
MegaCli -PdReplaceMissing -PhysDrv [E:S] -ArrayN -rowN -aN
```

Rebuild drive start

```
MegaCli -PDRbld -Start -PhysDrv [E:S] -aN
```

Rebuild drive stop

```
MegaCli -PDRbld -Stop -PhysDrv [E:S] -aN
```

Rebuild drive progress

```
MegaCli -PDRbld -ShowProg -PhysDrv [E:S] -aN
```

Clear drive start

```
MegaCli -PDClear -Start -PhysDrv [E:S] -aN
```

Clear drive stop

```
MegaCli -PDClear -Stop -PhysDrv [E:S] -aN
```

Clear drive progress

```
MegaCli -PDClear -ShowProg -PhysDrv [E:S] -aN
```

Bad to good

```
MegaCli -PDMakeGood -PhysDrv[E:S] -aN
```

Hot spare management

Set global hot spare

```
MegaCli -PDHSP -Set -PhysDrv [E:S] -aN
```

Remove hot spare

```
MegaCli -PDHSP -Rmv -PhysDrv [E:S] -aN
```

Set dedicated hot spare

```
MegaCli -PDHSP -Set -Dedicated -ArrayN,M,... -PhysDrv [E:S] -aN
```



Walkthrough: Change/replace a drive

1. Set the drive offline, if it is not already offline due to an error

```
MegaCli -PDOffline -PhysDrv [E:S] -aN
```

2. Mark the drive as missing

```
MegaCli -PDMarkMissing -PhysDrv [E:S] -aN
```

3. Prepare drive for removal

```
MegaCli -PDPPrRmv -PhysDrv [E:S] -aN
```

4. Change/replace the drive

5. If you're using hot spares then the replaced drive should become your new hot spare drive

```
MegaCli -PDHSP -Set -PhysDrv [E:S] -aN
```

6. In case you're not working with hot spares, you must re-add the new drive to your RAID virtual drive and start the rebuilding

```
MegaCli -PdReplaceMissing -PhysDrv [E:S] -ArrayN -rowN -aN
```

```
MegaCli -PDRbld -Start -PhysDrv [E:S] -aN
```

Please Note

This emergency cheat sheet is not exhaustive, but it should be sufficient in most cases.

For a complete reference either call

```
MegaCli -h
```

or refer to the manual at:

http://www.lsi.com/files/docs/techdocs/storage_stand_prod/sas/mr_sas_sw_ug.pdf (Chapter 3 – MegaRAID Command Tool).

Credits

This content has been taken from

<http://tools.rapidsoft.de/perc/perc-cheat-sheet.html> with

sincere thanks to the author for distilling the information into a usable format.

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