Solaris Volume Manager : Debugging Tips
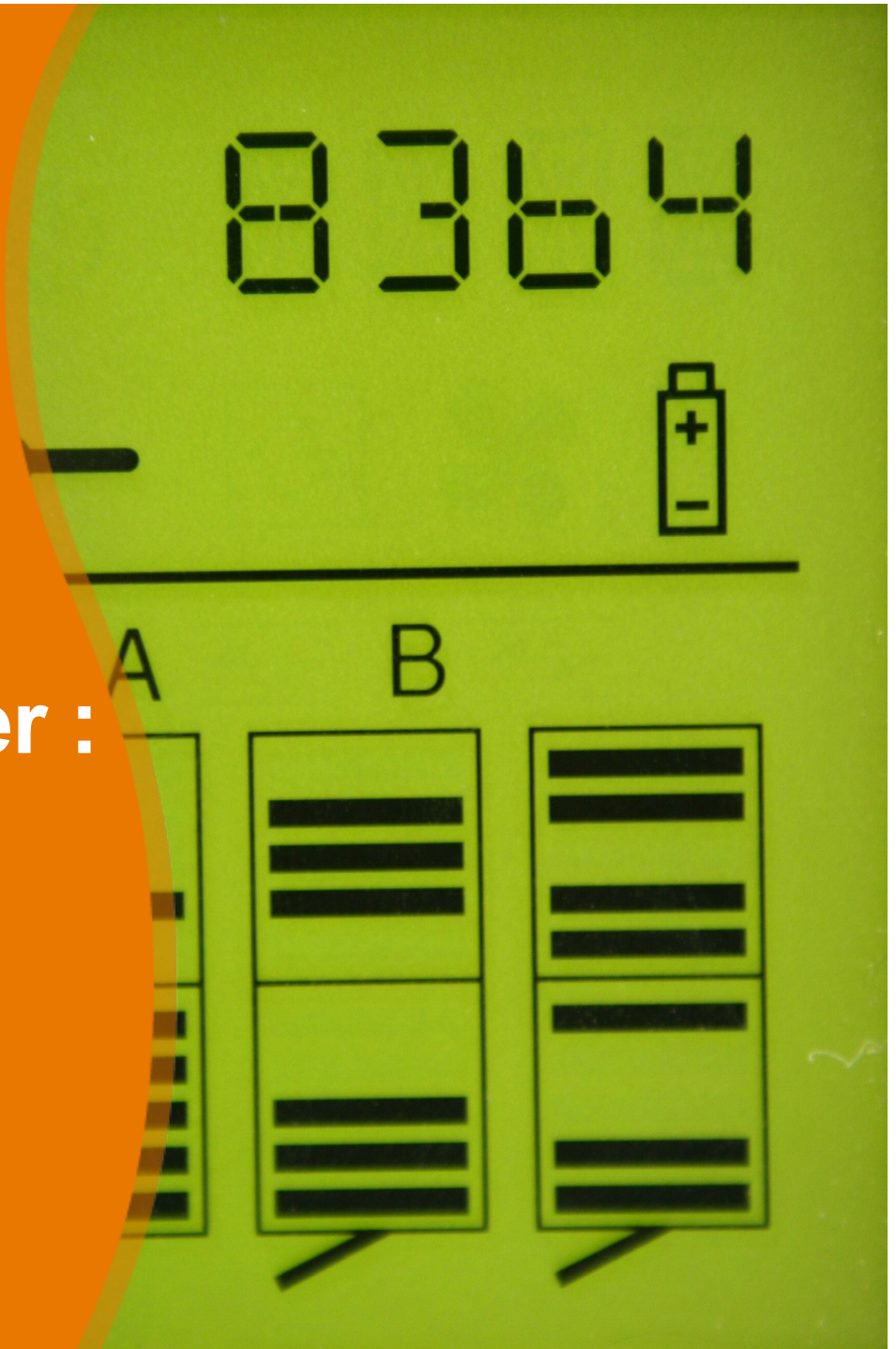
Solaris Volume Manager Debugging Tips

- Environment variables

- Dtrace

- MDB dcmds

- Compilation options

`

Environment Variables

- MD_DEBUG switch
  - > Set as env variable, comma separated list of options
  - > Acts in different ways to different code modules
  - > Usually good for on-site info gathering and lab tests
- META_SP_DEBUG
  - > Set as env variable, no value required
  - > Enables additional messaging in soft partition code

`

MD_DEBUG Options

- Metastat options :
  - \> SETINFO   print detailed metaset information
  - \> STAT   print detailed status information

- Libmeta code options :
  - \> DEVADM   enables messages in meta_devadm code
  - \> FAILFAST={NONE,DRIVER,DEBUG,HALT,PANIC}
       controls failfast mode for taking MH diskset drives
  - \> NOTHREAD   Forces MH set cmd to run as a single
       thread

`

MD_DEBUG Options

- Libmeta code options :
  - > DEVID   Warn if a device has no devid
  - > RENAME / EXCHANGE   Enable verbose messages in metarename code
  - > NODAEMON   Forces resyncs to run in the foreground
  - > MALLOC   prints malloc() debug info in md_init_nosig and md_exit
  - > RPC Enables messages in meta_client_create_retry()

`

Dtrace

- Useful tool for root causing functional and performance issues in user, daemon, and kernel code

- Scripts are easy enough to generate and fine tune that they are not usually kept around.

MDB dcmds

- Integrated in S10 and above
- Provide means to
    - > Dump SVM structures
    - > Walk SVM namespace entries
    - > Dump hotspare pools

`

MDB dcmds – S10

dumphotspare   - dump the hot spare pools

dumpnamespace   - dump the SVM name space

dumpsetaddr   - dump the SVM set addresses

md_verbose   - toggle verbose mode for SVM
dcmds

metaset   - list SVM metasets

metastat   - list SVM metadevices

simple_de_ic   - simple mddb_de_ic_t

`

Conditional Compilation Support

- Debug compile time options
  - rpc.mdcommd
    - DEBUG in both libmeta and rpc.mdcommd turns on debug output for the change log
  - rpc.metad
    - DEBUG will turn on debug functions but there are currently no calls to these functions
  - rpc.metamedd
    - DEBUG will turn on debug functions but there are currently no calls to these functions
  - rpc.metamhd
    - DEBUG will turn on debug functions but there are currently no calls to these functions

SVM Debugging Tips