# InfiniBand Management on localhost

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InfiniBand Management
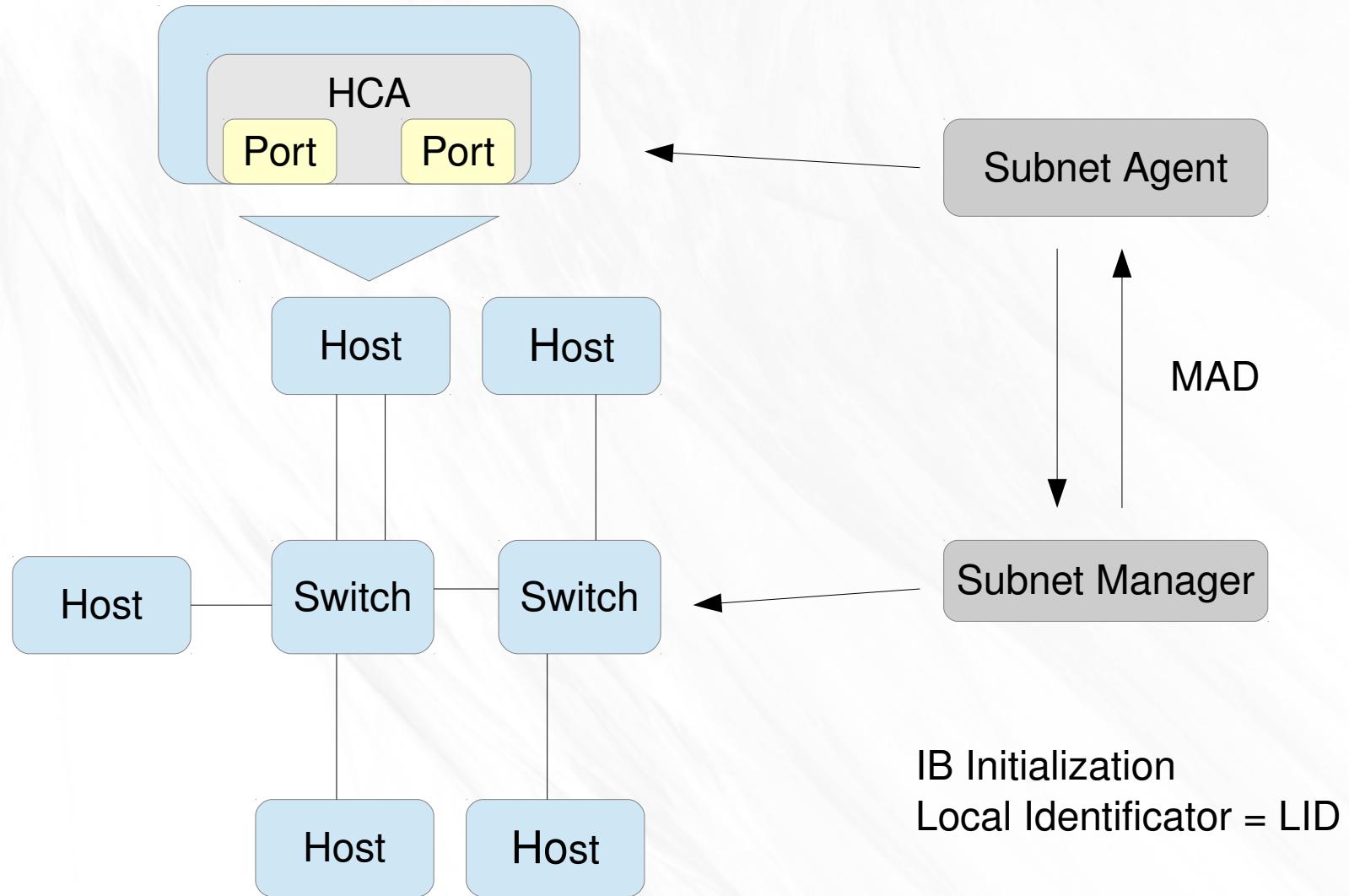
InfiniBand management simulator

Applications (OpenSM, Diagnostic Utilities)

⬇
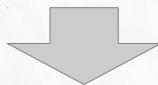
MAD Libraries (libibumad,libibmad)

⬇
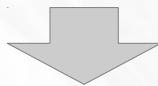
LD_PRELOAD=libumad2sim.so <--> ibsim

⬇

IB stack (ib_umad.ko)

How to use ibsim

- Install software from

    - OFED (rpms)

    - https://github.com/jgunthorpe/ibsim/

- Run ibsim

    - ibsim -s(tart) <network_config_file>

    - -r(emote_mode) -l(isten_to_port) port

- Manage from console or batch commands

Run applications

LD_PRELOAD=./umad2sim/libumad2sim.so ibnetdiscover

- Subnet Manager

    - opensm

- Diagnostic Utilities

    - ibstat

    - ibdiagnet

    - ibstatus

- Counters

    - perfquery

ibsim configuration file

Switch 8 "Switch1"

[1]   "Hca1"[1]

[2]   "Hca2"[2]

[3]   "Switch2"[3]

[4]   "Switch2"[4]

Hca   2 "Hca1"

[1]   "Switch1"[1]
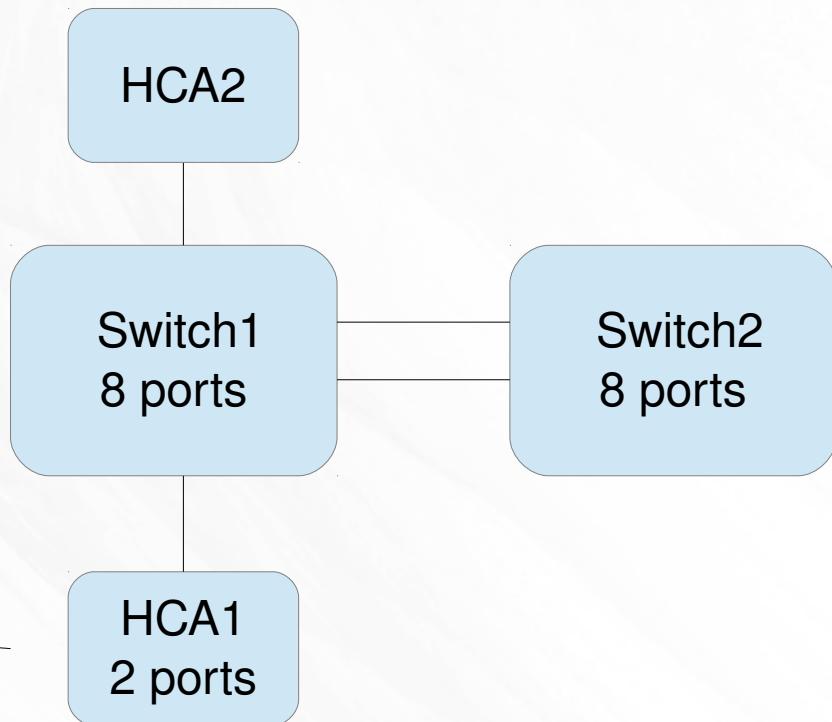
Conclusion

- Intro to IB management

  - start point if you meet IB fabrics

- ibsim application

  - features, how to start, configuration file

- ibsim was used for lab practice

  - no equipment, only VM

Questions?

Example

ibsim -s /usr/share/doc/ibsim-0.5mlnx1/net-examples/net

parsing: /usr/share/doc/ibsim-0.5mlnx1/net-examples/net

/usr/share/doc/ibsim-0.5mlnx1/net-examples/net: parsed 39 lines

#######################

Network simulator ready.

MaxNetNodes   = 2048

MaxNetSwitches = 256

MaxNetPorts   = 13312

MaxLinearCap   = 30720

MaxMcastCap   = 1024

sim>

Example

sim> dump

Net status - Sun May 19 12:05:04 2013

Switch 8 "Switch1"   nodeguid 200000 sysimgguid 200000

linearcap 30720 FDBtop 0 portchange 1

200000 [0]   "Sma Port"[0]   lid 0 lmc 0 smlid 0 4x 2.5G Active/LinkUp

200000 [1]   "Hca1"[1]   4x 2.5G Init/LinkUp

200000 [2]   "Hca2"[2]   4x 2.5G Init/LinkUp

200000 [3]   "Switch2"[3]   4x 2.5G Init/LinkUp

200000 [4]   "Switch2"[4]   4x 2.5G Init/LinkUp

200000 [5]   4x 2.5G Down/Polling

200000 [6]   4x 2.5G Down/Polling

200000 [7]   4x 2.5G Down/Polling

200000 [8]   4x 2.5G Down/Polling