



IBM and OpenFabrics Alliance

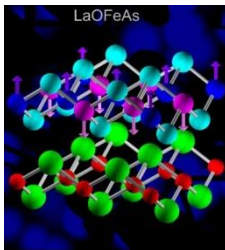
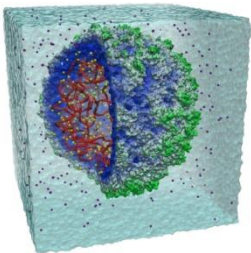
OEM Server Panel

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Agenda

- IBM's use of OpenFabrics software
- Challenges
- Observations

Use of OpenFabrics Software



Datacenter:
Scalable Databases

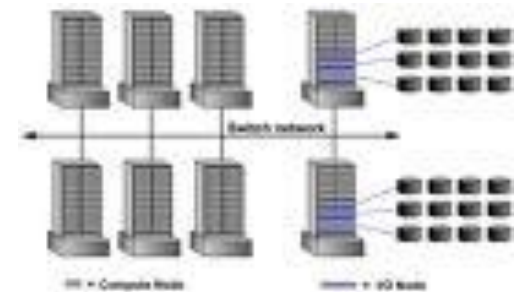


Scientific:
High Performance Computing



Financial:
High Freq Trading
Analytics

GPFS:
Parallel File Systems



Use of OpenFabrics Software



- IBM utilizes OFA components into both AIX (Power) and Linux (Power and Intel) product lines
- For Linux, we rely on Linux distros (e.g., Red Hat, Novell) to package, test and support OFA components

Use of OpenFabrics Software



- Transports
 - InfiniBand
 - RoCE
 - iWARP
- Protocols
 - Verbs, uDAPL
 - MPI (IBM MPI, Open MPI, MVAPICH)
 - IPoIB
 - RDS

Use of OpenFabrics Software



- Technology Areas
 - High Performance Computing
 - Financial Clusters
 - Database
 - Storage
- Products
 - Parallel Environment (IBM MPI, LoadLeveler)
 - DB2 pureScale
 - GPFS
 - SoNAS

Challenges

- Management of InfiniBand fabrics is *still* difficult
 - Tools are incomplete
 - Degradation can be hard to spot
 - Failures can be hard to isolate
- Programming knowledge at Verbs and uDAPL-levels *still* difficult to master
 - Lack of good example code
 - Lack of good tutorials, how-tos, etc.
 - Steep learning curve
 - Situation looks to improve with availability of OFA-sponsored Training Courses

Observations

- OFED continues to expand in the Enterprise Data Center
- IBM is using multiple OFA-developed technologies in an increasing range of products & markets