

IBM InfiniBand Update



OPENFABRICS
ALLIANCE

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www.openfabrics.org

Topics

- Open Fabrics Alliance: Importance to IBM
- Key InfiniBand Deployments in 2008
- Deployment Lessons/Challenges

OFA: Importance to IBM

- OFA instrumental in developing open source IB implementation
 - Enabled deployment of IB Linux solution on numerous IBM platforms
- OFA's efforts establish InfiniBand as an industry standard
- Critical for delivery of first Petaflop system – Roadrunner!

Key InfiniBand IBM Deployment in 2008



- Roadrunner

- Top 500 IB Clusters
 - 12 System p clusters
 - 21 BladeCenter clusters
 - 10 System x clusters

- InfiniBand supported on SLES, RedHat & AIX

- Oracle IB support on AIX

Deployment Lessons/Challenges

- Customers do not care about the fabric – just expect it to work!
- Customers expect Server OEM to be focal point for solution
 - Fabric problems must surface in a clear manner
 - What's urgent?
 - Something they can resolve? OR
 - Who to call to resolve issue?
 - Gulf between OS & fabric (not unique to IB)
 - Need more cohesive approach between OS & fabric
 - E.g. Killer App: Manage fabric as a whole
- Unique costs to support each vendor
 - Customer seek “standard” industry solution to lower cost
 - Unique vendor “capabilities” deter from acceptance of “standard”
- Commercial customers reluctant to transition to new technology
 - Lack of IB skills among clients
 - Ethernet “good enough for now”?
 - Implies IB must be made more attractive in other ways until performance becomes necessary
- Developer perspective
 - Need experience to get RDMA connection functional
 - Lack of good sample code
 - Lack of IB / RDMA programming infrastructure – detailed books, articles, howtos
 - Net: steep learning curve!