Think Tank Report
System Administration and Interoperability of Diverse Fabrics

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How to deal with the reality of diverse fabrics in modern systems?

- What great challenges face Sys Admins in integrating diverse fabrics

- What venue can be developed for accumulating documentation and distributing knowledge gained?

- Use of standardized resources at the node/edge, switch, cluster levels for greater visibility from the admin/user point of views.

- Interoperability: How can we make it easier for running multiple types of fabrics/technologies on systems for different use cases and keep each fabric’s integrity and reliability for performance/user? (in parallel or interchangeable based on use?)
Assignment

▪ Identify the key areas inhibiting Sys Admins from deploying new fabric technologies and integrating heterogeneous fabrics and recommend methods for overcoming those obstacles.

▪ Recommend ideas for integrating heterogeneous fabrics with similar software stacks

▪ Recommend a venue and/or documentation to capture and memorialize lessons learned.
Managing Diverse Fabrics

- Different fabrics have similar underlying technology but different ways of presenting that to the admins for deploying and administering
  - Use of similar kernel modules for different fabrics causes issues/confusions when interoperating them together on systems
  - Should these be redefined for more general use on these high speed fabrics?
    - Or kept separate?

- Many different tools for diagnosing
  - Good tools for basic errors, but what about the ones for the “subtle issues”
  - Vendors/admins make use of the tools in different ways and approach issues from different point of views
    - Documentation focused on vendor hardware/OFS

- Different flavors of OFS between distros
  - Town house this week focused on this as well
If the admins can define what requirements they would like to have for administering fabrics, can we work with vendors/developers to present that data?

- Define Tools/resources that are well known to provide useful information for fabric status and require same information across fabrics

Can the OFA be a driving force to help conceptualize the standardization?

- Help define what those requirements should look like
- Maintain and ensure vendors/developers are adhering to these requirements
- Develop community to define and implement an overly wrapper to interact with the tools that is standardized across these similar fabrics
Documentation / Knowledge Transfer

- Develop options for helping admins begin to learn to administer and diagnose these fabrics
  - Make use of centralized documentation resources

- **OFA wiki page**
  - Has been hit thousands of times but has outdated resources
    - Would be useful to know where hits are coming from to reach out to community
  - Keep up to date by community (need to get the word out)

- **User forums**
  - Used pretty regularly
  - Ideas thrown around to use github perhaps instead, but might be better to keep with OFA forum
▪ **Sys Admin training**
  * Would a training through the OFA be of use?
    * Drawbacks are that technology is changing rapidly (would be hard to keep current)
    * Tutorials/certifications
      * Would need to be done right to be credible

▪ **Collaborations with vendors**
  * How do vendors recommend that their fabrics are managed? Learn/share with the community
Path Forward

- How can the fabric administrator community push forward with accomplishing these tasks?

- Ongoing communication
  - Regular get togethers (either in person/con-calls) where resources can be shared and develop tools/resources
  - OFA efforts to help keep this community alive
    - Hosting events for demos
    - Keep forums active with issues

- OFA workshop integration
  - Use to have separate conference for users
    - Go back to this? Different track for portions of the workshop?
    - Benefit is having the developers in the room to give feedback
Important Links

OFA User Community Page
https://www.openfabrics.org/index.php/ofa-user-community.html

OFA Sys Admin Mailing List
http://lists.openfabrics.org/mailman/listinfo/ofa_sysadmin
Questions / Feedback

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