TAC Report
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OFA TAC chairs

#OFADevWorkshop
What is the TAC?

• TAC = Technical Advisory Council
• TAC Charter, the fine print:
  – Investigate technology trends
  – Review needs of end user markets/apps/technology
  – Maintain links to IBTA TWG, Spec bodies, & end users

• TAC Charter, my words:
  – *Find OFA growth vectors*
  – Could be anywhere from simple & tactical to new & green-field

• We meet twice a month
  – We = ~dozen technologists within the OFA
  – We invite outside experts as appropriate

Contact **tom.l.stachura@intel.com** if you are interested
So, what has the TAC done?

• Concrete Deliverables
  – Vetted new ULPs & Proposing OFA synergies
    • Recommended path to host GASPI on OFA site
    • Intent is to reduce the barrier for OFA adoption to new ULPs
  – Analyzed the I/O needs of Applications
    • This was the start of the OFI WG
    • The focus was to look at this from the application perspective
  – OFI WG spun out of TAC
    • TAC drove the creation of the OFI WG
    • NOTE: Our hope is to replicate this “incubation model” going forward

• Additional work “in progress”…
  – Storage at a Distance
  – Cloud & Virtualization relevance for OFED
  – Exascale scalability
Where is the TAC going?

• 3 key vectors we want to focus on
  – Improving Verbs
  – OFA in the Cloud
  – NVM & OFA

• We also still have unfinished work to complete
  – Storage at a Distance
  – Object Storage
Improving Verbs

- Scalability
  - RDMA-CM
  - QP Resources
- Scalability & Usability
  - Heavy cost for memory registration
- Application Impedance Match
  - Not mapping to well to MPI
  - Different h/w implementations
  - Mapping to “well-known” ports

Recommended Focus area for OFA & IBTA

OFI WG Focus Area
OFA in the Cloud

• We recently pulled together experts from Argonne, IBM, Mirantis, and VMware
  – 1 session on this topic was hosted by VMware this morning

• Key points we learned: **We need to:**
  1. Enable a socket-based solution for Cloud
  2. Expose high-performance networking capabilities to apps
  3. Provide support in a virtualized environment
     (e.g. don’t impact or lose VM migration)
  4. Provide support in an SDN environment
     (e.g. network virtualization and/or traffic engineering)

• OFI WG is leading on #1; TAC is leading #2-4

Contact [tom.l.stachura@intel.com](mailto:tom.l.stachura@intel.com) if you want to participate
NVM & OFA

• The TAC has not started work here as of yet…
• We had a good kick-off with the 3 sessions yesterday:
  – NVM as a Disruptive Technology
  – Storage Class Memory
  – NVM programming model (SNIA)
• What I heard:
  – Low latency NVM creates a disruptive opportunity
  – We can expose NVM directly to applications; RDMA is relevant here
  – There is obvious synergy between NVM & high-perf networking
• The TAC needs to investigate THIS YEAR
  – Doug Voigt and I have already discussed starting w/ use cases

Contact tom.l.stachura@intel.com if you want to participate
Brainstorm – what else?

- What other areas should we be investigating?
- What trends are important to OFA?
- Who should we be talking to?

Send ideas to tom.l.stachura@intel.com
Thank You