Community Questions

Runtime System Software - Summit

Community buy-in

- Ecosystem Creation: How do we achieve community buy-in to an envisioned runtime architecture and semantics?
- Process: We need a process to continuously evaluate refine the envisioned runtime architecture and semantics while keeping focus on achieving an Exascale runtime system. What should this process be?

Ecosystem Creation

- Establish an open, transparent environment where the solution is not pre-determined
- Provide an organic process for community decision-making, ensuring that the best solution wins (Metrics)
- Avoid a single player or clique dominating
- Lower the barrier to participation by providing stable, reliable releases of candidate solutions to a broad audience

Process

- Build an independent, open-source foundation that ensures the different projects can be continuously available, evolved, and supported.
- The different projects will evolve based on the contributions made. As solutions demonstrate their superiority, they will attract more contributions as well as consensus.
- The community will organically migrate to the superior solution.
- DOE can continuously view progress and help fund projects to cover any critical shortfalls.

Who is in the Community

- 1. Exascale Computing Research Community
- 2. High Performance Computing User Community (current users)
- 3. Academic Community (future users)
- 4. Application Development Community (scientists and engineers)
- 5. Software Vendors
- 6. Hardware Vendors

Community Services

- Project Team Infrastructure e.g. source code control, tooling, debuggers, collaboration/communication
- Release Engineering
- Technical Support
- IP management
- Education, instruction and training
- Community Development

Build on Experience – Community 2.0

Learn from the best Eclipse, Apache, Mozilla

- Building the community/ecosystem is top priority
- Support multiple projects and give them autonomy
- Support Regular Community Interaction
- Long-term commitment to quality through education and process

Avoid the pitfalls

- Commercial control of the purse strings leads to community breakdown
- Get to community support quickly and maintain community leadership



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