Asynchronous Many-Task Runtime Systems Working Group
(AMT RTS WG)

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Salishan HPC Conference
April 29, 2015
Gleneden Beach, OR
We’re kicking off a working group to help define best practices within the AMT RTS community.
We’re highly motivated, because we have to stand up a solution soon for ASC/ATDM [and other program drivers].
We’d like to work this as a community effort – developing best practices and shared approaches can help us all.
Shared Goals and Objectives

• Develop a common view of the AMT RTS components and the architecture in which they fit.
• Develop the use cases and requirements that prioritize the R&D activities associated with the ATM RTS.
• Augment the community in their efforts to develop sharable AMT RTS components.
PM/E Goals and Objectives

• Develop a common set of APIs for the programmers to get started on writing code via AMT models. This is: a) not intended to be a standard, but rather a beginning to decouple the codes from AMT system implementations, and b) is targeted at the application/library-level developers, and c) not intended to include the high-level application-domain abstractions (e.g., meshes).

• Develop a shared model for the use of AMT RTS, and specifically to generate the use cases and requirements that help drive the RTS/OS developments.

• Develop a shared set of AMT-based proxy apps that reflect the DOE workload and provide a sound basis for co-design.
RTS/OS Goals and Objectives

• Develop a set of requirements based on the use cases and semantics of the shared model for the use of the AMT RTS.
• Use these requirements to identify the common capabilities and differentiating capabilities of current RTS R&D activities.
• Evaluate the ability of the common RTS capabilities to be encapsulated through a common interface.
• Develop a method for categorizing the differentiating RTS capabilities to better understand scope and potential impact.
If you’d like to participate, contact either of us.

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