

# ECP SW deployment SDK / Spack in production environments

Scalable tools Workshop 7/11/18

Breakout session

# The ECP SDK

- Deployment packaging for software areas in ECP and other
- Based on release cadence that includes Continuous Integration testing across sites / architectures
- Software packaging based on spack

## Concerns:

- How will this deploy at a site that requires multiple compilers, versions, etc.
- Tool area - more complicated build relationships
- Can containerization help - Sameer has prototype for ECP ST PMR area
- What are spack needs in this area?

# Discussion

- Have tool chains - i.e. GCC / Mvapich /version
  - Horizontal layers - do these have versions?
- Then deploy tool sets on top of tool chains - i.e HPCToolkit, etc
  - Vertical layer built on horizontal layers
- More tool capability in Spack ecosystem
  - Different planes - ability to manage variants
  - Manage different sets
  - Have a matrix to help identify what should be built and supported
- Packaging guidelines to identify package quirks
- Production case - allow users to build on top of supported planes to create their own tool sets variants for testing
- ABI compatibility would help resolve many issues - cry for help
  - SW package should self identify
- Library dependencies ?

# Discussion

- Do we have underlying tool chains that are common across ST SDKs? And other tools?
  - Define a base for other SW products to target and release on
- Are SDKs deployment only targeted at ECP facilities or broader community
  - what is the support model
  - Things like the matrix capability could be built into the Spack ecosystem and provide a management and assessment capability for any HPC facility
  - Policies may be facility based
- Matrix would also support integrating continuous integration testing for tool chains/sets
  - This is an important component for a healthy SW ecosystem
- Spack needs more maturity regarding issues that occur. Error messages, etc..
- WG - Matt, Martin, Kevin, Sven, Paul, DavidM, others