

# Trilinos Framework Update

**11:40 Wednesday Nov. 6<sup>th</sup>, 2013  
CSRI 90  
Jim Willenbring**

Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.



- Future release timing
- Trilinos tutorial at Vecpar
- Trilinos impact tracking
- Changes to software.sandia.gov
- Tech-X Projects
- Trilinos.org
- Ongoing/Upcoming efforts

- Current three release per year plan is inconsistent
- Encouraged to move to a quarterly release model
- Proposal:
  - Freeze the first month of each quarter between the 5<sup>th</sup> and the 15<sup>th</sup> on a Tuesday and release about 2 weeks later.
  - Workable every quarter, including 4<sup>th</sup> quarter CY
  - Continue incrementing major version number about every 2 years

- Vecpar '14: June 30<sup>th</sup> – July 3<sup>rd</sup>
- Need to determine if developer(s) are available to offer tutorials
- Which tutorials?
  - Standard tutorial (expanded through Thursday/Friday/VM effort)
  - Kokkos
- How long?
  - Penciled in for one day
  - May want 2 days

- **Management request for information on Trilinos impact**
- **Need a list of customers (current version shown here ->)**
  - Which customers are missing?
- **Request for information from each customer**
  - The name and description of the customer code
  - High level mathematical description
  - What Trilinos packages and capabilities are used
  - How has Trilinos been used to solve challenging problems
  - Recent success stories
  - Comments on specific positive impact on customer/Sandia
  - Other comments. e.g. potential future impact

Albany
Alegra
ASCEM
CASL
Charon
Community
Climate
Dakota
Denovo
NEAMS
Paradigm
QCAD
SIERRA
Tramonto
<u>Xyce</u>
LifeV
FiPy



# Changes to software.sandia.gov

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- **Goal of changes: Improve security**
- **software.sandia.gov is being split into 2 servers:**
  - Repositories, CMS hosting
  - Collaborative machine
- **Sandia WebCars and metagroups for access (both servers)**
- **Repository machine**
  - Fast HTTPS protocol instead of SSH protocol
  - SSH protocol (git-shell) allowed internally by project and user request
  - SSH access by specific approval for specific reasons (internal network)
- **Collaborative machine**
  - SSH access to collaborative directories
- **3 upcoming forums in CSRI to discuss changes**
- **Email wg-sems-admin@sandia.gov with specific questions**

- ETI is the current primary focus
- Finishing some 64-bit ordinal work
- Contact Mike Heroux or Jim Willenbring if you have ideas and funding for additional efforts

- Status update
  - User Site
    - ◆ Likely the first to move, but facing impediments
    - ◆ Must choose CMS tool (Drupal, Wordpress)
    - ◆ No developer time available now
  - Developer Site
    - ◆ Trac
    - ◆ Need to convert Bugzilla database
    - ◆ Need to decide how much of the site to do in Trac
  - Mail lists
    - ◆ Bill G. has mail list capabilities set up
    - ◆ Need R&A
  - Public repository?



## Ongoing/Upcoming Framework Efforts

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- New STK in Trilinos
- Trilinos.org
- Testing / testing infrastructure updates
- BSD transition
- Collaboration agreements
- Lifecycle model
  - ◆ Training for participants
- TriBITS TPL system

Framework staff ~1.5 FTE, down from ~1.8