

Vanguard II Technical Advisory Team (TAT)



PRESENTED BY

James H. Laros III, Kevin Pedretti, Si Hammond



SAND2020-5487PE



VANGUARD



Sandia National Laboratories is a multimission laboratory managed and operated by National Technology & Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International Inc., for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-NA0003525.

TAT Groups, Members and Sections

- Systems Software and Architecture

- Sections:

- 3.2 System Description
 - 3.3 Hardware Architecture
 - 3.4 Software
 - 3.6 Collaboration
 - 3.7 Power and Energy

- Leads:

- Kevin Pedretti and Scott Hemmert

- Members:

- Andrew Younge (SNL)
 - Ryan Grant (SNL)
 - Phil Regier (SNL)
 - Matthew Curry (SNL)
 - Gwen Voskuilen (SNL)
 - Mike Lang (LANL)
 - Matt Leininger (LLNL)

- SMEs

- Stephen Olivier (SNL)
 - Kurt Ferreira (SNL)
 - Arun Rodrigues (SNL)

- Programming Environment and Acceptance

- Sections

- 3.2 System Description
 - 3.5 Programming Environment
 - 3.10 Performance/Platform Acceptance

- Leads:

- Si Hammond and Clay Hughes

- Members:

- PE

- Ian Karlin (LLNL)
 - David Beckingsale (LLNL)
 - David Richards (LLNL)
 - Gabe Rockefeller (LANL)
 - Pat McCormick (LANL)
 - David Poliakoff (SNL)
 - Siva Rajamanikam (SNL)
 - Mike Glass (SNL)

- Acceptance:

- David Poliakoff (SNL)
 - Hai Ah Nam (LANL)
 - Anthony Agelastos (SNL)

TAT Groups, Members and Sections (cont.)

- Operations

- Sections:

- 3.2 System Description
 - 3.9 Systems Management
 - 3.11 Facilities and Site Integration
 - 3.12 Maintenance

- Leads:

- Jeff Ogden and Randy Scott

- Members:

- Jay Livesay (SNL)
 - Phil Regier (SNL)
 - Justin Wood (SNL)
 - Dave Martinez (SNL)
 - Trent D'Hooge (LLNL)

- Storage

- Sections

- 3.2 System Description
 - 3.8 Storage

- Leads:

- Lee Ward and Matthew Curry

- Members:

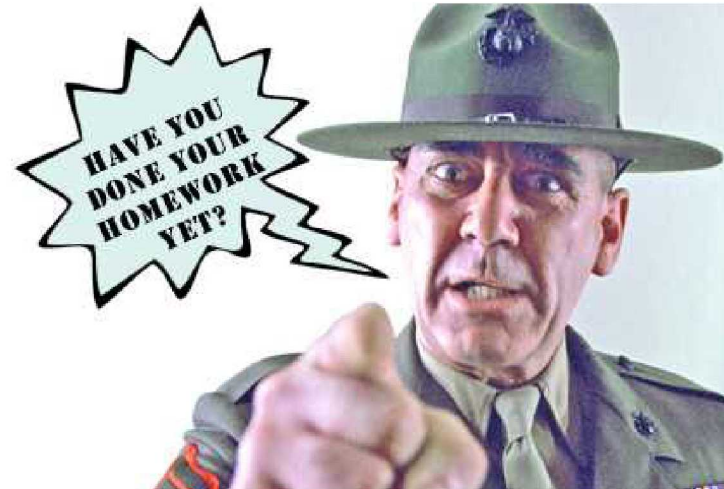
- Ruth Klundt (SNL)
 - Brad Settlemyer (LANL)
 - Robin Goldstone (LLNL)

TAT Groups, Members and Sections (cont.)

- Source Selection Members
 - James Laros (SNL)
 - Rob Hoekstra (SNL)
 - Kevin Pedretti (SNL)
 - Si Hammond (SNL)
 - Steve Monk (SNL)
 - Matt Leininger (LLNL)
 - Mike Lang (LANL)
- Observers
 - Thuc Hoang
 - Scott Collis
 - Ron Brightwell
 - Others TBD

TAT Responsibilities (ALL)

- Read entire proposal
 - Yes, even the sections that you aren't responsible for
- Evaluate proposal based on Mandatories (MR) and Objectives (TO, VO, DO)
- Follow Group-lead guidance
- Come to meetings prepared to report and discuss your findings
- Work as a TEAM!



Handling Information

- You are responsible for protecting company proprietary information contained in the proposals (and the proposals themselves)
 - Recall you signed an agreement to NOT share the proposal or proposal information outside of TAT members
 - Do not leave hard copies of responses on un-attended printers
 - **Do not transmit (email) any documents related to the evaluation without password protection**
 - Do not discuss any aspects of this procurement process with anyone outside of the TAT members
 - Including where you may be overheard!



Spreadsheets

- Spreadsheets will be provided along with proposals
- Ratings (see slides 9 & 10)
- Comments
 - Comments are optional if rating is Satisfactory
 - Comments are **REQUIRED** if rating is otherwise (Excellent, Good, Marginal, or Unsatisfactory)
- Strength/Weakness
 - Provided to assist in developing the out-brief

	VENDOR A		
	Rating	Strength/Weakness	Comments
3.10 Performance/Platform Acceptance			
3.10.1 (TO) The Offeror shall supply all software, source code (where possible), tools, and support necessary to integrate vendor-supplied components into the ATSE stack.			
3.10.2 (TO) The Offeror shall provide the support necessary for research/production staff to demonstrate an initial set of full machine runs and provide performance projections for the following benchmarks:			
- HPCG (High Performance Conjugate Gradient) Benchmark			
- HPL (High Performance LINPACK) Benchmark			

Ratings Choices and Definitions

Restated on 'Guidance'
tab in spreadsheet!



- **Excellent**
 - The offeror's qualifications are superior and are indicative of high ability to exceed the requirements (objectives) stated in the RFQ. The proposal demonstrates considerable high past performance in the same or similar work as described in the proposal. The firm clearly has ample resources available to support the project.
- **Good**
 - The offeror's qualifications are above average but fall short of the level of "Excellent"; qualifications are indicative of a high ability to meet the requirements (desired attributes) stated in the RFQ. The firm has sufficient existing resources available to support the project and has demonstrated good past performance in same or similar work.
- **Satisfactory**
 - The offeror's qualifications are average and are indicative of an ability to satisfy the basic requirements (objectives) of the RFQ. Qualifications are relevant to the work described in the RFQ. The firm has an acceptable level of resources to support the project and has demonstrated satisfactory past performance in same or similar work.
- **Marginal**
 - The offeror's qualifications are below average and raise doubts about the offeror's ability to satisfy the basic requirements (objectives) of the RFQ. Qualifications bear little relevance to the work described in the RFQ. It is unclear whether the firm can provide adequate resources to support the project. Past performance in the same or similar work is unclear, was below average, or less than satisfactory.
- **Unsatisfactory**
 - The offeror's qualifications are far below the standard for a qualified Subcontractor, and are not indicative of an ability to meet the requirements (objectives) of the RFQ. Qualifications bear no relevance at all to the work described in the RFQ. The firm does not have resources to support the project adequately, and does not appear to have a viable plan to acquire such resources. Offeror does not demonstrate past performance in the same or similar work, or such performance was unsatisfactory.

Ratings

- Each objective must be rated
 - This includes sub-components of a single objective
- Rating of objectives **MUST** be reflective of sub-component ratings
 - Don't rate a sub-component Marginal and the overall objective Excellent

	VENDOR A		
	Rating	Strength/Weakness	Comments
3.5.2 (DO) The Offeror shall describe the open source compiler options that meet the following objectives for all of the proposed processor types, including any accelerators:	Satisfactory		Can be addressed with NRE
- Supports the OpenMP 5.0 (or higher) programming model for general purpose processor and accelerator offload	Marginal	Partial support	
- Supports the C/C++17 language standard	Satisfactory		
- Supports the Fortran 2008 language standard	Marginal	Partial support	
- Supports interoperability of the supported languages when linked into an application binary	Satisfactory		

Schedule, Past and Projected

- ✓ August 26th 2019 - RFI released
- ✓ September 25th 2019– RFI responses received
- ✓ November 20th 2019 – Tri-lab consensus on target technology
- ✓ January 31st 2020 – 1st draft Vanguard II technical specifications
- ✓ February 10th 2020 – 13th – Vendor meetings at CSRI/NM
- ✓ February 21st 2020 – Technical Specification draft to Tri-labs
- ✓ March 20th 2020 – Technical content completed, all feedback incorporated
- ✓ April 16th 2020 – VanEvaluate and prioritize procurement of prerelease hardware from computer vendors based on program goals.
- ✓ guard II RFP/Q released
- ✓ April 28th (1-4pm) – Pre-bid conference
- ✓ May 13th – COI forms due back to Jim Laros
- ~~June 1st – Responses due~~
- June 15th – Responses due (Extension granted, dates modified appropriately from this point)
- June 16th – Responses distributed to technical review team



Schedule, Past and Projected (cont)

- June 16th - July 2nd – groups conduct technical review of proposals
- July 8th – Spreadsheets due to Jim from group leads
- July 9th – (TBD) Technical Review Group presentations
- July 13th – (TBD) Source Selection meeting
- July 15th – Begin negotiations
- August 14th – Statement of Work completed
- August 31st 2020 – Contract signed

TAT Brief Out Agenda

- 9am (FIRM) Introductions
- 9:10 – 12:30 Group out-briefs
 - Systems Software and Architecture
 - Programming Environment and Acceptance
 - Operations
 - Storage
- Break for lunch when morning out-briefs are complete
- 2:00 (NLT) Begin group discussion



Backup Slides

Group Lead Responsibilities

- Coordinate how you will conduct your reviews with your group members
 - Its your call as long as you complete your reviews by the required date
 - All meetings will be held over the phone (COVID-19)
- Deliver roll-up spreadsheet reflecting your groups consensus by due date
 - One overall sheet
 - One rating per objective per proposal
- Complete and present your high-level findings at the TAT out-brief call
 - A template will be provided
 - Please stick to the format, consistency is important for fairness

Procedural Notes

- Spreadsheets
 - Example will be distributed prior to proposal due date
 - Final sheets distributed along with proposals
 - Once we know who you are evaluating
- 3 part evaluation
 - Ratings (see definitions)
 - Each objective must be rated
 - This includes sub-components of a single objective
 - Rating of objectives **MUST** be reflective of sub-component ratings
 - Don't rate a sub-component Marginal and the overall objective Excellent
- Comment
 - Comment is optional if rating is Satisfactory
 - Comment is **REQUIRED** if rating is otherwise (Excellent, Good, Marginal, or Unsatisfactory)
- Strength/Weakness
 - Provided to assist you in developing your out-brief

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