NSCI: High-Performance Computing Security Workshop

NIST

Gaithersburg, Maryland
Building 101, Green Auditorium
September 29-30, 2016

AGENDA

	Thursday, September 29, 2016 8:30 a.m. – 5:20 p.m.	
		Topic
8:30 – 8:40	Chuck Romine (NIST)	**Welcome to NIST and the Information Technology Laboratory**
8:40 – 8:50	Tim Polk (OSTP)	**NSCI and Workshop Goals**
8:50 – 9:10	Chuck Romine (NIST)	**HPC Expert on Why Security Matters**
9:10 – 9:30	Sean Peisert (Berkeley Lab)	**Cybersecurity for HPC Systems: Challenges and Opportunities**
9:30 – 9:50	John West (Texas Advanced Computing Center)	**HPC Current Use and Practice: Open Science HPC Center**
9:50 – 10:10	**Networking Break**	
10:10 – 10:30	Buddy Bland (Oak Ridge)	**HPC Current Use and Practice: National Laboratories**
10:30 – 10:50	David Pellerin (Amazon)	**HPC Current Use and Practice: Industry** • Current and emerging cloud use-cases in industry • Architecting for high performance in the cloud • Monitoring and managing cloud-based HPC for high security

	Thursday, September 29, 2016 8:30 a.m. – 5:20 p.m.	
10:50 – 11:10	David Kahaner (Asian Technology Information Program)	**A Snapshot of Advanced Computing Developments in China and Japan**
11:10 – 11:20	Matt Barrett (NIST)	**The NIST Security Framework for Critical Information Systems** • might cause some shared terminology • we can explain that all the areas are needed
11:20-11:40	Tom Hinke (NASA)	**Securing NASA's Most Powerful Supercomputer**
11:40 – 1:00	**Breakout Session: "HPC Security Best Practices: Strengths and Weaknesses"** • multiple rooms, same topic *(see Page 5 for breakout abstracts)* • Lecture Room A, Lecture Room B, Green Auditorium	
1:00 – 2:00	**Break for Lunch** *Cafeteria closes @ 3:00pm. Grab an extra snack for the afternoon break*	
2:00 – 3:20	**Breakout Session: Open Science and the Insider Threat: Can They Be Reconciled?** • multiple rooms, same topic *(see Page 5 for breakout abstracts)* • Lecture Room A, Lecture Room B, Green Auditorium	
3:20 – 3:40	**Networking Break**	
3:40 – 5:00	**Breakout Session: What New Hardware/Software Features and Architectural Structures Would Revolutionize Security for HPC?** • **E.g., what is current HW cutting edge, and what is on the way** • Multiple rooms, same topic *(see Page 5 for breakout abstracts)* • Lecture Room A, Lecture Room B, Green Auditorium	
5:00 – 5:20	**Announcements and Feedback**	
Adjourn		
5:20 – 5:40	**Hotwash** (just organizers)	

	Friday, September. 30, 2016 8:30 a.m. – 2:30 p.m.	
8:30 – 8:40	**Announcements. Feedback Forms Distributed.**	
8:40 - 10:10	**Breakout Group Report Outs**	
10:10 – 10:40	Phil Colella (OSTP)	**KEYNOTE: An Expanded NSCI HPC Ecosystem and Cybersecurity**
10:40 – 11:00		**Networking Break**
11:00 – 11:20	Angelos Keromytis (DARPA)	**Transparent Computing**
11:20 – 12:00	Lee Beausoleil (NSA) (moderator)	**Panel. HPC monitoring:** *how detailed can it be? What problems would fine-grained monitoring solve? Can data provenance be maintained through monitoring?* ***David Lombard*** (Intel), ***Sean Peisert*** (Berkeley Lab), **Angelos Keromytis** (DARPA)
12:00 - 1:00	**Break for Lunch**	
1:00 – 1:10	Lee Beausoleil	**Agency Perspective: NSA**
1:10 – 1:20	Robinson Pino	**Agency Perspective: DOE**
1:20 – 1:30	Anita Nikolich	**Agency Perspective: NSF**
1:30 – 1:40	Lee Badger	**Agency Perspective: NIST**
1:40 – 1:50	Reed L. Mosher	**Agency Perspective: DOD**
1:50 – 2:30	Carl J. Williams (NIST) (moderator)	**Panel. Revisit**: • HPC Perspective on Why Security Matters • Security Perspective on Why HPC Matters Panelists nominated by organizers based on previous sessions.
Adjourn		