

NDM 2015

Network-aware Data Management Workshop

Room 410



2:00 pm – 5:30 pm

November 16th, 2015 - Monday

Welcome to NDM



- The Fifth Workshop on Network-aware Data Management

<http://ndm-meeting.org>

Mehmet Balman,
Surendra Byna,
Brian L. Tierney



Scope of the workshop

- Discuss emerging trends in use of networking for data management
- Create new collaborations between network and data management communities

Agenda

2:05 – 2:35 Keynote

Network Integration with Workload Management - the PanDA Example

Kaushik De (University of Texas at Arlington)

2:35 - 3:00

Managing Scientific Data with Named Data Networking (NDN)

Susmit Shannigrahi (Colorado State University)

3:00 - 3:30 Refreshment Break

3:30 - 3:55

A Multi-domain SDN for Dynamic Layer-2 Path Service

Fatma AL-Ali (University of Virginia)

3:55 - 4:20

**Design and Implementation of Control Sequence
Generator for SDN-enhanced MPI**

Baatarsuren Munkhdorj (Osaka University)

4:20 - 4:45

**Approximate Causal Consistency for Partially
Replicated Geo-Replicated Cloud Storage**

Tayuan Hsu (University of Illinois at Chicago)

4:45 - 5:10

**Hysteresis-based Optimization of Data Transfer
Throughput**

Md S Q Zulkar Nine (University at Buffalo (SUNY))

Program Committee

- Pavan Balaji, Argonne National Laboratory and Northwestern University, USA
- Jerry Chou, National Tsing Hua University, Taiwan
- Constantine Dovrolis, Georgia Institute of Technology, USA
- Zhihui Du, Tsinghua University, China
- Renato J Figueiredo, University of Florida, USA
- Kartik Gopalan, State University of New York at Binghamton, USA
- Zhiyi Huang, University of Otago, New Zealand
- Raj Kettimuthu, Argonne National Laboratory and University of Chicago, USA
- Jinh Kim, Texas A&M University-Commerce, USA
- Siva Kulasekaran, Texas Advanced Computing Center, USA

Program Committee (continue)

- Manish Parashar, Rutgers University, USA
- Eric Pouyoul, Energy Sciences Network and Lawrence Berkeley Lab, USA
- Yusuke Tanimura, National Institute of Advanced Industrial Science and Technology, Japan
- Malathi Veeraraghavan, University of Virginia, USA
- Venkat Vishwanath, Argonne National Laboratory, USA
- Chen Wu, ICRAR, The University of Western Australia, Australia
- Wenji Wu, Fermilab, USA
- Lei Xia, LinkedIn, USA
- Esma Yildirim, Fatih University, Turkey
- Michelle M. Zhu, Southern Illinois University, USA

Workshop Evaluation

- Please do not forget to fill out the survey forms

Network Integration with Workload Management - the PanDA Example

Kaushik De (University of Texas at Arlington)

Abstract: PanDA is the workload management system used by thousands of physics in the ATLAS experiment at the Large Hadron Collider. PanDA manages the execution of millions of user jobs per day at hundreds of sites worldwide. While PanDA was originally designed a decade ago to manage workloads on CPU's and Storage, over the past few years the role of networking has proven to be equally important. We will present results and discuss future plans for active network integration in PanDA.