ACM ScienceCloud 2013

4th Workshop on Scientific Cloud Computing (ScienceCloud) 2013

http://datasys.cs.iit.edu/events/ScienceCloud2013/

Keynote

Dr. Ian T. Foster

- Senior Scientist & Distinguished Fellow
  - Math and Computer Science Division (MCS), Argonne National Laboratory
- Director
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- Professor
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The notion of science as a service was originally positioned in 2005 as a means of publishing and accessing scientific data and applications through internet accessible services. At that time, researchers were only just grasping the benefits of employing the same service oriented architectures commonly used in other domains. Since this time we have indeed seen a huge uptake in researchers leveraging services to disseminate and share data and applications in fields as diverse as genomics, climate science, and physical sciences. In addition, commercial software as a service (SaaS) products like Google Docs and Gmail are now used by many researchers in everyday activities. The major benefit of a SaaS approach is that researchers are able to invoke applications or access data remotely over the internet without needing to know the inner workings of the service. Our vision of science as a service worked well in a world when computing resources were scarce; when we needed to federate heterogeneous resources and make them accessible to researchers; when different tools and data were provided using different interfaces and representations; and when research problems involved datasets that could be hosted and analyzed on a single computer. In this talk we re-examine our vision of science as a service in a world in which computing resources are now commoditized; researchers are increasingly facing 'big data' challenges; cloud providers, such as Amazon, have become viable alternatives to purchasing dedicated infrastructure; and reliable infrastructure for scientific problems is only an API call away.

Time	Description	Presenter	Institution
9:00AM	Opening Remarks		
9:05AM	Keynote -- Science as a Service: How On-Demand Computing Can Accelerate Discovery	Ian T. Foster	ANL UChicago
10:00AM	Break		
	Session 1: Applications and Services		
10:30AM	High Performance Risk Aggregation: Addressing the Data Processing Challenge the Hadoop MapReduce Way	A. Rau-Chaplin B. Varghese Z. Yao	Dalhousie Univ.
11:00AM	Performance Evaluation of a MongoDB and Hadoop Platform for Scientific Data Analysis	E. Dede M. Govindaraju D. Gunter R. Canon L. Ramakrishnan	SUNY LBL
11:30AM	VIDAS: Object-based Virtualized Data Sharing for High Performance Storage I/O	Pablo Llopis Javier Garcia Blas Florin Isaila Jesus Carretero	Univ. Carlos III de Madrid
12:00PM	Lunch		
	Session 2: Cloud Services		
1:30PM	Invited talk -- To Cloud My Big Data or Not To? Musings at the Intersection of Big Data, Intense Computing and Clouds	Radu Sion	Stony Brook
2:30PM	StorkCloud: Data Transfer Scheduling and Optimization as a Service (transfer service)	Tevfik Kosar Engin Arslan Brandon Ross Bing Zhang	SUNY
3:00PM	Break		
	Session 3: Technology and Infrastructure		
3:30PM	Rebalancing in a Multi-Cloud Environment	Dmitry Duplyakin Ali Alzabarah Paul Marshall Kate Keahey Henry Tufo	Univ. of Colorado, Boulder ANL UChicago
4:00PM	Dimensioning the Virtual Cluster for Parallel Scientific Workflows in Clouds	Daniel de Oliveira Vitor Viana Eduardo Ogasawara Kary Ocaña Marta Mattoso	COPPE/UFRJ CEFET/RJ
4:30PM	HTC Scientific Computing in a Distributed Cloud Environment	R.J. Sobie A. Agarwal I. Gable C. Leavett-Brown M. Paterson R. Taylor A. Charbonneau R. Impey W. Podiama	Univ. of Victoria NRC Canada
5:00PM	Closing Remarks		

Organizers

Ioan Raicu IIT & ANL

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