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FINAL CALL FOR PAPERS

Infrastructure virtualization has emerged as an important architecture and experimentation concept for the Internet infrastructure. The global computing and communication infrastructure will encompass (as it does today) a diverse and huge collection of networking, computing and storage resources. Together they need to form a coherent infrastructure and meet our society's requirements for the 21st century. Infrastructure virtualization involves creation of a virtual slice of network, computing and storage resources in support of a service, an application, or an experiment from a physical substrate of diverse resources. This allows users of a virtualized infrastructure slice to access resources on a potentially global scale without incurring the cost of building such an infrastructure. Thus infrastructure virtualization provides a platform to allow innovation on a global scale and enables new business models.

As we envision and research Future Internet, there is increasing recognition that Infrastructure Virtualization will play an important role. However, there are many technical problems to solve: how to discover and advertise the resources; how to create and manage an infrastructure slice across diverse resources; how does virtualization extend to the wireless edge; how to implement virtualization across diverse resources and across layers of protocol stack; how to map an application or service to run on an infrastructure slice; what applications and capabilities are enabled by infrastructure virtualization; what kind of cross-layer protocols are possible; how does infrastructure virtualization impact the business models of network operators; and others.

Many research groups in the US, Europe, Japan, and elsewhere are pursuing different aspects of infrastructure virtualization; various international funding agencies are actively supporting research in this area; and many providers and vendors are very interested in exploring how this concept and associated technologies would help solve their business problems and create new growth opportunities. The goal of the workshop is to feature recent research and developments related to infrastructure virtualization to allow exchange of ideas and help build a research and user community to explore and help realize the potential of infrastructure virtualization.

TOPICS OF INTEREST

Jennifer Rexford, *Princeton University* We will solicit previously unpublished work on the following, non exhaustive, list of topics:

- ✤ Infrastructure virtualization architecture;
- Resource allocation to virtual slices;
- Management tools for infrastructure virtualization;
- Implementation and transition map for infrastructure virtualization;
- Isolation and slice independence in a virtualized infrastructure;
- Integration of the wireless edge into a virtualized network;
- Inter-operability and federation of virtualized infrastructures;
- Cross-layer protocols for virtualized networks;
- ✤ Applications and services enabled by virtualized infrastructure; and
- Security issues with virtualized infrastructure.

EXTENDED DEADLINES

Paper submission deadline: Acceptance notification: Camera ready final submission: Workshop: Friday March 27, 2009 Friday May 1, 2009 Friday May 29, 2009 Monday August 17, 2009

INSTRUCTIONS FOR AUTHORS

Authors should submit **pdf** papers exclusively, at <u>http://www.easychair.org/conferences/?conf=visa09</u>. Please follow the format of ACM Sigcomm 2009 submissions, except anonymity is not required and the page limit is **eight** pages. This workshop strongly encourages the submission of exploratory results that point to new directions and challenges in the design and management of a virtualized infrastructure.