Welcome to the seventh international workshop on Network Infrastructure Services as part of Cloud Computing organised within CloudCom 2017, Hong Kong, December 11th-14th, 2017. The previous workshops mostly held in conjunction with CloudCom have been a steady success stories creating an environment that reenforces team efforts and activities, research, and international collaborations between several projects leading to broad dissemination of the work presented.

NetCloud workshops attempt to address the problem of how the underlying network infrastructure is capable of supporting advanced cloud computing use cases, big data power users for an example. The workshop regularly brings together people from the network research community, commercial network operators and industry with the major cloud computing players, including IT specialists, researchers and commercial providers. NetCloud covers an area that can transform theory into practice and the outputs of the workshop can provide organizations with several useful recommendations, proofs-of-concepts and demonstrations to improve current cloud related networking practices.

The selected papers in NetCloud 2017 present the collaborative efforts of researchers from 6 different countries focusing on different aspects of the cloud related networking issues. The hot topics of this years’ workshop include discussions about intercloud and inter-datacenters networks designed using the Software Defined Networks (SDN) paradigm in combination with newly proposed architecture frameworks and automated on-demand network infrastructure provisioning. Other contributions discuss the optimal workflow scheduling for time critical applications. The workshop includes also a paper presenting the whole middleware stack for multicloud applications deployment, including intercloud overlay network provisioning on demand, which are supported by the cloud automation tools.

We hope the seventh NetCloud workshop will continue to foster collaborations of projects, research publications and funding opportunities among research institutions and industry.

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NetCloud 2017

Topics

- Definition and architectures for the Network as a Service (NaaS) cloud service model and Cloud Carrier operational model
- Intercloud and inter-datacenters Software Defined Networks (SDN)
- Cloud and Intercloud architecture frameworks and required on-demand network infrastructure provisioning
- Unified and converged IT and optical resources description languages and frameworks for cloud oriented infrastructures
- General Infrastructure services provisioning in clouds, new architecture developments, service delivery and on-demand provisioning frameworks
- Isolation and flexibility of the cloud oriented virtualized optical networks
- Standardization of optical network service provisioning interfaces for cloud based platforms and services
- Co-advertisement, co-planning, composition and co-provisioning of any type of optical network resource and IT services (i.e. connectivity + IT resources at the end-points coordinated in a single, optimal procedure)
- Performance and reliability issues, Service Level Agreement and QoS guarantees in the network layer
- End-to-end techniques for autonomic management of cloud resources
- Policy based infrastructure services management
- Experimental platforms that support network management in cloud computing
- Multi-cloud applications and topologies
- Support systems for holistic cloud and network self service provisioning enabling agile transformation and open market exchange for composed services
- Network support for fog and dew computing