The First International Workshop on Quality of Service Assurance in the Cloud

Preface

Cloud computing offers a computational model where network, storage, and compute domains can be abstracted into virtual resources offered on demand. While these abstractions offer opportunities to significantly simplify the management and optimize the use of resources, they impose additional challenges on assuring the quality of service (QoS).

In the context of multi-tenancy, the same physical resources are shared by different users that do not necessarily share the same service level agreements; hence the QoS distinction has to be enforced at a finer grain. Moreover, certain attributes of the QoS may contradict with others, for instance, high availability favors replication and distributed redundancy while energy efficiency favors de-duplication and consolidation. The multi-layered architecture of the distributed cloud requires not only a thorough orchestration between layers to ensure the required QoS, but also makes the root cause analysis even more complicated in case of the SLA violation. Continuous changes and migrations of the resources allocated at all layers of abstraction pose further challenges to detecting problems, identifying their location and reasoning about causality.

The aim of this workshop is to raise awareness of the challenges of the QoS assurance in the cloud, and bring together practitioners and researchers to discuss potential solutions.

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