Abstract

Measurability is a concept in elastic scaling that is based on two assumptions: (1) every cloud service provider is cautious, i.e., does not exclude any cloud consumer’s Unpredictable Workload resource pooling pattern choice from consideration, and (2) every cloud service provider respects the cloud consumer’s Unpredictable Workload resource pooling pattern preferences, i.e., deems one cloud consumer’s Unpredictable Workload resource pooling pattern choice to be infinitely more likely than another whenever it premises the cloud consumer to prefer the one to the other. In this paper we provide a new approach for measurability, by assuming that cloud service providers have asymmetric Unpredictable Workload resource pooling pattern about the cloud consumer’s Unpredictable Workload utilities. We show that, if the uncertainty of each cloud service provider about the cloud consumer’s Unpredictable Workload utilities vanishes gradually in some regular manner, then the Unpredictable Workload resource pooling pattern choices it can measurably make under common conjecture in measurability are all actually measurable in the original elastic scaling with no uncertainty about the cloud consumer’s utilities.
References


**Index Terms**

Computer Science       Distributed Systems
Keywords

Cloud service provider, cloud consumer, Unpredictable Workload, asymmetric, resource pooling pattern, utilities, elastic scaling, behavioral, measurably