

WS-QoC: Measuring Quality of Service Compliance

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ABSTRACT

Web services have been the focus of much research activities in recent years, especially those that provide a virtual framework for resource sharing across institutional boundaries. As a consequence of this, we envision a service rich environment in the future, where service consumers are faced with the inevitability of selecting the “right” service. In such a scenario the Quality of Service (QoS) serves as a benchmark to differentiate between services. However, the autonomy of service providers implies that the provider may defect in the course of service delivery, and not accurately deliver the quality agreed upon within a Service Level Agreement (SLA). It becomes necessary, therefore, to measure how “trustworthy” a provider has been in complying with the agreed levels in the SLA in the past. We propose Quality of Compliance (QoC), which provides a mechanism for assessing the level of compliance of the service provider to an SLA, and therefore gives an indication of the actual service quality delivered. We also present our prototype implementation of WS-QoC.