

Risk-aware Migrations For Prepossessing SLAs*

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Abstract

SLAs were developed in order to guarantee the customer's desired Quality of Service. To preprocess SLAs even in the case of system failures, migrating the job to an alternative resource is a well-known fault-tolerance mechanism. In this paper we start to consider migrations in a risk-aware concept. We plan to introduce risk assessment and management technologies into the Grid fabric in order to ensure prepossessing SLAs. The most benefits are seen in a risk-aware scheduling and initiating precautionary fault-tolerance mechanism.

This paper focusses on precautionary migrations which should prevent an SLA violation. A motivating scenario presents the variety of required actions in a system with high workload for several migration alternatives. The important aspects of jobs and resources are explained. Furthermore, we present a measurement to estimate the effects of migrating to an alternative resource. This will be one decision criteria in the migration process. Future work will complete the risk-aware scheduling of migrations.

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