

A SYSTEM FOR ACCESS AND ADMINISTRATION OF FAULT-TOLERANT WEB SERVICES

Abdulkadar A. Khambati

Dr. Gordon K. Springer, Thesis Supervisor

ABSTRACT

Web Services, a recent development in web technology, enables programs (services) on the World Wide Web (WWW) to communicate with each other. A program (web service) available on the WWW has to be robust to serve the vast number of users on the WWW and should have a high level of availability. This can be achieved by incorporating fault-tolerance in a program by having multiple instances of the same program running on different servers. This thesis presents a system to start, administer and monitor multiple instances of a web service on different servers. The system designed to incorporate fault-tolerance in web services cannot afford to have a single point of failure. Hence, the system itself is designed to be fault-tolerant. This thesis also implements a Web Service Registry that provides a means for the developers to register their web services with the Web Service Registry and thus, make the web services accessible to the world.