

# Abstract

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The ever developing and demanding world of Information Technology along with the dynamic businesses has seen significant changes in the way applications are developed, deployed and maintained. The evolution is seen not only in developing and maintaining applications; but also in computing and storing the data.

Distributed Database technology is extensively used for many systems to store the large amount of data. A distributed database is a collection of multiple, logically interrelated databases distributed over a computer network. A distributed database management system is the software that manages the distributed database and provides an access mechanism that makes this distribution transparent to the users. Distributed database system is distributed database and distributed database management system, together.

An administrator for a distributed database is also called the Global Database Administrator. He is responsible for work being done smoothly on distributed database servers. Work that originates on the server system can be monitored in the same way as a local system by using the same tools but with different kinds of desired information that may or may not be located on the single system.

Service-oriented architecture is a flexible set of design principles used during the phases of systems development and integration in software development process. A software system based on SOA will package functionality as a suite of inter-operable services that can be used within multiple separate systems from several business domains. It is an evolution of distributed computing based on the request / reply design paradigm for synchronous and asynchronous applications.

This thesis / research basically involves 1) the study of Service Oriented Architecture for software development and Distributed Database Technology

for distributed database administration tool and 2) the applicability of service oriented architecture in a software tool for distributed database oriented system and to evaluate its overall performance. The tool – Heterogeneous Data Migration Tool is based on the SOA principles and is intended for the data migration between heterogeneous distributed database sources.

Some papers have been published on distributed database administration and service oriented architecture. Few papers on current web technologies have also been published keeping in view their implementation for real world problems amenable to service oriented aspects. A paper has also been published on the cloud services for managing the data related to higher education.