
Theory Assignment 1

Introduction to Distributed Systems

Exercise 1 -

Describe precisely what is meant by a scalable system. Detail one technique that can be used to achieve scalability.

Exercise 2 -

What is distribution transparency, and why is it important? List three types of distribution transparency.

Exercise 3 -

What is the role of a middleware in a distributed system?

Exercise 4 -

List three software components that may fail when a client process sends a message to a server process, giving an example of a failure in each case. Suggest how the components can be made to tolerate one another's failures.

Exercise 5 -

What are the pitfalls of assuming a reliable, static, secure, and homogeneous network. How each of this properties can affect distributed systems?