



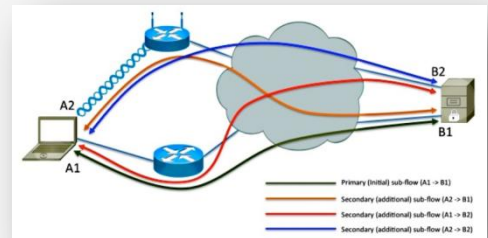
Performance Study of Linear Network Coding

Description



Concurrent transmission over multiple interfaces/paths comes with many advantages compared to single path transmission. Using multiple interfaces increases the reliability, availability and improves the quality of service/experience.

The key to performance improvement for concurrent transmission over lossy links with varying channel conditions is network coding.



Tasks

In this thesis you will implement a simple network coding algorithm and network emulation tool. The implementation should allow to demonstrate the performance improvements with network coding if data is transmitted over up to five links with varying conditions (bandwidth, delay, jitter and packet loss).

Requirements

Basic knowledge of computer networks

Programming skills in C, C++ or Java are recommended



Keywords

Simulation, Emulation, Networks, Measurement



Complexity

Depending on the type of the thesis (BA or MA) the complexity will be adjusted.