

# Design and Implementation of Highly Available Linux Clusters

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## Abstract

Fueled by the Internet revolution and the lure of opportunities in the new converging world of voice, data and video over cost-effective networks, telecom and networking companies are attempting to offer the most complete and compelling end-to-end enterprise solutions. The interest in clustering from the telecom world comes from the fact that we can address the availability and scaled performance using cost-effective hardware and software while maintaining near telecom-grade characteristics. These characteristics include continuous service availability, high reliability, superior performance, high throughput for fast and reliable data streaming, flexibility in terms of fast reconfiguration, linear scalability, and ease and completeness of management.

In 2000, the ARIES (Advanced Research on Internet E-Servers) project started at Ericsson Research Canada, aimed at finding and prototyping the necessary technology to prove the feasibility of a clustered Internet Server that provides telecom-grade characteristics. In 2001, ARIES evolved into a new direction to enhance the clustering capabilities Linux to fulfill the future demands for Mobile Internet Servers. This tutorial will address in detail all the design and implementation issues we faced building Linux clusters using Linux and Open Source Software as the base technology; in addition it will provide a how-to for building Linux clusters starting from scratch.

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