



# An Introduction to High Availability

Richard Easlick



# Table of Contents

1. Definition of High Availability	02
2. The Business Case for H.A.	08
3. Technologies for H.A.	14

# Chapter 1

## Definition of High Availability

## Chapter 1

# Definition of High Availability

By Richard Easlick

Highly available characterizes a system that is designed to avoid the loss of service by reducing or managing failures as well as minimizing planned downtime for the system. A key strategy is to have a replacement ready for any component that fails.

Many discussions of HA use availability percentages like 99.999 percent—called five nines—which means about 5 minutes of downtime per year is permitted and the system is still 99.999 percent available. An ultra-available system with 99.99999—seven nines—availability has about 3 seconds of downtime a year.



This availability discussion has significance when related to service-level agreements (SLAs) because economic penalties are required to be paid by suppliers when the downtime exceeds the SLA agreement. SLAs are often part of managed services and outsourcing contracts.

But while HA can be described using numbers, doing so can be very misleading. There is no standard method for modeling or calculating the degree of availability in a computer system. The important thing is to create clear definitions of what the numbers mean and then use them consistently.

High Availability, def. = Highly available characterizes a system that is designed to avoid the loss of service by reducing or managing failures as well as minimizing planned downtime for the system. A key strategy is to have a replacement ready for any component that fails.

