

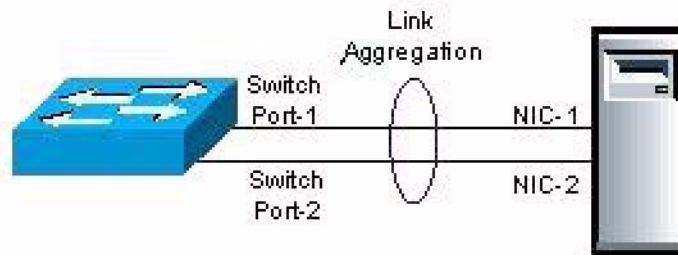
ZebOS®
Network Platform

Link Aggregation Module

Overview

IP Infusion's ZebOS® Network Platform Link Aggregation Module gives service providers and other large network managers the capability to use multiple Ethernet cables or ports in parallel to increase the link speed beyond the capacity of any one single cable or port. Link Aggregation allows the links to be aggregated together to form a Link Aggregation Group (LAG), so that a Media Access Control (MAC) Client can treat the LAG as if it was a single link.

The ZebOS Link Aggregation Module affords an inexpensive way to configure a high-speed backbone network capable of transferring more content than any single port or device can deliver. It also allows customers to grow networks incrementally as demand increases, without the overhead of buying new hardware each time they need to expand. This also reduces IT costs, since customers do not have to remove and replace old equipment each time.



Link Aggregation Between a Switch and a Server

Link Aggregation Control

Link Aggregation Control manages and controls the Link Aggregation sublayer using information that is local to the control function, plus dynamic information exchanged by the Link Aggregation Control Protocol (LACP). On each port, Link Aggregation maintains configuration information to control aggregation, exchanges configuration information with other systems to allocate LAGs, attaches ports to and detaches ports from an Aggregator when they join or leave a LAG, and enables or disables an Aggregator's collector and distributor functions.

Link Aggregation Control Protocol

The ZebOS Link Aggregation Control Protocol (LACP) provides for the bundling of several physical interfaces to form a single logical channel providing enhanced performance and redundancy. Each switch views an aggregated interface as a single link, and the spanning tree views it as one interface. When there is a failure in one physical interface, the remaining interfaces stay up, so there is no disruption to communications. LACP is part of the ZebOS Link Aggregation Module.

Features

- Increased bandwidth without expensive equipment purchases and manual setups
- Automatic management of LAG
- No manual or system initialization events required for continuous operation
- Accommodates devices with differing hardware and software constraints
- Stable configurations and convergence is achieved rapidly
- Enhanced availability from the perspective of MAC clients
- Backward compatibility with aggregation-unaware devices
- Portable, modular software
- MIB Support for Link Aggregation Groups

Benefits

- Linearly increased bandwidth without expensive new equipment
- Rapid configuration and re-configuration
- Load sharing with MAC client traffic distributed across multiple links

Standards Support

- Static Aggregation
- IEEE 802.3ad (2002) — Link Aggregation Control
- IEEE 802.3 — Link Aggregation Group Management Information Base (LAG-MIB)

Requirements

- ZebOS Network Services Manager

Standard Deliverables

- Source Code (written in ANSI compliant C)
- Installation Guide
- Configuration Guide
- Command Reference Guide
- Developer Guide