

Fabric Computing Architecture

A fabric computing architecture (FCA) is a converged system that combines computing, networking and IO. It has the potential to become the next generation architecture for enterprise servers based on the benefits it can deliver. Gartner has listed fabric computing as one of its top 10 technologies for 2008. The architecture solves fundamental issues in the data center today, including asset under-utilization, management complexity, inflexibility, and spiraling operating costs.

A fabric computing architecture provides reconfigurable pools of computing, communications and storage resources connected to a highly available, high performance, scalable communications fabric. The fabric computing architecture provides pools of standard processors, memory, networking, storage and IO which can be assembled into logical building blocks including VLAN networking, SAN networking, IDS, load balancing, firewall, VPN, router, IO gateways and servers. These building blocks can be assembled in real time to deliver the complete infrastructure to support any application.

The flexible architecture provides savings in operation and acquisition costs compared to the current mode of operation. There are savings due to the significant decrease in complexity since fewer components (including networking, computing, cabling, adjuncts, and overlay software) are required. Savings also come due to the elimination in costs associated with delivering a given workload (due to higher efficiencies and utilizations), providing application high availability, footprint reduction, reconfiguration, power reduction, and using less staff.