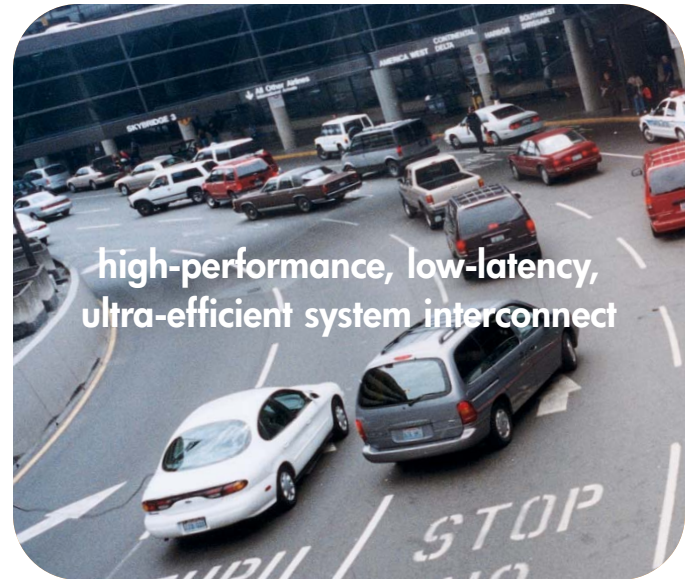


hp NonStop ServerNet cluster

product description



high-performance, low-latency,
ultra-efficient system interconnect

HP NonStop™ ServerNet Cluster is an extension of the revolutionary ServerNet architecture that allows two or more NonStop systems to interconnect and operate as if they were on a single ServerNet fabric. This lets systems take full advantage of all the efficiencies and high performance of ServerNet technology while providing seamless messaging between all resources within a cluster.

NonStop ServerNet Cluster is based on ServerNet II technology—an enhanced, higher-speed version (up to 125 megabytes per second) of ServerNet architecture designed to move massive amounts of data efficiently. NonStop ServerNet Cluster enables systems to interconnect at distances up to 1 kilometer (0.62 miles) between sites. Release 3 allows up to three sites and 24 nodes. This capability allows businesses to deploy systems over distances (for a variety of business and technical reasons) and retain the operational effectiveness of a single system.

NonStop ServerNet Cluster utilizes HP Expand networking software to maintain security between nodes and is the optimal product for running this software in a NonStop S-series server complex. It provides up to 5 gigabytes per second of internodal throughput.

features at a glance

- High-performance multisystem interconnect
- Scalable performance and bandwidth
- Higher solution availability
- Plug-and-play configuration
- NonStop cluster switch
- Improved interconnect management
- Efficient low-level message system interface



i n v e n t

high-performance multisystem interconnect

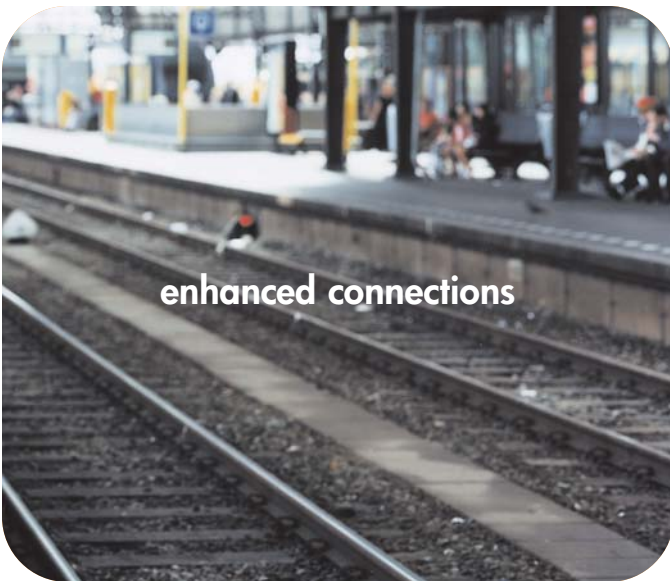
Because NonStop ServerNet Cluster is so much more efficient than previous Expand interconnect methods, customers can realize a significant improvement in application performance over multiple nodes for a given investment in system resources. With configurations of up to 24 nodes in a cluster, NonStop ServerNet Cluster provides significant gains for today's huge applications.

scalable performance and bandwidth

At the heart of NonStop ServerNet Cluster is the ServerNet architecture, a technology that provides high-performance interconnection among processors and I/O devices. The ServerNet architecture is a wormhole-routed, full-duplex, packet-switched, point-to-point network, optimized for high bandwidth and low latency. It allows virtually unlimited growth, both in processing performance and system bandwidth, to handle the increasing demands of the most powerful online transaction processing, business intelligence, and electronic commerce applications. NonStop ServerNet Cluster utilizes the latest generation of ServerNet router, Router 2. With Router 2, packets within the ServerNet fabric are routed at 125 megabytes per second.

higher solution availability

NonStop ServerNet Cluster can improve the availability of solutions by making it economically feasible to split single-system configurations into two or more nodes. With NonStop ServerNet Cluster, the cluster performs the same as a single system. Within a cluster, each system can be upgraded separately so that a customer application can run continuously. This means an application outage is not required for a software upgrade. And, in the unlikely event of a system failure, only some of the resources running an application are affected.





plug-and-play configuration

NonStop ServerNet Cluster allows the addition or removal of operating nodes while the cluster continues to run. Therefore, no reload is required to configure (or reconfigure) a cluster if the need arises.

NonStop cluster switch

NonStop ServerNet Cluster utilizes the NonStop cluster switch as a hub between clustered nodes. As a key component of the cluster, the cluster switch has all the standard high-availability characteristics of NonStop systems. It is power fault tolerant because it has two power cords. If one power source fails, the load is transferred automatically to the operational power source, with no interruption of operation. NonStop ServerNet Cluster provides a pair of cluster switches for fault tolerance, with both always active to provide maximum bandwidth between nodes.

improved interconnect management

The TSM toolset and remote support make it possible to analyze problems, report incidents, and replace components without disrupting server operation. With NonStop ServerNet Cluster, this capability is extended to multiple nodes in a cluster. Replacement procedures for cluster components have been added to the TSM Library.

efficient low-level message system interface

NonStop ServerNet Cluster uses the proven Expand system interconnect software. What makes NonStop ServerNet Cluster unique is that it uses the native internal message system to pass traffic between nodes. It creates a virtual circuit for the duration of a transfer. The only exception is when an application opens a connection between nodes. In that case, Expand software is used to verify the security of the transaction. After security verification, the data transfer is done by the low-level message system. This low-level interface makes using NonStop ServerNet Cluster significantly more efficient than transferring data over standard communication protocols. It saves processor cycles (overhead) and reduces latency (the time spent doing that processing). In addition, the connection has very high bandwidth. The performance of a multinode cluster using NonStop ServerNet Cluster can be as much as 25 percent better than that of a cluster running Expand software over Asynchronous Transfer Mode (ATM).

ordering information and specifications

For NonStop ServerNet Cluster ordering information and specifications, contact your HP sales representative. An ordering and configuration guide is available on the internal website.



For more information, go to www.hp.com/go/nonstop.

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