To protect critical data and application services against disaster-like interruptions, businesses often locate data centers in different geographic locations. If critical data and applications are not replicated and failed-over quickly and transparently to the users, the impact on business operations can be drastic.

An Extended Campus Cluster (also known as extended-distance cluster and extended-distance MC/Serviceguard cluster configuration) protects geographically dispersed data centers from unplanned downtime caused by system and application failures, operator errors, and local disasters. In addition, it enhances data and application availability. By monitoring HP 9000 servers, detecting failures within seconds, and managing failover between systems located in different data centers, an extended-distance MC/Serviceguard cluster configuration is a powerful and cost-effective business continuity solution for your critical data and applications.

An Extended Campus Cluster is basically a standard MC/Serviceguard cluster that spans two or three data centers. The cluster has nodes (systems) and storage devices distributed over data centers. Application and system data is replicated through HP’s host-based mirroring solution, HP Mirrordisk/UX. The primary difference between an Extended Campus Cluster and a standard MC/Serviceguard cluster is the physical location of the components (servers and storage devices) that make up the cluster. Through the support of dense wavelength division multiplexing (DWDM) technology, an Extended Campus Cluster makes it possible to transfer application control to a secondary data center located up to 100 kilometers (62 miles) away.
In an Extended Campus Cluster, servers and storage can be located in either two or three geographically dispersed data centers, separated from one another by just a few hundred meters or up to 100 kilometers (62 miles). To ensure that the Extended Campus Cluster has the ability to manage a site disaster, specific design, configuration, and architecture rules and requirements must be adhered to. Through the integration with HP Workload Manager (WLM), an Extended Campus Cluster also ensures that service-level objectives continue to be met after an application fails-over from one system to another in a disaster.

**Recommended when:**

- Two or three data centers are used
- The business can only tolerate a minimum of application downtime
- Data centers are located up to 100 km (62 miles) apart
- HP’s host-based disk mirroring software, HP Mirrordisk/UX, is used to replicate data
- A cost-effective solution is required
- Business is at risk from disasters that result from system failures, operator errors, fire, and building damage

**Comparison with HP MetroCluster**

The major differences between an Extended Campus Cluster and HP MetroCluster are the methods used to replicate data between the data centers. An Extended Campus Cluster always uses the host-based software Mirrordisk/UX for data replication; HP MetroCluster always uses array-based mirroring products (HP Continuous Access XP or EMC SRDF) for data replication.

HP’s business continuity solutions portfolio includes a comprehensive range of products and services.
benefits

- computing resources remain available, even during critical disasters
- application downtime is minimized through rapid application recovery time on the secondary site
- critical data is protected through continuous replication from the primary site to the backup site
- the effect from operator errors, the major cause of unplanned downtime, is minimized
- increased flexibility in where to locate data centers through the support of extended distances of up to 100 kilometers (62 miles)
- flexibility in choice of storage solutions

hp business continuity software

**HP MC/Serviceguard**—Fast, secure failover of mission-critical data and applications in the data center.

**Extended Campus Clusters**—Automated failover of mission-critical data and applications over metropolitan networks; integrated with HP Mirrordisk/UX.

**HP Metrocluster with HP Continuous Access XP**—Fast, automated failover of mission-critical data and applications over metropolitan networks; integrated with HP’s high-performance data replication solution, HP Continuous Access XP.

**HP Metrocluster with EMC SRDF**—Fast, automated failover of mission-critical data and applications over metropolitan networks; integrated with EMC data replication solution SRDF.

**HP Continentalclusters**—Push-button failover between mission-critical clusters over wide-area networks across thousands of kilometers; integrated with the high-performance data replication solutions HP Continuous Access XP and EMC SRDF, and the logical data replication solution Oracle® Standby Database.

HP’s mission-critical system engineering team can help you select and design the right business continuity solution for your computing environment.

hp high-availability services

HP offers comprehensive Business Continuity and Recovery Services. Consulting and Integration helps assess, design, implement, and plan your infrastructure so you can be assured of the best possible business continuity solution. Some of the services provided include:

- **availability needs assessment**—consulting services to identify and define availability needs and requirements
- **architecture and design**—consulting services to design the underlying architecture for the customer’s environment
- **implementation service**—consulting services to configure and implement HP infrastructure solutions in the operating environment
- **test/rehearsal plans**—consulting services to design appropriate disaster-rehearsal-test plans, define measurement criteria, and evaluate the execution of rehearsals

Also, HP offers comprehensive support services and operation services to help you operate your business continuity infrastructure more efficiently.
why hp?

• proven high-availability and business continuity solutions with more than 60,000 licenses sold (as of January 2002)
• recognized by Gartner Group for the #1 disaster-tolerant-solutions portfolio in the industry
• robust clustering architecture with many advanced features and functionality
• comprehensive Business Continuity and Recovery Services that span the entire lifecycle of the business continuity solution, including design, implementation, education, support, and operations
• HP high-availability and business continuity solutions are tested with hundreds of ISV applications

To learn more

For more information on HP high-availability and business continuity programs and offerings, please visit us at:
www.hp.com/large/infrastructure/business_continuity/

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