

SUSE® LINUX ENTERPRISE HIGH AVAILABILITY EXTENSION

Businesses today run 24 hours a day, 365 days a year. And to keep your businesses running, you need to provide your employees highly available services—non-stop, continuous access to critical business systems and data. But you also need to watch your expenses and carefully manage your budget. You need SUSE® Linux Enterprise High Availability.

Background

In order to contain costs, many firms began using commodity off-the-shelf (COTS) hardware and open source software to meet their diverse and growing computing needs. You did too. But because commodity x86 servers generally do not provide the same level of hardware resiliency or built-in redundancy as their more expensive, higher-end server counterparts, one potential risk you face when using these systems for mission-critical workloads is unplanned downtime caused by component failures. In order to ensure the continuous operation of your core business services, you need some way to protect your systems from failure and increase services availability, either through greater reliability, redundancy or fast fail-over to standby systems.

Product Overview

SUSE Linux Enterprise High Availability Extension can help you ensure services availability and stay within budget. It is an affordable, integrated suite of robust open source clustering technologies that enables you to implement highly available physical and virtual Linux® clusters. Used with SUSE Linux Enterprise Server, it helps you maintain business continuity, protect data integrity and reduce unplanned downtime for your mission-critical Linux workloads. By using SUSE Linux Enterprise High Availability Extension, you can safely depend on commodity hardware for your mission-critical workloads, deliver the services required by your business and contain costs.

Key Features and Benefits

SUSE Linux Enterprise High Availability Extension delivers all of the essential monitoring, messaging and cluster resource management functionality of proprietary third-party solutions, but at a more affordable price. Based on an innovative, highly flexible policy engine, it supports a wide range of physical and virtual clustering scenarios, and its adherence to open standards ensures interoperability.

Flexible, policy-driven clustering solution

SUSE Linux Enterprise High Availability Extension supports OpenAIS—the leading standards-based communication protocol for server and storage clustering. Also included is Pacemaker, a highly scalable cluster resource manager with a flexible policy engine that supports n-node clusters. Using OpenAIS and Pacemaker, you can continuously monitor the health of your resources, manage dependencies, and automatically stop and start services based on highly configurable rules and policies.

Resource agents for applications

SUSE Linux Enterprise High Availability Extension includes resource agents for many third-party and open source applications at no additional charge. Included are scripts for monitoring third-party applications such as SAP® Instance and Database, Oracle®, IBM® DB2®, Informix®, WebSphere®, VMware® and Novell® eDirectory™. Also included are scripts for popular open source services, such as Apache, MySQL, NFS Postgres, Tomcat and Xen®. With these components, you can quickly, easily and affordably set up many





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highly available data center services. For the most complete, up-to-date list of resource agents, please visit: www.novell.com/products/highavailability

Continuous data replication

SUSE Linux Enterprise High Availability Extension includes support for distributed replicated block devices with DRBD8, a leading open source networked disk-management tool. Using DRBD8, you can build single partitions from multiple disks that mirror each other and make data highly available. You can also quickly restore clustered services by taking advantage of its fast data resynchronization capabilities. DRBD8 supports both synchronous and asynchronous mirroring, and in the event of an outage, it automatically resynchronizes the temporarily unavailable node to the latest version of data, without interfering with the service that is running.

Cluster-aware file system and volume management

SUSE Linux Enterprise High Availability Extension includes the latest version of OCFS2, which is now a shared-disk POSIX-compliant generic cluster file system. Using OCFS2, you can cluster a wide range of applications for higher availability using cluster-aware POSIX locking, as well as resize clusters and add new nodes on the fly. Also included is support for cLVM2, a clustered logical volume manager. cLVM2 provides a more convenient, single, cluster-wide view of storage. Clustering extensions to the standard LVM2 toolset allow you to use existing LVM2 commands to safely and simply manage shared storage, eliminating the need to learn a new set of tools.

Virtualization aware

The clustering technologies in SUSE Linux Enterprise High Availability Extension support physical and virtual environments equally well. Virtualization is increasingly being used by organizations seeking to improve resource utilization, responsiveness and services availability. SUSE Linux Enterprise Server includes Xen, the leading open source virtualization hypervisor. The cluster resource manager in SUSE Linux Enterprise High Availability Extension is able to recognize, monitor and manage services running within virtual servers created with Xen, as well as services running in physical servers. Virtual servers can be clustered

together, they can be clustered with physical servers, and physical servers can be clustered with each other, extending high availability from virtual to physical workloads. And the ability to encapsulate entire workloads within virtual guests means that you can easily replicate and manage them using the tools included, such as DRBD8, OCFS2 and cLVM2. The combination of SUSE Linux Enterprise Server, with integrated Xen, and SUSE Linux Enterprise High Availability Extension, with support for virtualized environments, gives you unprecedented flexibility to improve services ability and improve resource utilization at the same time.

User-friendly management tools

SUSE Linux Enterprise High Availability Extension includes a powerful new unified command-line interface for experienced IT managers to quickly and easily install, configure and manage their clustered Linux servers. Also included is an improved graphical user interface that provides operators with a simple, user-friendly tool for monitoring and administering their clustered environment. Finally, new YaST2 modules for the configuration of DRBD, openAIS and multipath help you more easily configure distributed storage systems and high-availability solutions, and improve productivity.

Supported Platforms

SUSE Linux Enterprise Server 11 (for x86, x86_64, Itanium*, Power* and System z* architectures)

Pricing

SUSE Linux Enterprise High Availability is an extension to SUSE Linux Enterprise Server. For current pricing, please visit: www.novell.com/products/highavailability/howtobuy.html

More Information

For more information about SUSE Linux Enterprise High Availability Extension, contact your partner or sales representative, or visit: www.novell.com/products/highavailability