

Overview

Models

ProLiant LifeKeeper for Linux Cluster Solution for Oracle
(available in North America exclusively)

305488-001

Introduction

Large enterprises rely on Oracle9i database solutions for mission-critical applications for dynamic data content such as data warehouses, e-commerce applications, financial systems, supply-chain management, and business intelligence systems. These applications require high availability and ensuring 24x7 availability for these applications has required high costs, high numbers of redundant systems, and a dedicated IT staff. Today there is a cost-effective alternative. The ProLiant LifeKeeper for Linux cluster solution for Oracle. This solution enables enterprises with mission-critical applications to implement high-availability database servers at a fraction of the cost of traditional UNIX® solutions.

This solution based on the ProLiant DL380G2 packaged Cluster, Red Hat or SuSE Linux, SteelEye Technology LifeKeeper for Linux and Oracle 9i allows for medium business and departmental systems users to maintain continuous availability of their business critical data without having the enterprise class expense of high priced RISC/UNIX hardware and software systems performing the same tasks as a industry standard solution from HP. The key is integration, qualification and outstanding performance to make this solution work and HP, SteelEye and Oracle have made that happen.

The HP ProLiant LifeKeeper for Linux Cluster Solution is a one stop implementation experience when the Linux distribution and Oracle software is already available. HP has integrated LifeKeeper for Linux into a certified HP cluster kit for use with this and other Linux-based back office and business critical application environments.

LifeKeeper for Linux Clusters on ProLiant is a robust high availability application and data cluster solution supported on HP ProLiant servers and Smart Array Cluster Storage that comes integrated in the DL380G2 Packaged Cluster, a component of this solution. HP has fully tested and certified LifeKeeper for Linux on ProLiant servers for optimal performance with Red Hat and SuSE. LifeKeeper for Linux Clusters on ProLiant provide a wide range of application failover configurations from simple active-passive clusters to more sophisticated clusters supporting active-active and cascading application and resource failover.

SteelEye's LifeKeeper for Oracle high availability clustering software, is an industry-proven solution that seamlessly integrates with existing applications and management environments protecting thousands of servers at customer sites worldwide.

This solution for Oracle 9i includes: an active/active configuration, which offers customers a higher return on investment by eliminating the need for idle backup servers; significantly reduced staffing requirements through an easy-to-use centralized Java GUI; and support for shared storage configurations. With Oracle and LifeKeeper's scalable architecture, organizations can meet current needs cost-effectively, and then grow seamlessly and with minimal user disruption without system-wide replacements and unplanned outages.

The SuSE Linux Enterprise Server Version 7 and Red Hat 7.2 supports the current ProLiant LifeKeeper for Linux Cluster Solution for Oracle. In this solution, the following components are shipped to the customer or end user: HP ProLiant DL380G2 Packaged Cluster, The HP ProLiant Cluster HA/L100 LifeKeeper for Linux cluster kit, and the SteelEye Technology Oracle 9i Application Recovery Kit. These software products along with customer supplied Linux and Oracle make up the total solution, which can be easily installed and deployed in less than one day. LifeKeeper for Linux and the Oracle Application Recovery Kit (ARK) are installed on each server. Additional ARKs can be ordered and installed on the cluster but performance will vary depending on application interactions. Please refer to the SteelEye Web site <http://www.steeleye.com> for additional ARK and functional information.

NOTE: This Web site is available in English only.

Overview

Customer Benefits

The ProLiant DL380G2 Packaged Cluster is ideal for small to medium-sized businesses and or enterprise departmental operations requiring an affordable, ultra-high performance cluster for business critical applications. The package is a highly available, industry standard unit that reduces the complexity of clustering. It contains all the hardware you need for a powerful cluster, designed for easy serviceability and tool-less access to major components and has a simplified system board for fast and easy servicing, reducing the total cost of ownership.

The package comprises two ProLiant DL380 G2 servers and one shared storage subsystem in a compact (8U) package at a competitive price. It is ideally suited for mid-range local and remote cluster solutions requiring high levels of availability. Its high availability features include up to 6GB of PC133 ECC memory per node, hot plug drives and fans, hot plug PCI slots and optional redundant network controllers!

The ProLiant Smart Array Cluster shared storage subsystem is SCSI-based and houses up to fourteen 1 Universal hot plug 72GB drives! It supports Advanced Data Guarding, which protects against more than one drive failure in a RAID set, and has redundant ROM technology. It delivers easily scalable, high performance industry standard storage that easily integrates into customers' business environments.

SteelEye's LifeKeeper for Linux clustering software is certified on multiple ProLiant servers. HP adds customer value by providing a range of tested and certified and ProLiant server and StorageWorks configurations, documentation, and global support across a range of leading Linux distribution offerings. LifeKeeper for Linux Version 4.1.1 is certified to operate on select ProLiant servers with Red Hat 7.X Professional Edition and SuSE SLES 7 Linux distributions.

LifeKeeper for Linux Benefits:

Redundant Cluster Interconnects: LifeKeeper for Linux Clusters on ProLiant supports multiple (redundant) Ethernet TCP cluster interconnects between grouped servers, which can also be used for other system communications. At least two cluster interconnects are required. Ethernet TCP interconnects may be private or combined with the public LAN. If using the public LAN for the cluster interconnect, it is strongly recommended that it be used as the redundant, backup interconnect and the primary link be via a dedicated private LAN. A backup serial TTY interconnect is also supported for 2-node configurations, which is shipped as part of the DL380G2 Packaged Cluster.

Shared Data Failover

Storage devices, which are connected to multiple servers in the LifeKeeper cluster, allow grouped servers to share access to the same set of disks. In the case of a failure of the primary server, LifeKeeper automatically manages the unlocking of the disks from the failed server, and the locking of the disks on the next available backup server.

Shared Communication

LifeKeeper can automatically manage switching of communications resources, such as TCP/IP addresses, allowing users to connect to an application regardless of where the application is currently active.

LifeKeeper GUI

The LifeKeeper GUI is a client/server application developed using Java technology, which provides a graphical administration interface to LifeKeeper and its configuration data. The GUI may be accessed locally on a node within the cluster and remotely via a Unix, Linux, or Windows® -based web browser.

Multiple Fault-Detection Mechanisms

Hardware component and application faults at the resource level are detected in advance of a full system failure through multiple fault-detection mechanisms. LifeKeeper monitors Linux clusters using intelligent processes and multiple LAN heartbeats. By sending redundant signals between server nodes to determine system and application health, LifeKeeper confirms a system's status before taking action. This reduces the risk of a single point of failure and minimizes false failover. LifeKeeper also limits unnecessary failover by recovering failed applications at the resource level, without a full failover to another server. If required, failover is transparent to clients and does not impact users' productivity. LifeKeeper migrates all applications and transfers connectivity in such a way that clients have continuous access to applications and data. This ensures that all clients are not affected by unanticipated system failures.

Summary

LifeKeeper for Linux Clusters on ProLiant is a robust high availability application and data cluster solution supported on HP ProLiant servers and StorageWorks storage systems. HP has fully tested and certified LifeKeeper for Linux on ProLiant servers for optimal performance on Red Hat and SuSE. LifeKeeper for Linux Clusters on ProLiant provide a wide range of application failover configurations from simple active-passive clusters to more sophisticated clusters supporting active-active and cascading application and resource failover.

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ProLiant LifeKeeper for Linux Cluster Solution for Oracle Components	DL380G2 Packaged Cluster Smart Array Cluster Redundant Controller SteelEye Technology Oracle 9i Application Recovery Kit	203899-001 218252-B21 316017-001
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Licensing and Packaging Software licenses are valid for 30 days under SteelEye Technology's evaluation program. The customer or end user must contact SteelEye Technology to purchase a LifeKeeper for Linux Core software and Oracle ARK licenses for each server in this solution:

Domestic: 1.877.319.0108
International: 1.803.461.3885
Email: salesdirect@steeeye.com

SteelEye provides a broad offering of other off-the-shelf Application Recovery Kits. To get a complete list, go to the Supported Applications page on SteelEye's Web site: http://www.steeeye.com/products/supported_apps.html
NOTE: This Web site is available in English only.

One license is required for every server on which the product is installed and used. Licenses are non-transferable. Full details are contained in the End User License Agreement.

ProLiant Linekeeper for Linux Cluster Solution for Oracle Benefits

- **Benefit 1** - Integrated solution from HP, giving the customer a one-stop high availability package for a clustered Oracle failover environment with all the benefits of LifeKeeper, Oracle, and HP technology. The cluster can be used in either an active-passive or active-active configuration for efficient operations.
- **Benefit 2** - The solution supports Red Hat or SuSE distributions so customers can specify whichever Linux distribution they desire or require as well as a generalized Oracle approach.
- **Benefit 3** - Scale up with the DL380G2 Packaged Cluster for 1P to 2P performance and memory scaling as well as no-single-point-of-failure configuration options to provide continuous availability for an Oracle solution. Just add a monitor, keyboard and mouse and you are ready to go.

Solution Features

DL380G2 Packaged Cluster

The DL380G2 Packaged Cluster is comprised of two ProLiant DL380 G2 servers and one shared storage subsystem in a compact (8U) package at a competitive price. It is ideally suited for mid-range local and remote cluster solutions requiring high levels of availability.

Its high availability features include up to 6GB of PC133 ECC memory per node, hot plug drives and fans, hot plug PCI slots and optional redundant network controllers! The ProLiant Smart Array Cluster Storage shared storage subsystem is SCSI-based and houses up to fourteen 1 Universal hot plug 72GB drives! It supports Advanced Data Guarding, which protects against more than one drive failure in a RAID set, and has redundant ROM technology. It delivers easily scalable, high performance industry standard storage that easily integrates into customers' business environments.

ProLiant Cluster HA/L100 LifeKeeper for Linux Cluster Kit

The ProLiant Cluster HA/L100 LifeKeeper for Linux Cluster Kit, 303523-B22 provides quick access to and implementation of a LifeKeeper for Linux high availability cluster solution. The kit includes HP installation documentation for HP ProLiant servers, Smart Array Cluster Storage and selected HP StorageWorks Fibre attached storage models. Further, the kit includes LifeKeeper for Linux version 4.1.1 evaluation software and documentation. The HA/L100 LifeKeeper for Linux cluster kit supports the latest 4.1.1 version of LifeKeeper, used to certify and support HP Smart Array Cluster Storage.

SteelEye's LifeKeeper high availability clustering solutions on ProLiant Clusters are fast and easy to deploy, enabling companies, their customers, and suppliers to quickly benefit from always-on, enterprise applications.

SteelEye Technology Oracle Application Recovery Kit

The Oracle Application Recovery Kit, 316018-001 from SteelEye, delivers maximum uptime while enabling enterprise IT managers to keep a tight rein on costs. SteelEye's LifeKeeper for Oracle 9i high availability database server solution includes the following:

Oracle9i Application Recovery Kit - Ensures seamless, nonstop operation for Oracle9i database. This solution provides the end user with all the tools necessary to create an Oracle active-passive failover cluster. Software and documentation are included on the Application Recovery Kit CD package. Of course, the users must install their Linux version, then install LifeKeeper for Linux, and then configure the Oracle application recovery cluster before beginning operation.

As in the case of the HA/L100 Cluster Kit, the customer or end user must contact SteelEye Technology to purchase LifeKeeper for Linux software and Oracle ARK licenses for each server in this solution. The customer will also need to contact Oracle Corporation for software and software licenses as well.

Specifications

Client Browser Support Microsoft® Internet Explorer 5.5 or later

Supported Operating Systems Red Hat 7.2 Professional, Red Hat 7.3 Professional, SuSE Linux Enterprise Server 7

Client System Support Microsoft Windows 98
Microsoft Windows 2000 and 2000 Professional
Microsoft Windows 2000 XP Professional Edition
Microsoft Windows NT® 4.0 Server and Enterprise Edition
Microsoft Windows 2000 Server and Advanced Server
Microsoft Windows Server 2003 (when available) and Advanced Server
Red Hat Linux 7.2 Professional, Red Hat Linux 7.3 Professional, Red Hat Linux Advanced Server 2.1
SuSE Linux Enterprise Server 7
Novell NetWare 5.x, 6.x

Supported Servers ProLiant DL380 G2 Packaged Cluster

Warranty HP will replace defective delivery media replacement for a period of one year (12 months) following the date of purchase

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