

# Pro Linux High Availability Clustering By Sander Van Vugt

The expert guide to high availability clusters for HP-UX, Linux, Windows 2000, and Windows NT. The start-to-finish guide to high availability clustering Includes ways to maximize enterprise application availability—and minimize cost Completely updated for the latest tools, technologies, and applications Describes high availability solutions in HP-UX, Linux, and Windows environments Business-critical applications require higher availability than ever before-and today's high availability systems rely on clustering as a key strategy for maximizing reliability and robustness. In Clusters for High Availability, Second Edition, Peter S. Weygant covers all three pillars of successful high availability computing: robust technology, sound computing processes, and proactive support. He addresses every aspect of delivering high availability clustered systems: terminology, architecture, implementation, management, monitoring, and beyond. Coverage includes: Fundamental concepts and components associated with high availability clustering A 14-step checklist for assessing your high availability needs Clustering techniques for HP-UX, Windows 2000, Windows NT, and Linux

Clustered storage, backup, and network infrastructure solutions Practical techniques for building "disaster-tolerant" systems State-of-the-art cluster replication, monitoring, and management tools Weygant presents several brand-new case studies, including an Oracle Parallel Server application providing 5nines:5minutes protection; a high availability brokerage application built using a continental cluster; and a storage area network solution designed for an Internet service provider. The book also contains an extensive glossary. If you're responsible for delivering high availability, Clusters for High Availability is the comprehensive, up-to-date blueprint you need.

Server bottlenecks and failures are a fact of life in any database deployment, but they don't have to bring everything to a halt. This practical book explains replication, cluster, and monitoring features that can help protect your MySQL system from outages, whether it's running on hardware, virtual machines, or in the cloud. Written by engineers who designed many of the tools covered, this book reveals undocumented or hard-to-find aspects of MySQL reliability and high availability—knowledge that's essential for any organization using this database system. This second edition describes extensive changes to MySQL tools. Versions up to 5.5 are covered, along with several 5.6 features. Learn replication fundamentals, including use of the binary log and MySQL Replicant Library

Handle failing components through redundancy Scale out to manage read-load increases, and use data sharding to handle large databases and write-load increases Store and replicate data on individual nodes with MySQL Cluster Monitor database activity and performance, and major operating system parameters Keep track of masters and slaves, and deal with failures and restarts, corruption, and other incidents Examine tools including MySQL Enterprise Monitor, MySQL Utilities, and GTIDs

Asterisk is the leading Open Source Telephony application and PBX software solution. It represents an effective, easy-to-administer, and accessible platform for running enterprise telephony requirements. The real world, however, offers numerous hurdles when running Asterisk in the commercial environment including call routing, resilience, or integrating Asterisk with other systems. This book will show you some of the ways to overcome these problems. As the follow-up to Packt's highly successful 2005 title Building Telephony Systems with Asterisk, this book presents the collected wisdom of Asterisk Professionals in the commercial environment. Aimed at Administrators and Asterisk Consultants who are comfortable with the basics of Asterisk operation and installation, this book covers numerous hands-on topics such as Call Routing, Network Considerations, Scalability, and Resilience \_ all the while providing practical solutions and

suggestions. It also covers more business-related areas like Billing Solutions and a Winning Sales Technique. Even if your interest or experience with Asterisk is lower level, this book will provide a deeper understanding of how Asterisk operates in the real world. Asterisk is deployed across countless enterprises globally. Running on Linux, it has constantly demonstrated its resilience, stability, and scalability and is now the advanced communication solution of choice to many organizations and consultants. With a foreword from Mark Spencer, the man behind Asterisk, this book presents the accumulated wisdom of three leading Asterisk Consultants and shows the reader how to get the most out of Asterisk in the commercial environment. Over the course of eleven chapters, this book introduces the reader to topics as diverse as Advanced Dial Plans, Network Considerations, and Call Routing, through to Localization, DAHDI, Speech Technology, and Working with a GUI. The book also covers the more nebulous aspects of being an Asterisk professional such as evaluating customer requirements and pitching for contracts. This book represents the wisdom and thoughts of front line consultants. The knowledge they impart will prove informative, thought provoking and be of lasting interest to Asterisk professionals. To the outside world, a "supercomputer" appears to be a single system. In fact, it's a cluster of computers that share a local area network and have the ability to

work together on a single problem as a team. Many businesses used to consider supercomputing beyond the reach of their budgets, but new Linux applications have made high-performance clusters more affordable than ever. These days, the promise of low-cost supercomputing is one of the main reasons many businesses choose Linux over other operating systems. This new guide covers everything a newcomer to clustering will need to plan, build, and deploy a high-performance Linux cluster. The book focuses on clustering for high-performance computation, although much of its information also applies to clustering for high-availability (failover and disaster recovery). The book discusses the key tools you'll need to get started, including good practices to use while exploring the tools and growing a system. You'll learn about planning, hardware choices, bulk installation of Linux on multiple systems, and other basic considerations. Then, you'll learn about software options that can save you hours--or even weeks--of deployment time. Since a wide variety of options exist in each area of clustering software, the author discusses the pros and cons of the major free software projects and chooses those that are most likely to be helpful to new cluster administrators and programmers. A few of the projects introduced in the book include: MPI, the most popular programming library for clusters. This book offers simple but realistic introductory examples along with some pointers for advanced

use. OSCAR and Rocks, two comprehensive installation and administrative systems openMosix (a convenient tool for distributing jobs), Linux kernel extensions that migrate processes transparently for load balancing PVFS, one of the parallel filesystems that make clustering I/O easier C3, a set of commands for administering multiple systems Ganglia, OpenPBS, and cloning tools (Kickstart, SIS and G4U) are also covered. The book looks at cluster installation packages (OSCAR & Rocks) and then considers the core packages individually for greater depth or for folks wishing to do a custom installation. Guidelines for debugging, profiling, performance tuning, and managing jobs from multiple users round out this immensely useful book.

DB2® 9 builds on the world's number one enterprise database to simplify the delivery of information as a service, accelerate development, and dramatically improve operational efficiency, security, and resiliency. Now, this new edition offers complete, start-to-finish coverage of DB2 9 administration and development for Linux®, UNIX®, and Windows® platforms, as well as authoritative preparation for the latest IBM DB2 certification exam. Written for both DBAs and developers, this definitive reference and self-study guide covers all aspects of deploying and managing DB2 9, including DB2 database design and development; day-to-day administration and backup; deployment of

networked, Internet-centered, and SOA-based applications; migration; and much more. You'll also find an unparalleled collection of expert tips for optimizing performance, availability, and value. Coverage includes: Important security and resiliency enhancements, including advanced access control; fine-grained, label-based security; and the new security administrator role Breakthrough pureXML™ features that make it easier to succeed with service-oriented architecture Operational improvements that enhance DBA efficiency--including self-tuning memory allocation, automated storage management, and storage optimization Table-partitioning features that improve scalability and manageability Powerful improvements for more agile and rapid development, including the new Eclipse-based Developer Workbench and simple SQL or XQuery access to all data Whatever your role in working with DB2 or preparing for certification, DB2 9 for Linux, UNIX, and Windows, Sixth Edition is the one book you can't afford to be without. Download Complete DB2 V9 Trial Version Visit [ibm.com/db2/9/download.html](http://ibm.com/db2/9/download.html) to download a complete trial version of DB2, which enables you to try out dozens of the most powerful features of DB2 for yourself: everything from pureXML support to automated administration and optimization. Straight from IBM, the ultimate guide to running DB2 9 and preparing for the latest IBM DB2 certification exam! Covers powerful DB2 9 enhancements ranging

from automated management to improved compression Covers the full spectrum of DBA responsibilities, including server management, data placement, XML concepts, activity analysis, high availability, and security Presents expert tips and best practices from the DB2 customer support organization

Gain the essential skills and hands-on expertise required to pass the LPIC-3 300 certification exam. This book provides the insight for you to confidently install, manage and troubleshoot OpenLDAP, Samba, and FreeIPA. Helping you to get started from scratch, this guide is divided into three comprehensive sections covering everything you'll need to prepare for the exam. Part 1 focuses on OpenLDAP and topics including securing the directory, integration with PAM and replication. Part 2 covers Samba and teaches you about Samba architecture, using different back ends, print services, and deploying Samba as a stand-alone server, PDC, and Active Directory Domain Controller. Finally, Part 3 explains how to manage FreeIPA and how to integrate it with Active Directory. Practical LPIC-3 300 is the perfect study guide for anyone interested in the LPIC-3 300 certification exam, OpenLDAP, Samba, or FreeIPA. What You'll Learn Integrate LDAP with PAM and NSS, and with Active Directory and Kerberos Manage OpenLDAP replication and server performance tuning Use Samba as a PDC and BDC Configure Samba as a domain member server in an existing NT domain



Use Samba as an AD Compatible Domain Controller Replicate, manage, and integrate FreeIPA Who This Book Is For This book is for anyone who is preparing for the LPIC-3 300 exam, or those interested in learning about OpenLDAP and Samba in general.

The Linux Enterprise Cluster explains how to take a number of inexpensive computers with limited resources, place them on a normal computer network, and install free software so that the computers act together like one powerful server. This makes it possible to build a very inexpensive and reliable business system for a small business or a large corporation. The book includes information on how to build a high-availability server pair using the Heartbeat package, how to use the Linux Virtual Server load balancing software, how to configure a reliable printing system in a Linux cluster environment, and how to build a job scheduling system in Linux with no single point of failure. The book also includes information on high availability techniques that can be used with or without a cluster, making it helpful for System Administrators even if they are not building a cluster. Anyone interested in deploying Linux in an environment where low cost computer reliability is important will find this book useful. The CD-ROM includes the Linux kernel, Idirectord software, the Mon monitoring package, the Ganglia package, OpenSSH, rsync, SystemImager, Heartbeat, and all the figures and illustrations

used in the book.

As Linux® on System z® becomes more prevalent and mainstream in the industry, the need for it to deliver higher levels of availability is increasing. IBM® supports the High Availability Linux (Linux-HA) project, which provides high availability functions to the open source community. One component of the Linux-HA project is the Heartbeat program, which runs on every known Linux platform. Heartbeat is part of the framework of the Linux-HA project. This IBM Redbooks® publication provides information to help you evaluate and implement Linux-HA release 2 by using Heartbeat 2.0 on the IBM System z platform with either SUSE® Linux Enterprise Server version 10 or Red Hat® Enterprise Linux® 5. To begin, we review the fundamentals of high availability concepts and terminology. Then we discuss the Heartbeat 2.0 architecture and its components. We examine some of the special considerations when using Heartbeat 2.0 on Linux on System z, particularly Linux on z/VM®, with logical partitions (LPARs), interguest communication by using HiperSockets™, and Shoot The Other Node In The Head (STONITH) by using VSMERVE for Simple Network IPL (snIPL). By reading this book, you can examine our environment as we outline our installation and setup processes and configuration. We demonstrate an active and passive single resource scenario and a quorum scenario by using a single

resource with three guests in the cluster. Finally, we demonstrate and describe sample usage scenarios.

This book is targeted at system engineers and system administrators who want to upgrade their knowledge and skills in high availability and want to learn practically how to achieve high availability with CentOS Linux. You are expected to have good CentOS Linux knowledge and basic networking experience. Expert techniques for designing your system to achieve maximum availability and predictable downtime With your company's reputation and profits at stake, downtime on your 24/7 web site is not an option, nor is poor application performance. Now in its second edition, this authoritative book provides you with the design blueprints to maximize your system availability. Striking a balance between costs and benefits, the authors show you all of the elements of your computer system that can fail-as well as ways to assess their reliability and attain resiliency and high availability for each one. A unique feature is "Tales from the Field," a collection of true-to-life experiences that will help you avoid mistakes and deploy your system with confidence. Learn how to design your system to limit the impact of such problems as computer viruses, natural disasters, or the corruption of critical files and discover how to: \* Implement effective backup-and-restore and tape management strategies \* Arrange disks and disk arrays to avoid

downtime caused by inevitable failures \* Utilize technologies such as Storage Area Networks (SANs), Network Attached Storage (NAS), Virtualization, and clustering \* Achieve effective application recovery after any part of the system has failed \* Replicate critical data to remote systems across a network

How can you help your Drupal website continue to perform at the highest level as it grows to meet demand? This comprehensive guide provides best practices, examples, and in-depth explanations for solving several performance and scalability issues. You'll learn how to apply coding and infrastructure techniques to Drupal internals, application performance, databases, web servers, and performance analysis. Covering Drupal versions 7 and 8, this book is the ideal reference for everything from site deployment to implementing specific technologies such as Varnish, memcache, or Solr. If you have a basic understanding of Drupal and the Linux-Apache-MySQL-PHP (LAMP) stack, you're ready to get started. Establish a performance baseline and define goals for improvement Optimize your website's code and front-end performance Get best and worst practices for customizing Drupal core functionality Apply infrastructure design techniques to launch or expand a site Use tools to configure, monitor, and optimize MySQL performance Employ alternative storage and backend search options as your site grows Tune your web servers through

httpd and PHP configuration Monitor services and perform load tests to catch problems before they become critical

Enabling technologies - An overview of cluster computing / Thomas Sterling / - Node Hardware / Thomas Sterling / - Linux / Peter H. Beckman / - Network Hardware / Thomas Sterling / - Network Software / Thomas Sterling / - Setting Up clusters : installation and configuration - How fast is my beowulf? / David Bailey / - Parallel programming / - Parallel programming with MPI / William Gropp / - Advanced topics in MPI programming / William Gropp / - Parallel programming with PVM / AI Geist / - Fault-tolerant and adaptive programs with PVM / AI Geist / - Managing clusters / - Cluster workload management / James Patton Jones / - Condor : a distributed job scheduler / - Maui scheduler : A multifunction cluster scheduler / David B. Jackson / - PBS : portable batch system / James Patton Jones / - PVFS : parallel virtual file system / Walt Ligon / - Chiba city : the Argonne scalable cluster.

Pro Linux High Availability Clustering teaches you how to implement this fundamental Linux add-on into your business. Linux High Availability Clustering is needed to ensure the availability of mission critical resources. The technique is applied more and more in corporate datacenters around the world. While lots of documentation about the subject is available on the internet, it isn't always easy

to build a real solution based on that scattered information, which is often oriented towards specific tasks only. Pro Linux High Availability Clustering explains essential high-availability clustering components on all Linux platforms, giving you the insight to build solutions for any specific case needed. In this book four common cases will be explained: Configuring Apache for high availability Creating an Open Source SAN based on DRBD, iSCSI and HA clustering Setting up a load-balanced web server cluster with a back-end, highly-available database Setting up a KVM virtualization platform with high-availability protection for a virtual machine. With the knowledge you'll gain from these real-world applications, you'll be able to efficiently apply Linux HA to your work situation with confidence. Author Sander Van Vugt teaches Linux high-availability clustering on training courses, uses it in his everyday work, and now brings this knowledge to you in one place, with clear examples and cases. Make the best start with HA clustering with Pro Linux High Availability Clustering at your side.

What is this book about? Professional Red Hat Enterprise Linux 3 is a complete professional guide to setting up, configuring, and deploying Red Hat Enterprise Linux in the corporate production environment. The book focuses on Enterprise Server and Advanced Server features, including the key areas of high availability with the Red Hat Cluster Suite, Red Hat Network Control Center, and Red Hat

Enterprise applications such as the Content Management System and portal server. Other key unique features include kernel tuning for various performance profiles; advanced Apache configuration; Tux installation/maintenance; building high-performance FTP servers; building high-performance mail servers (which means replacing Sendmail); Mailing list management; how to efficiently add, remove, or modify 100 users at the same time; and a discussion of disk quota management and monitoring. What does this book cover? The key features of the book include the following: How to install and setup RHEL 3 How to deploy RHEL 3 in production environment How to manage an RHEL system using Perl and shell scripting Advanced administration tools How to use Red Hat network service Details on installation and setup of security tools Ability to use and deploy High Availability solutions provided with RHEL 3 Performance tuning How to use monitoring tools Ability to use RHEL to provide scalable infrastructure solutions. "Linux High Availability Clustering Complete Video Course is a unique video product that teaches you how to implement and configure high availability solutions for your Linux projects. High Availability ensures the availability of critical workloads in the cloud and in data centers for both large corporate and smaller environments and this video course is your go-to resource for getting started with High Availability today. Configuring High Availability is an essential

part of setting up a Linux environment. High Availability is used in the data center, but also for ensuring the availability of critical workloads in the Cloud. The video course includes whiteboard concept teaching, live CLI work, screencast teaching, and hands-on labs, so you have everything you need to learn about High Availability for your work. It also covers everything you need to study for and pass the RHCA Exam 436 and also covers the High Availability portion of the Linux Professional Institute LPIC-3 304: Virtualization and High Availability exam."--Resource description page.

InfoWorld is targeted to Senior IT professionals. Content is segmented into Channels and Topic Centers. InfoWorld also celebrates people, companies, and projects.

The definitive guide to administering a Red Hat EnterpriseLinux 6 network Linux professionals who need a go-to guide on version 6 of RedHat Enterprise Linux (RHEL) will find what they need in thiscomprehensive Sybex book. It covers RHEL administration in detail,including how to set up and manage web and mail services, use RHELin enterprise environments, secure it, optimize storage, configurefor virtualization and high availability, and much more. It also provides a great study aid for those preparing for either the RHCSAor RHCE certification exam. Red Hat is the Linux market leader, and Red Hat administratorsare in demand This Sybex guide is a



comprehensive resource on Red Hat Enterprise Linux administration and useful for those preparing for one of the Red Hat certification exams. Covers setting up and managing web and mail services, using RHEL in enterprise environments, securing RHEL, and optimizing storage to fit your environment. Explores advanced RHEL configurations, including virtualization and high availability. Red Hat Enterprise Linux 6 Administration is the guide Linux professionals and Red Hat administrators need to stay current on the newest version.

As organizations strive to do more with less, IBM® DB2® for Linux, UNIX, and Windows provides various built-in high availability features. DB2 further provides high availability solutions by using enterprise system resources with broad support for clustering software, such as IBM PowerHA® SystemMirror®, IBM Tivoli® System Automation for Multiplatforms (Tivoli SA MP), and Microsoft Windows Cluster Server. This IBM Redbooks® publication describes the DB2 high availability functions and features, focusing on High Availability Disaster Recovery (HADR) in the OLTP environment. The book provides a detailed description of HADR, including setup, configuration, administration, monitoring, and preferred practices. This book explains how to configure Cluster software PowerHA, Tivoli SA MP, and MSCS with DB2 and show how to use these products to automate HADR takeover. DB2 also provides unprecedented enterprise-class disaster recovery capability. This book covers single system view backup, backup and restore with snapshot backup, and the db2 recovery

command, in detail. This book is intended for database administrators and information management professionals who want to design, implement, and support a highly available DB2 system.

This book starts with the basic premise that a service is comprised of the 3Ps-products, processes, and people. Moreover, these entities and their sub-entities interlink to support the services that end users require to run and support a business. This widens the scope of any availability design far beyond hardware and software. It also increases t

More Than 8 Hours of video instruction to learn everything you need to know about Linux High Availability Overview Linux High Availability Complete Video Course: Red Hat EX436 and LPIC-3 304 has 8 hours of comprehensive video that teaches you everything you need to know about configuring and using High Availability in Linux. Uptime is a crucial part of your job. This title focuses on giving you the knowledge you need to maintain a high level of availability for you Linux servers. You will also find full hands-on labs, so you can get real-world experience while working your way through the course. The course can be used with all flavors of Linux, including Red Hat, Ubuntu, and SUSE. It also covers every objective in the Red Hat Certificate of Expertise in High Availability Clustering exam (EX436) and the High Availability portion of the Linux Professional Institute LPIC-3 304: Virtualization and High Availability exam. Description Linux High Availability Clustering Complete Video Course is a unique video product that

teaches you how to implement and configure high availability solutions for your Linux projects. High Availability ensures the availability of critical workloads in the cloud and in data centers for both large corporate and smaller environments and this video course is your go-to resource for getting started with High Availability today. Configuring High Availability is an essential part of setting up a Linux environment. High Availability is used in the data center, but also for ensuring the availability of critical workloads in the Cloud. The video course includes whiteboard concept teaching, live CLI work, screencast teaching, and hands-on labs, so you have everything you need to learn about High Availability for your work. It also covers everything you need to study for and pass the RHCA Exam 436 and also covers the High Availability portion of the Linux Professional Institute LPIC-3 304: Virtualization and High Availability exam. About the Instructor Sander van Vugt is an independent Linux trainer, author, and consultant living in the Netherlands. Sander has written numerous books about different Linux-related topics and many articles for Linux publications around the world. Sander has been teaching Red Hat, SUSE, and LPI Linux classes since 1994. As a consultant, he specializes in Linux High Availability solutions and performance optimization. More information about Sander is on his website at [www.sandervanvugt.com](http://www.sandervanvugt.com) . For more ...

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\* Only book on the market to actually show you how to build an Oracle RAC cluster on Linux. \* Author expertise & quality: Steve Shaw's Hammerora project is one of the most

visited sites in SourceForge.net. Julian Dyke is Chair of UK Oracle User Group RAC SIG and a member of the Oak Table Network. \* Based on latest Oracle release (10g R2) which we anticipate being the release where the largest number of customers migrate from existing single instance databases to RAC clusters. \* Linux is highest growth sector in relational database market and Oracle has 69% of that market (Gartner).

Enterprise servers play a mission-critical role in modern computing environments, especially from a business continuity perspective. Several models of IT capability have been introduced over the last two decades. Enhancing Business Continuity and IT Capability: System Administration and Server Operating Platforms proposes a new model of IT capability. It presents a framework that establishes the relationship between downtime on one side and business continuity and IT capability on the other side, as well as how system administration and modern server operating platforms can help in improving business continuity and IT capability. This book begins by defining business continuity and IT capability and their importance in modern business, as well as by giving an overview of business continuity, disaster recovery planning, contingency planning, and business continuity maturity models. It then explores modern server environments and the role of system administration in ensuring higher levels of system availability, system scalability, and business continuity. Techniques for enhancing availability and business continuity also include Business impact analysis Assessing the

downtime impact Designing an optimal business continuity solution IT auditing as a process of gathering data and evidence to evaluate whether the company's information systems infrastructure is efficient and effective and whether it meets business goals The book concludes with frameworks and guidelines on how to measure and assess IT capability and how IT capability affects a firm's performances. Cases and white papers describe real-world scenarios illustrating the concepts and techniques presented in the book.

For more than 40 years, Computerworld has been the leading source of technology news and information for IT influencers worldwide. Computerworld's award-winning Web site (Computerworld.com), twice-monthly publication, focused conference series and custom research form the hub of the world's largest global IT media network. Need to configure or manage Novell Cluster Services on NetWare, Linux or a mixed environment? Pick up a copy of the official reference guide, Novell Cluster Services for Linux and NetWare. This book blends in-depth information with practical, real world examples to cover cluster services configuration strategies, backup requirements, cluster services management, and upgrading tactics. You'll gain invaluable insight from authors Rob Bastiaansen and Sander van Vugt, two Novell Certified Instructors with day-to-day experience consulting on the topics covered in this book. Master installing and managing Novell Cluster Services with the tutorial not available from anyone else, Novell Cluster Services for Linux and NetWare.

The aim of this IBM Redbooks publication is to provide a technical reference for IT system

administrators in organizations that are considering a migration from Sun Solaris to IBM AIX 5L-based systems. This book presents a system administrator view of the technical differences that exist and the methods that are necessary to complete a successful migration to AIX 5L-based systems. This book is designed primarily as a reference for experienced Sun Solaris 8 or 9 system administrators who will be working with AIX 5L. This book is not an AIX 5L administration how-to book for system administrators who are beginners, but rather a guide for experienced administrators who have to translate a given Solaris system administration task to AIX 5L.

The author teaches at Wofford College.

LinuxONE is a portfolio of hardware, software, and solutions for an enterprise-grade Linux environment. It has been designed to run more transactions faster and with more security and reliability specifically for the open community. It fully embraces open source-based technology. Two servers are available for LinuxONE: The IBM® LinuxONE III LT1 and IBM LinuxONE III LT2. We describe these servers in "IBM LinuxONE servers" on page 5. Aside from still running SUSE Linux Enterprise Server and Red Hat Enterprise Linux Servers, LinuxONE runs Ubuntu, which is popular on x86 hardware. Ubuntu, which runs the cloud, smartphones, a computer that can remote control a planetary rover for NASA, many market-leading companies, and the Internet of Things, is now available on IBM LinuxONE servers. Together, these two technology communities deliver the perfect environment for cloud and DevOps. Ubuntu 16.04 on LinuxONE offers developers, enterprises, and Cloud Service Providers a scalable and secure platform for next generation applications that include OpenStack, KVM, Docker, and JuJu. The following are reasons why you would want to optimize your servers through virtualization using

LinuxONE: Too many distributed physical servers with low utilization A lengthy provisioning process that delays the implementation of new applications Limitations in data center power and floor space High total cost of ownership (TCO) Difficulty allocating processing power for a dynamic environment This IBM Redbooks® publication provides a technical planning reference for IT organizations that are considering a migration from their x86 distributed servers to LinuxONE. This book walks you through some of the important considerations and planning issues that you might encounter during a migration project. Within the context of a pre-existing UNIX based or x86 environment, it presents an end-to-end view of the technical challenges and methods necessary to complete a successful migration to LinuxONE.

DB2 Universal Database v8 builds on the world's #1 enterprise database to simplify anytime/anywhere information integration, streamline management, automate resource tuning, enhance business intelligence, and maximize performance, scalability, and reliability. Now, IBM offers complete, start-to-finish coverage of DB2 Universal Database v8 administration and development for UNIX, Linux, and Windows platforms... "and authoritative preparation for IBM's newest DB2 certification exam." This definitive reference and self-study guide covers every aspect of deploying and managing DB2 Universal Database v8, including best practices for DB2 database design and development; day-to-day administration and backup; expert techniques for deploying networked, Internet-centered, and XML-based database applications; migrating to DB2 UDB v8; and much more. You'll also find an unparalleled collection of IBM tips and tricks for maximizing the performance, availability, and value of any database system. Coverage includes: Manageability and serviceability enhancements, including new tools for storage management and monitoring database health Performance improvement

## Acces PDF Pro Linux High Availability Clustering By Sander Van Vugt

with multidimensional clustering, enhanced prefetching, threading of Java UDFs and stored procedures, and materialized query tables New Setup wizards, configuration assistants, GUI tools, and DB2 Administration Server (DAS) improvements Availability and scalability enhancements New DB2 v8 Replication and Data Warehouse Centers Major improvements for developers, including SQL, XML, JDBC, and CLI enhancements Whether you're a DBA, a developer, a DB2 certification candidate, or all three, "DB2 Universal Database v8 for Linux, UNIX, and Windows Database Administration Certification Guide" is the one book you can't afford to be without. Straight from IBM, the ultimate guide to running DB2 v8 and preparing for IBM's latest DB2 certification exam! In-depth coverage of DB2 v8 database administration and development Covers new DB2 v8 enhancements in manageability, serviceability, reliability, availability, and performance Contains in-depth coverage of new DB2 v8 tools, including the Replication, Data Warehouse, and Development Centers Presents expert tips and best practices from IBM's own DB2 customer support organization About the CD The CD-ROM included with this book contains a complete trial version of DB2 UDB V8 Personal Edition, plus the DB2DEMO program to help explore the many features of DB2.

This book is designed as an Ubuntu 20.04 LTS Server administration and reference source, covering the Ubuntu servers and their support applications. Server tools are covered as well as the underlying configuration files and system implementations. The emphasis is on what administrators will need to know to perform key server support and management tasks. Coverage of the systemd service management system is integrated into the book. Topics covered include software management, systemd service management, systemd-networkd and Netplan network configuration, AppArmor security, OpenSSH, the Chrony time server, and



Ubuntu cloud services. Key servers are examined, including Web, FTP, CUPS printing, NFS, and Samba Windows shares. Network support servers and applications covered include the Squid proxy server, the Domain Name System (BIND) server, DHCP, distributed network file systems, IPtables firewalls, and cloud computing.

Until now, building and managing Linux clusters has required more intimate and specialized knowledge than most IT organizations possess. This book dramatically lowers the learning curve, bringing together all the hands-on knowledge and step-by-step techniques needed to get the job done.

"Linux Clustering" is the premier resource for system administrators wishing to implement clustering solutions on the many types of Linux systems. It guides Linux Administrators through difficult tasks while offering helpful tips and tricks.

As Linux on System z becomes more prevalent and mainstream in the industry, the need for it to deliver higher levels of availability is increasing. This IBM Redbooks publication starts with an explanation of high availability (HA) fundamentals such as HA concepts and terminology. It continues with a discussion of why a business needs to consider an HA solution and then explains how to determine your business single points of failure. We outline the components of a high availability solution and describe these components. Then we provide some architectural scenarios and demonstrate how to plan and decide an implementation of an end-to-end HA solution, from Linux on System z database scenarios to z/OS, and include storage, network, z/VM, Linux, and middleware. This implementation includes the IBM Tivoli System Automation for

Multiplatforms (TSA MP), which monitors and automates applications distributed across Linux, AIX®, and z/OS® operating systems, as well as a GDPS based solution. It includes the planning for an end-to-end scenario, considering Linux on System z, z/VM, and z/OS operating environments, and the middleware used. The TSA MP implements HA for infrastructure, network, operating systems, and applications across multiple platforms and is compared to a Linux HA implementation based on open source Linux-HA, which is Linux only.

Create high availability clusters to enhance system performance using CentOS 7 About This Book Master the concepts of high performance and high availability to eliminate performance bottlenecks Maximize the uptime of services running in a CentOS 7 cluster A step-by-step guide that will provide knowledge of methods and approaches to optimize the performance of CentOS clusters Who This Book Is For This book is targeted at system administrators: those who want a detailed, step-by-step guide to learn how to set up a high-availability CentOS 7 cluster, and those who are looking for a reference book to help them learn or refresh the necessary skills to ensure their systems and respective resources are utilized optimally. No previous knowledge of high-availability systems is needed, though the reader is expected to have at least some degree of familiarity with any spin-off of the Fedora family of Linux distributions, preferably CentOS. What You Will Learn Install a CentOS 7 cluster and network infrastructure Configure firewall, networking, and clustering services and settings Set up

and test a HAC (high-availability cluster) to host an Apache web server and a MariaDB database server Monitor performance and availability Identify bottlenecks and troubleshoot issues Improve performance and ensure high availability In Detail CentOS is the enterprise level Linux OS, which is 100% binary compatible to Red Hat Enterprise Linux (RHEL). It acts as a free alternative to RedHat's commercial Linux offering, with only a change in the branding. A high performance cluster consists in a group of computers that work together as one set parallel, hence minimizing or eliminating the downtime of critical services and enhancing the performance of the application. Starting with the basic principles of clustering, you will learn the necessary steps to install a cluster with two CentOS 7 servers. We will then set up and configure the basic required network infrastructure and clustering services. Further, you will learn how to take a proactive approach to the split-brain issue by configuring the failover and fencing of the cluster as a whole and the quorum of each node individually. Further, we will be setting up HAC and HPC clusters as a web server and a database server. You will also master the art of monitoring performance and availability, identifying bottlenecks, and exploring troubleshooting techniques. At the end of the book, you'll review performance-tuning techniques for the recently installed cluster, test performance using a payload simulation, and learn the necessary skills to ensure that the systems, and the corresponding resources and services, are being utilized to their best capacity. Style and approach An easy-to-follow and step-by-step guide with hands-on instructions to

set up real-world simple cluster scenarios that will start you on the path to building more complex applications on your own.

Pro Ubuntu Server Administration teaches you advanced Ubuntu system building. After reading this book, you will be able to manage anything from simple file servers to multiple virtual servers to high-availability clusters. This is the capstone volume of the Apress Ubuntu trilogy that includes Beginning Ubuntu Linux, Third Edition and Beginning Ubuntu Server LTS Administration: From Novice to Professional, Second Edition. You will be able to make Ubuntu technology shine in a Fortune 500 environment and let Ubuntu server become the backbone of your infrastructure. Topics covered include Performance monitoring and optimization High-availability clustering Advanced Lightweight Directory Access Protocol (LDAP) integrated networking Use this certification to gather all the information on the topic of LPI LPIC-3 (304-200) Certification exam. The Questions will help you distinguish the type and complexity level of the questions and the Practice Exams will make you familiar with the format of an exam. You should refer this guide carefully before attempting your actual LPI LPIC-3 304 Linux Virtualization and High Availability certification exam. This certification is particularly interesting for candidates who must know and understand the general concepts, theory and terminology of virtualization. This consist of Xen, KVM and libvirt terminology. Key learning points in this certification includes: - Variations of Virtual Machine Monitors - Migration of Physical to Virtual Machines - Migration of Virtual

Machines between Host systems - Cloud Computing - IaaS, PaaS, SaaS - Understand the most important cluster architectures - Understand recovery and cluster reorganization mechanisms - Design an appropriate cluster architecture for a given purpose - Application aspects of high availability - Operational considerations of high availability Preparing for the LPIC-3 304-200 Linux Virtualization and High Availability exam to become a certified LPI expert? Here we have brought Best Exam Questions for you so that you can prepare well for this Exam of LPIC-3 304-200 Linux Virtualization and High Availability. Unlike other online simulation practice tests, you get an ebook version that is easy to read & remember these questions. You can simply rely on these questions for successfully certifying this exam.

The Definitive Guide to SUSE Linux Enterprise Server 12 is a task-oriented book designed for self-study as well as classroom environments, which will also serve you as a reference guide. The book covers all skills that system administrators typically need to possess to administer SUSE Linux Enterprise Server in corporate environments. It starts at the beginning, which makes The Definitive Guide to SUSE Linux Enterprise Server 12 suitable for people without any preliminary Linux knowledge, and yet works up to advanced SUSE Linux administration tasks, such as building a cluster, optimizing performance or managing SUSE Linux Enterprise Server with SUSE Manager. The Definitive Guide to SUSE Linux Enterprise Server 12 is an ideal reference guide for system administrators, but is also perfect as a study book to prepare for the CLA, CLP

as well as the CLE exams. This book contains step-by-step exercises, and scenario based exercises at the end of each chapter to help readers getting familiar with the subjects that are required to pass these three exams. The Definitive Guide to SUSE Linux Enterprise Server 12 also contains test exams, so you can use it as a study guide in a formal learning environment or as a book that you can learn and test your own progress as you master SUSE Linux Enterprise Server. You'll learn everything you need to know and the skills you need to manage SUSE Linux Enterprise Servers, from installing a secure server, to performing the day-to-day management tasks on SUSE Linux Enterprise Server. Along the way you'll encounter and master SUSE Linux Enterprise Server in a data center environment, how to manage your SUSE Enterprise Server for High Availability, and you'll see how to manage your SUSE Linux Enterprise Server with SUSE Manager. From installation to expert management, The Definitive Guide to SUSE Linux Enterprise Server 12 will show you the ways to succeed with Linux Enterprise Server 12.

- This is the latest practice test to pass the 304-200 LPI LPIC-3 Virtualization & High Availability Exam.
- It contains 129 Questions and Answers.
- All the questions are 100% valid and stable.
- You can reply on this practice test to pass the exam with a good mark and in the first attempt.

Book + Content Update Program SQL Server 2016 High Availability Unleashed provides start-to-finish coverage of SQL Server's powerful high availability (HA)

solutions for your traditional on-premise databases, cloud-based databases (Azure or AWS), hybrid databases (on-premise coupled with the cloud), and your emerging Big Data solutions. This complete guide introduces an easy-to-follow, formal HA methodology that has been refined over the past several years and helps you identify the right HA solution for your needs. There is also additional coverage of both disaster recovery and business continuity architectures and considerations. You are provided with step-by-step guides, examples, and sample code to help you set up, manage, and administer these highly available solutions. All examples are based on existing production deployments at major Fortune 500 companies around the globe. This book is for all intermediate-to-advanced SQL Server and Big Data professionals, but is also organized so that the first few chapters are great foundation reading for CIOs, CTOs, and even some tech-savvy CFOs. Learn a formal, high availability methodology for understanding and selecting the right HA solution for your needs Deep dive into Microsoft Cluster Services Use selective data replication topologies Explore thorough details on AlwaysOn and availability groups Learn about HA options with log shipping and database mirroring/ snapshots Get details on Microsoft Azure for Big Data and Azure SQL Explore business continuity and disaster recovery Learn about on-premise, cloud, and hybrid deployments Provide all types of database needs, including online transaction processing, data warehouse and business intelligence, and Big Data Explore the future of HA and disaster recovery In addition, this book is part of

InformIT's exciting Content Update Program, which provides content updates for major technology improvements! As significant updates are made to SQL Server, sections of this book will be updated or new sections will be added to match the updates to the technologies. As updates become available, they will be delivered to you via a free Web Edition of this book, which can be accessed with any Internet connection. To learn more, visit [informit.com/cup](http://informit.com/cup). How to access the Web Edition: Follow the instructions inside to learn how to register your book to access the FREE Web Edition.

Pro Oracle Database 11g RAC on Linux provides full-life-cycle guidance on implementing Oracle Real Application Clusters in a Linux environment. Real Application Clusters, commonly abbreviated as RAC, is Oracle's industry-leading architecture for scalable and fault-tolerant databases. RAC allows you to scale up and down by simply adding and subtracting inexpensive Linux servers. Redundancy provided by those multiple, inexpensive servers is the basis for the failover and other fault-tolerance features that RAC provides. Written by authors well-known for their talent with RAC, Pro Oracle Database 11g RAC on Linux gives you a rock-solid and technically flawless foundation on which to build your RAC-management skills. Authors Julian Dyke and Steve Shaw share their hard-won experience in building RAC clusters, showing you how to build for success using the very latest Oracle technologies, such as Automatic Storage Management (ASM) and Oracle Clusterware. You'll learn to troubleshoot performance and other problems. You'll even learn how to correctly deploy RAC in a



virtual-machine environment based upon Oracle VM, which is the only virtualization solution supported by Oracle Corporation. RAC is a complex and powerful technology. It demands expertise in its deployment. You can't just "wing it" in creating a RAC solution. Julian and Steve have earned the right to term themselves expert—in Pro Oracle Database 11g RAC on Linux, they offer a rigorous and technically-correct treatment of RAC that helps you build a solid foundation of expertise and achieve success. Rigorous and technically accurate content Complete coverage of RAC, from planning to implementation to rollout to ongoing maintenance and troubleshooting Up-to-date with the very latest RAC features

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