IBM Enterprise Linux Server

An ideal platform for optimized workload deployment

Highlights

- Smarter Computing—optimized workloads for less costs

- Simplified IT infrastructure inside a single physical server

- Highly scalable, flexible and secure— sharing all system resources

- Tight integration of workloads

- Business continuance that help minimize revenue loss

The IBM Enterprise Linux Server is a proven Linux platform for workload consolidation, workload re-deployment and new workload deployment for mid-sized and large enterprises.

The Enterprise Linux Server can help you control costs for optimized workload deployment through its impressive scalability, availability, security and service management capabilities. It can provide high IT efficiency. It can be the better choice for your IT spending.

You can run application and data servers, share system resources at extreme levels of utilization and provision flexible IT services. This Linux infrastructure can run up to hundreds of different workloads in parallel, providing load-balancing and efficient systems management that will help you achieve superior levels of service and improved operational efficiency.

The Enterprise Linux Server can provide significant advantages over other Linux platforms, helping to transform the IT infrastructure in the new era we call Smarter Computing. An IT infrastructure that is integrated, automated and secured.

Optimize workload deployment and gain control of virtual servers to increase your IT efficiency.

The IBM Enterprise Linux Server

The Enterprise Linux Server offers smarter computing based on a Linux-ready IT infrastructure solution that combines the industry-leading IBM System z® and the outstanding IBM z/VM® virtualization technologies for workload and server consolidation, new Linux workloads with an attractive price. An Enterprise Linux Server[1] with 4 cores with enough capacity to run comparable workloads costs roughly half of typical 3-year maintenance costs compared to 100 cores of traditional x86 or RISC servers.

The Enterprise Linux Server builds on the robust and reliable capabilities available with the recently announced IBM zEnterprise® EC12 (zEC12), IBM zEnterprise 114 (z114), IBM zEnterprise 196 (z196) and IBM System z10® (z10™) servers and combined with IBM z/VM virtualization software to greatly enhance the economic attractiveness of running Linux workloads in a single, easy-to-scale, and easy-to-manage system. It includes dedicated Linux processors (IFLs2), memory, I/O connectivity, and z/VM3 virtualization software with three- to five-year solution pricing that helps accelerate return on investment.

The Enterprise Linux Server can run workloads such as business intelligence with Cognos® and SPSS®, data ware-housing and data serving with InfoSphere®, DB2® and Oracle Database, collaboration with the Lotus® suite, Enterprise Content - and Asset- and Business Process Management applications, as well as vendor applications like SAP, and Java™ and WebSphere®-based applications.

The Enterprise Linux Server allows you to optimize your workload deployment, and realize savings in the area of software licensing in particular.

Business value
Simplicity and Scalability

The cost and complexity of managing real and even virtual servers can be a drain on budgets and hinder a company's ability to maximize the business value of its IT investment. A single Enterprise Linux Server can greatly simplify the server, network and software infrastructure, as well as the operational tasks, needed to run a large number of physical Linux servers.

In fact, the Enterprise Linux Server is able to run hundreds of Linux images in a single, space-saving and highly energy-efficient footprint, and can help to lower the overall acquisition costs by up to 60 percent[1], reduce energy costs by up to 80 percent,[1] and can help to reduce software costs by up to 90 percent[1,4] compared to x86 alternatives.

The Enterprise Linux Server offers server provisioning in minutes, rock solid workload isolation, extensive virtualization management features, the ability to share and over-commit system resources and cost-attractive business resilience and failover solutions, needed to meet your client expectations for unlimited access to existing and new services.

Consolidation of smaller physical servers means fewer components, which results in less complexity, less management time, less licensing requirements and less expenditure. Because the Enterprise Linux Server provides a truly centralized environment, it's much more economical and resourceful compared with other server systems.

Flexibility

The Enterprise Linux Server responds and adapts instantly to constantly changing business demands. Naturally, your system is configured to suit today's business priorities. But what about tomorrow?

With the Enterprise Linux Server, you can reconfigure in minutes. There's no physical disassembly or unplugging of machines, it's all done virtually. You're not limited by the physical infrastructure. So there's no need for extra wiring, new routers or additional disk subsystems. And if it's a short term reconfiguration, you can quickly and easily revert to your original settings for business as usual.

In addition, the outstanding Enterprise Linux Server capabilities enable an enormous vertical scalability and the z/VM virtualization software an the impressive horizontal scalability, both very helpful in terms of flexibility.

Business continuance and Security

It's all about trust. Your data is an absolutely vital part of your business, possibly your most valuable asset. So you need to house it on a server you can truly rely on.

With its built-in protection, availability and security is a given for the Enterprise Linux Server. Unlike other systems—for instance a cluster with one machine backing up another and an additional failover machine—peace of mind comes included in the price.

The Enterprise Linux Server is the most secure commercial server available[5], built using groundbreaking technology you can trust. Powerful encryption will ensure your data, and therefore your business, is protected 24/7.

With the IBM z/VM Single System Image feature[6], a running Linux virtual machine can be relocated non-disruptively from one member system to any other of the cluster, a process known as Live Guest Relocation. This provides application continuity across planned z/VM and hardware outages and flexible workload balancing.

In addition, you can rely on the IBM Maintenance and Support included in the price. So if you do have any issues you know exactly who to call.

Efficiency

IBM Enterprise Linux Server virtualization offers simplicity, scalability, availability and security that clients need to meet customer expectations for access to their IT services.

Virtualization is an inherent part of the IBM Enterprise Linux Server design. It's not just an added feature, it's in the machine's DNA. This powerful virtualization enables unparalleled workload deployment on a massive scale, take its ability to share and over-commit system resources at high levels of efficiency every hour of every day for example. Think of the reductions in terms of space, in terms of complexity, or even the amount of copper cabling required.

Increased efficiency also means less waste. Not just by eliminating unnecessary power and space requirements. With the Enterprise Linux Server, you can spend less time managing your IT systems. To name one example, the new z/VM Single System Image feature[6] allows to cluster up to four z/VM instances together, manageable as a single z/VM system with shared system resources. That's simplifying systems management.

The IBM Enterprise Linux Server is built for maximum utilization. It can balance workloads dynamically to ensure available resources are maximized at any time, and therefore nearly 100 percent utilization of the system resources nearly 100 percent of the time can be achieved.

Bottom-line, life-cycle management costs for an Enterprise Linux Server solution can be considerably less expensive than competitive system alternatives.

The IBM Enterprise Linux Server, when based on the zEnterprise System[7], can benefit from the hybrid approach of this system as well. A complete solution suite can run on a single zEnterprise, running Linux applications and databases on the Enterprise Linux Server, based on zEC12, z114 or z196, in conjunction with a "companion" application on the IBM zEnterprise BladeCenter® Extension (zBX). In addition, the IBM zEnterprise Unified Resource Manager allows to manage all virtual servers running on the Enterprise Linux Server and zBX.

The Enterprise Linux Server can provide optimized workload deployment for a smarter computing.

Look to the future

By exercising the Enterprise Linux Server, you have the ability to deploy a smart IT infrastructure that optimizes workloads to the next level of operational simplicity, availability and security, at a price that is designed to lower your IT costs and achieve a quick return on investment (ROI).

For more information

Please contact your IBM representative or IBM Business Partner, or visit:

- **ibm.com**/systems/z/os/linux/els.html
- **ibm.com**/systems/z/linux

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[5] IBM System z servers are the world's only servers with the highest level of hardware security certification, Common Criteria Evaluation Assurance Level 5 (EAL5). This certification provides assurances that many different applications running in different operating environments in different logical partitions will be secure and distinct from each other.

[6] The z/VM Single System Image feature is available with z/VM Version 6 release 2.

[7] The zEnterprise System (zEnterprise) is comprised of an IBM zEnterprise EC12 (zEC12), IBM zEnterprise 114 (z114) or an IBM zEnterprise 196 (z196), the IBM zEnterprise BladeCenter Extension (zBX) and the IBM zEnterprise Unified Resource Manager.

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[1] Distributed server comparison is based on IBM cost modeling of Linux on zEnterprise vs. alternative distributed servers. US Enterprise Linux Server pricing. Given there are multiple factors in this analysis such as utilization rates, application type, local pricing, etc., savings may vary by user.

[2] Integrated Facility for Linux (IFL):
ibm.com/systems/z/os/linux/solutions/ifl.html

[3] www.vm.ibm.com

[4] When using z/VM virtualization to consolidate and manage Oracle software.

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