SUSE® Linux Enterprise Server for System z*

You do not have to spend more for management and software or increase power and floor space requirements to get the data centre you need. With SUSE® Linux Enterprise Server for System z*, we offer an alternative platform to x86 platforms for virtualizing Linux*, UNIX* and Windows* workloads. SUSE Linux Enterprise Server for System z will help you leverage the resiliency of System z servers while you lower costs, reduce complexity and downtime, and mitigate risk across your enterprise.

- **Solutions:**
  Enterprise Linux Servers
- **Products:**
  SUSE Linux Enterprise Server
    for System z
  SUSE Linux Enterprise Server
    Starter System for System z
  SUSE Manager
  SUSE Studio

"With SUSE Linux Enterprise Server on IBM System z we not only consolidated all our Sun servers, but we also have tremendous room to grow on our 32-way IBM mainframe. I haven't had to buy a new server in the past two years—how many CIOs are able to say that?"

Kenneth J. Kucera
Senior Vice President and CIO
First National Bank of Omaha

Respond to Today's Business Needs Today

You need to reduce data centre costs; however, you also need to become more competitive and provide more services for your customers, which means you need more compute capacity. The typical response to these challenges is to add more hardware servers to handle the required workloads. Adding new physical servers to your data centre, while giving you the capacity you need, may take weeks and increase management, licensing and hardware costs, as well as power and floor space requirements. It may also result in low server utilisation (usually in the 5–15 percent range), driving up your total cost of ownership.

This server sprawl drains your budget, making it difficult to respond to business

demands quickly. To remain competitive, you need to be able to provision new servers and add new software programmes in minutes and hours, not days and weeks. You can do this with SUSE Linux Enterprise Server for System z—running in a z/VM virtualization environment on a System z server—while reducing total cost of ownership, simplifying data centre complexity and increasing flexibility.

Deploy an Industry-leading Server Consolidation Platform

SUSE Linux Enterprise Server for System z offers you an alternative to x86 platforms for consolidating servers and virtualizing Linux, UNIX and Windows workloads. When you choose SUSE Linux Enterprise Server for System z, you are leveraging the resiliency of System z servers, the power of SUSE
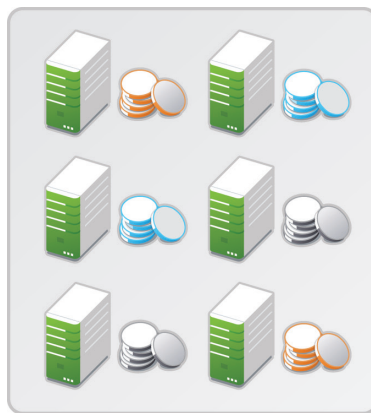
SUSE Linux Enterprise Server for System z allows you to run Linux applications in a virtualized environment on System z servers, consolidating servers and workloads to simplify management and reduce costs.

With SUSE Linux Enterprise Server for System z, the cost of running incremental workloads on System z servers goes down as the total workload grows. The cost goes up linearly for distributed systems with added workloads. As you add more and more workloads to run on SUSE Linux Enterprise Server for System z virtual machines, the average cost per workload drops.
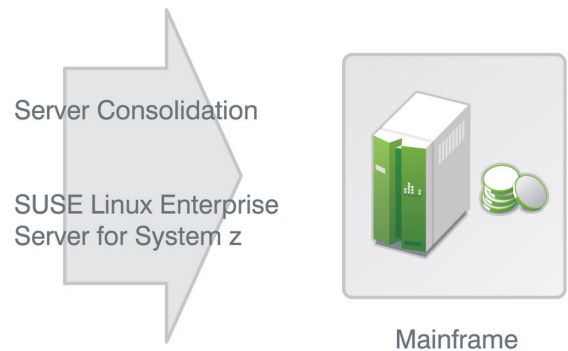
Linux Enterprise Server for System z and the hypervisor capabilities of z/VM to create a virtual environment that lowers total cost of ownership and simplifies data centre management while increasing flexibility and reducing downtime.

As the market share leader in mainframe and virtualization technology, SUSE Linux Enterprise Server for System z enables you to access the largest number of open source and proprietary applications and take advantage of the best technical support in the industry. We work closely with IBM to implement customer-requested enhancements. When you deploy SUSE Linux Enterprise Server for System z, you may take advantage of these enhancements to:

- *Reduce total cost of ownership*
- *Simplify data centre complexity*
- *Increase business agility*

Server Consolidation

SUSE Linux Enterprise
Server for System z

Mainframe

Distributed Systems

Reduce Total Cost of Ownership

The cost of running your data centre includes hardware, software licences, floor space, power, system administrators and many other factors—all of which add up quickly. However, what may be costing your data centre the most is server sprawl. SUSE Linux Enterprise Server for System z is a powerful product that enables you to consolidate many workloads onto a single server. System z servers generally require only about 20 percent of the floor space and power that equivalent capacity x86 servers require.

With SUSE Linux Enterprise Server for System z, the cost of running incremental workloads on System z servers goes down as the total workload grows. The cost goes up linearly for distributed systems with added workloads. As you add more and more workloads to run on SUSE Linux Enterprise Server for System z virtual machines, the average cost per workload drops. It drops because you do not have to acquire new hardware, purchase new operating system subscriptions and new software licences as you add workloads on new virtual machines. For some workloads, you may reach a threshold at which the cost of adding new workloads on SUSE Linux Enterprise Server for System z virtual machines drops to virtually zero.

Simplify Data Centre Complexity

If your data centre is like most others, it has multiple types of operating system platforms and architectures in use at any given time; they are stored in various forms with cables running everywhere. Additionally, chances are good that you acquired these systems from many different vendors, so you must maintain several hardware and software licensing agreements. You must also hire system administrators with varying backgrounds to maintain the various hardware and software systems. All these issues contribute to data centre complexity. You can decrease this complexity using server consolidation with SUSE Linux Enterprise Server for System z in a z/VM environment. You may consolidate many workloads onto a single System z server, reducing the number of hardware vendors and software licences that you must maintain. Then, after consolidation, you can manage your Linux virtual machines on System z servers with mainframe tools, as well as systems management tools integrated with SUSE Linux Enterprise (like YaST® and AutoYaST), or additional products like SUSE Manager, greatly simplifying management tasks such as backups, updates and patches. Running Linux on System z servers also simplifies software licence maintenance and makes it less costly because a single software licence may be shared across all Linux virtual machines that use the licensed software.

Increase Business Agility

Your success relies on your ability to respond to changing user demands and market requirements. To maintain a competitive edge, you must make these changes quickly—and changes frequently take the form of a new server or an existing server being provisioned with new workloads. Workload availability is key to maintaining systemwide agility.

Server consolidation using SUSE Linux Enterprise Server for System z on IBM System z servers offers you the flexibility you need to meet your organisation's business demands. If you choose SUSE Linux Enterprise Server for System z, you can benefit from the large application portfolio available on it, including a growing set of server and middleware products and open source applications. With SUSE Linux Enterprise Server for System z in a z/VM environment, you may provision new servers and virtual SUSE Linux Enterprise Server for System z servers in seconds and minutes. z/VM is able to spawn a new SUSE Linux Enterprise Server for System z virtual server with the security and reliability inherent in the mainframe. The z/VM hypervisor pools, emulates and distributes system resources so that SUSE Linux Enterprise Server for System z virtual machines may share the same resources.

System z server operating systems such as z/VM and z/OS provide sophisticated workload and resource management capabilities that allow a wide variety of workloads to be scheduled and run without intervention. You can move many kinds of workloads onto SUSE Linux Enterprise Server for System z virtual machines. Resources are shared across the virtual machines and the workloads are scheduled by System z workload management software. This is in contrast to standalone Linux and Windows servers that can run only single workloads and provide little resource sharing.

Leverage SUSE Linux Enterprise Server for System z

SUSE Linux Enterprise Server for System z allows you to run Linux applications in a virtualized environment to lower costs and increase compute capacity and flexibility. These advanced technologies enable you to access open source applications, address

As the market share leader in mainframe and virtualization technology, SUSE Linux Enterprise Server for System z ensures that you have access to the largest number of open source and proprietary applications and receive the best support in the industry.

When you choose the SUSE Linux Enterprise Server for System z for server consolidation, you are leveraging the resiliency of System z servers, the power of SUSE Linux Enterprise Server for System z and the hypervisor capabilities of z/VM to create a virtual environment that lowers total cost of ownership, reduces data centre complexity, increases flexibility and reduces downtime.

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infrastructure simplification issues, simplify management and save on software licensing. We deliver these industry-leading benefits using:

- **SUSE Linux Enterprise Server for System z.** *SUSE has tailored this powerful Linux operating system for mainframes by working closely with IBM to include enhancements requested by IBM customers and to ensure that it supports many of the ISV applications. SUSE Linux Enterprise Server for System z contains modifications to seamlessly run on the IBM System z hardware and to work with the z/VM virtualization technology.*
- **SUSE Manager.** *SUSE Manager delivers best-in-class Linux server management capabilities, like automated software management, system provisioning and monitoring. It enables customers to easily manage Linux server deployments across physical, virtual and cloud environments, decreasing total cost of ownership while improving compliance and service quality.*
- **SUSE Studio™.** *SUSE Studio delivers the fastest and easiest way to build, configure and maintain portable and cloud-enabled application stacks, thereby reducing the complexity, maintenance and support costs of software deployments. SUSE Studio Advanced Edition is the only available tool that combines the creation of application images or software appliances for x86 and mainframe environments. SUSE Studio Advanced Edition eases the migration*

between the various IT environments within a data centre.

- **SUSE Linux Enterprise Server Starter System for System z.** *This tool is a pre-built installation server for SUSE Linux Enterprise Server for System z that may be installed on a z/VM system. One of the biggest hurdles in trying out Linux on System z servers is gaining network access to the installation media from System z servers. The Starter System for System z eliminates this hurdle, making it easy for customers who may have little or no Linux or z/VM experience to initiate evaluations of SUSE Linux Enterprise Server for System z. Starter System may be downloaded at no charge at www.novell.com/ partners/ibm/mainframe/starterpack.html. The Starter System for System z is not required to deploy SUSE Linux Enterprise Server for System z.*

Master Today's On-demand Environment

Your business suffers when workloads are not consistently available. A data centre must recover quickly from all downtime, whether planned or unplanned because your business can potentially face losses from tens of thousands of dollars to millions of dollars per hour of downtime. So when you are ready to eliminate downtime, lower costs, increase business agility and simplify complexity, you are ready for SUSE Linux Enterprise Server for System z. For more information visit: www.suse.com/mainframe

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