



# SUSE® Linux Enterprise Server for IBM Z and LinuxONE

IBM Z and LinuxONE systems are known for their high reliability and ability to run various mixes of workloads simultaneously with very little downtime, and have evolved to become the most secure and trusted hardware platforms on the planet. Linux and open source software has rejuvenated the hardware as a viable consolidation platform that both saves on licensing costs and enables technologies such as virtualization, cloud, containerization and cryptography that are vital to survive in today's economy.

## System Requirements

- **Hardware:**
    - + IBM zEnterprise EC12 (zEC12) (2827)
    - + BM zEnterprise BC12 (zBC12) (2828)
    - + BM z13 (2964)
    - + IBM z13s (2965)
    - + IBM LinuxONE Emperor (2964)
    - + IBM LinuxONE Rockhopper (2965)
    - + IBM z14 (3906)
    - + IBM z14 ZR1 (3907)
    - + IBM z15 (T01 - T02)
    - + IBM LinuxONE Emperor II (3906)
    - + IBM LinuxONE III (LT2)
    - + IBM LinuxONE Rockhopper II (3907)
  - **Network Connection:**
    - + OSA Express Ethernet (including Fast and Gigabit Ethernet)
    - + HiperSockets or Guest LAN
    - + 10 GBE\_vSwitch
    - + RoCE (RDMA over Converged Ethernet)
- The following interfaces are still included, but are no longer supported:
- + CTC (or virtual CTC)
  - + IP network interface for IUCV
  - + ESCON
- **Disk Space:**
  - + 1.5 GB minimum for text mode installation
  - + 2.5 GB for minimal system installation
  - + 3 GB for GNOME desktop installation
  - + 4 GB for all patterns
  - + 10 GB recommended minimum (no Btrfs snapshots)
  - + 16 GB required minimum (with Btrfs snapshots)
  - + 32 GB recommended minimum (with Btrfs snapshots)
- **Memory:**
  - + 1 GB for installation under z/VM or KVM
  - + 1 GB for installation under LPAR

## Product Overview

SUSE Linux Enterprise Server for IBM Z and LinuxONE is an enterprise-class, highly reliable, scalable and secure open source server operating system, optimized for optimized for the IBM s390 architecture and the complete range of IBM Z and LinuxONE systems, and built to power physical, virtual and cloud-based missioncritical workloads.

Businesses have trusted their mission-critical applications to SUSE Linux Enterprise Server for IBM Z and LinuxONE. As your workloads increase, turn to the operating system that's better optimized for the mainframe and LinuxONE systems than any other Linux OS—increasing uptime, reducing operating costs and accelerating innovation. The operating system provides state-of-the-art hardware exploitation of IBM Z and LinuxONE processors— for a much faster Linux system with enhanced

compiler and toolchain to help boost your application performance.

More businesses choose SUSE Linux Enterprise Server for IBM Z and LinuxONE than any other Linux for running workloads on IBM mainframes. The reasons are engineering excellence and long-term business expertise that accelerate innovation. SLES is optimized for IBM mainframes like no other Linux operating system, ensuring you benefit from continuous improvement and innovation. Our longstanding development jointly with IBM means you can confidently rely not only on our business expertise, but also on true engineering excellence.

## Key Benefits

SUSE Linux Enterprise Server for IBM Z and LinuxONE comes with many new technologies and features that help you achieve greater ROI, uptime and performance:

For detailed product specifications and system requirements, visit: [www.suse.com/products/systemz/technical-information/documentation/](http://www.suse.com/products/systemz/technical-information/documentation/)

- **Exploits the latest IBM hardware**, including z15 (T02) and LinuxONE III (LT2)
- **Provides continuous uptime**. With the addition of SUSE Live Patching for IBM Z, you can maintain system compliance and currency without taking the system down.
- **Enables Secure Execution** providing a trusted execution environment designed to protect and isolate critical workloads better than a standard software environment, from both internal and external threats. Secure execution lets you:
  - Scale up to thousands of workloads in full isolation protected from internal and external threats
  - Address the security issue present in other Linux servers of running multiple containers in the same virtual machine
  - Protect the context of containers in heterogeneous workloads without extensive software code change
  - Ensures confidentiality and integrity for sensitive data and workloads on IBM Z in the hybrid multicloud
- **Enables Secure Boot** ensuring that the code launched by the firmware is trusted. The chain of trust is verified from the hardware throughout the whole firmware up into the operating system
- **Enables pervasive encryption** Crypto Card updates for data at rest (encrypting data before being saved on storage) with z14 CEX6S crypto card support and for data in flight (encrypting data before being sent on a network) with kernel services exploiting z14 cryptography hardware
- **Boosts performance** and throughput while increasing uptime and simplifying data center management
- **Lowers total cost** of ownership and accelerates innovation through database consolidation and advanced virtualization
- **Improves operational efficiency** through a common code base that comes with integrated systems management tools unique to SUSE **virtualization**

- **capabilities** to help shrink your data center footprint and simplify maintenance for your IT staff
- **Advanced RAS capabilities** increase reliability and reduce costs, providing extra dimensions of availability

#### Key Benefits

- Performance improvements on the latest IBM Z machines and support for SIMD (Single Instructure, Multiple Data) and SMT (Simultaneous Multithreading)
- Support for the latest cryptographic acceleration for secure-key operations and new hardware assists for fast data encryption
- Virtualization capabilities to boost resource utilization using KVM and/or z/VM
- Advanced high availability Linux services included with every subscription with a clustered file system for Linux on IBM
- Disk mirroring with real-time enhancements for IBM Z improves storage operation and service availability
- Java SDK is included and is an ideal framework for secure server-side web programming
- OFED (OpenFabrics Enterprise Distribution) packages are enabled, used in environments that require highly efficient networks, storage connectivity and parallel computing
- ZYpp provides superior package management and is the fastest update stack available on any enterprise distribution
- YaST® (Yet another Setup Tool) framework offers the most powerful and extensive Linux environment available today for every aspect of installation, configuration and management of your system
- AutoYaST, designed for remote system configuration and mass-deployment
- Centralized advanced system and configuration management as well as security monitoring and Live Patching, as well as many other features can be done with **SUSE Manager** running on SUSE Linux Enterprise Server for IBM Z and LinuxOne