IBM LinuxONE III Model LT2

Highlights

- Designed for cloud native development
- Increase security and privacy with Secure Exection on Linux
- Industry standard 19" frame

We believe your data is yours. We believe the insights you gain from your data are yours to use in the pursuit of your business objectives. We designed the IBM LinuxONE III Model LT2 (LinuxONE III LT2) with this belief at the core.

IBM LinuxONE III LT2 is designed to help enable cloud native development and deployment, achieve encryption everywhere, and provide high availability and resiliency. All of these benefits together help provide the cloud you want with the privacy and security you need. The IBM LinuxONE III LT2 is the newest entry model into the IBM LinuxONE family of servers. It delivers a single-frame, efficient design with a low entry cost that can easily coexist with other platforms in a cloud data center.

Today's business challenges require innovative solutions. Enterprises are adopting open architectures to drive such innovation; however, this innovation comes with risk. Security breaches are becoming more prevalent and increasingly strict regulations are demanding higher standards for businesses to protect client data. In addition, clients expect 24x7 availability while developers demand simplicity and flexibility.

Fortunately IBM LinuxONE III LT2 is designed to help enable cloud native development and deployment, achieve encryption everywhere, and provide high availability and resiliency. All of these benefits together help provide the cloud you want with the privacy and security you need. The IBM LinuxONE III LT2 is the newest entry model into the IBM LinuxONE family of servers. It delivers a single-frame, efficient design with a low entry cost that can easily coexist with other platforms in a cloud data center.

Cloud native development

Transforming digital workloads and shifting to cloud requires rapid development using agile and DevOps principles across the entire application development cycle. Achieving these enterprise shifts requires a security-rich and stable technology infrastructure that performs consistently and seamlessly integrates workloads across organization—even as enterprise assets grow.

IBM compilers and runtimes exploit the latest IBM LinuxONE III LT2 architecture to deliver optimized performance, improved resource use and capabilities for your business applications. Businesses can boost productivity by using the latest language features, compiler innovations and modern frameworks.

IBM's new Cloud Paks, along with Red Hat OpenShift Container Platforms, will assist in modernization and automation to develop, deploy, and manage cloud-native applications. Red Hat OpenShift is an enterprise containers and Kubernetes platform that provides a common environment for cloud-native workloads. IBM Cloud Paks are complete solutions that provide a common, consistent and integrated environment for cloud-native workloads. Cloud Paks run on top of Red Hat's OpenShift Container Platform. In addition, the recently introduced IBM Hyper Protect Virtual Servers are the first customer-managed, IBM LinuxONE and architecture-based virtual servers offered for use in hybrid clouds.

Encryption Everywhere

Secure Execution for LinuxONE is a new capability introduced with the IBM LinuxONE III LT2, available for all models of the LinuxONE III generation. Engineered to help protect against insider and outsider threats in multi-tenanted cloud environments, it ensures users, and even system administrators, are unable to access sensitive data in Linux-based virtual environments. Secure Execution for Linux protects the confidentiality and integrity of data at scale, by isolating data at the virtual machine level, and ensuring that only the people within the organization that have a need-to-know have access to data in the clear.

With adoption of pervasive encryption combined with IBM Data Privacy Passports, the LinuxONE III LT2 protects data in-flight and at rest—even after it leaves the data center. Paired with security-rich execution for Linux, the LinuxONE III LT2 server helps protect the integrity of data from malicious internal or external attacks for multitenant cloud workload deployments. Only the people with a need to know within the organization have access to data in the clear.

Cyber Resiliency

The ability to run GDPS Virtual Appliance requires the use of only a single central processor, allowing your platform to run with an even more robust RAS with minimal impact to power and efficiency.

Whether on premises or in the cloud, IBM LinuxONE III LT2 helps avoid or recover from failures and helps minimize business disruptions. Designed into the server are component reliability, redundancy and features that assist in providing fault avoidance and tolerance. Its resiliency is the ability to adapt to planned or unplanned events while keeping services and operations running continuously.

IBM LinuxONE III LT2

Flexible Compute

IBM LinuxONE III comes in a single 19-inch frame designed with redundant power, cooling and line cords. These factors allow the server to install in virtually any existing data center. By having the same footprint as other data center servers, you gain facility standardization.

- Intelligent power distribution unit (iPDU)

- The frame runs on single or 3-phase power.

- Support for A3 operating class as defined by the American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE)[1].

- A new optional Hardware Management Appliance can be ordered with the IBM LinuxONE III to provide HMC/SE functions within the 19" frame, eliminating the need for a separate HMC outside of the server.

The IBM LinuxONE III LT2 twelve core processor chip leverages the density and efficiency of 14 nm silicon-on-insulator technology. The LinuxONE III LT2 is available with five feature-based sizing options – Max4, Max13, Max21, Max31, and Max65. The LinuxONE III LT2 design incorporates two Central Processor Complex (CPC) drawers for the Max65. This enhances availability by allowing Enhanced Drawer Availability (EDA), a feature previously not available on single frame servers. EDA allows a single CPC drawer in a multi-drawer server, if there is sufficient memory installed, to be removed, serviced and reinstalled without bringing the system down.

The Integrated Accelerator for zEDC provides values for existing and new compression users along with less CPU consumption for compression. Pervasive usage enabled in highly virtualized environments gives all LPARS and virtual machines 100% access. This means no having to choose which Linux guests may use the accelerator and applications for compression.

A LinuxONE server can support various Linux distributions, including Red Hat, SUSE and Ubuntu, or side by side with IBM z/VM environments on a single physical server. The IBM LinuxONE server can run various Linux workloads independently on a single server. As a result, you gain infrastructure benefits from tight colocation of data and applications, fast internal communications and integrated high availability.

Maximize the bottom line

With the challenges of modern workloads that require innovative solutions come the increased cost and risk to meet those demands. The new IBM LinuxONE III LT2 offers new solutions to companies looking for an innovative platform. With integrated accelerators that power pervasive encryption, booted virtualization performance and specialty processors to accelerate Linux workloads, companies can lower their total cost of ownership (TCO) without sacrificing security, ease of development, or availability and resiliency.

LinuxONE provides powerful and flexible Linux environments that work in harmony with your existing workloads. It offers encryption everywhere, high availability and resiliency, and cloud native development to provide modern solutions for your business challenges.

[1]ASHRAE Thermal Guideline Classes for IT Equipment Spaces, 4th Edition, ASHRAE, 2015

Why IBM?

IBM has been committed to Linux since 1999. As you transform your business and differentiate yourself in a trust economy, IBM remains your partner. We have the total expertise—in systems, software, delivery, support and financing—to help you create a secure, open, and intelligent foundation for the future. Our experts can help you configure, design and implement a solution optimized for the needs of your business.

For more information

Detailed System Specifications:

https://www.ibm.com/downloads/cas/MVJVYR6B

Additionally, IBM Global Financing provides numerous payment options to help you acquire the technology you need to grow your business. We provide full lifecycle management of IT products and services, from acquisition to disposition. For more information, visit: ibm.com/financing