IBM LinuxONE III Express

A simplified way to you get started on LinuxONE

Upgradeable and off-the-shelf, IBM LinuxONE III Express hardware starts at $135,000 USD.[1]

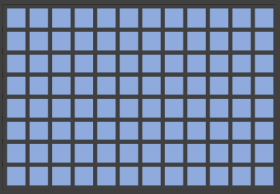
With industry-leading levels of performance, scalability, security and availability, LinuxONE III Express is available in three configuration sizes to meet your workload demands.

- Secure your hybrid cloud
- Designed to deliver real TCO savings
- Capacity to scale as you grow
- Get started with 4, 6 or 12 cores

Learn more about
IBM LinuxONE III Express

Database Consolidation

IBM LinuxONE III Express can lower your software costs by reducing the number of required software licenses compared to x86.

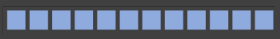


96 cores on x86 servers

- RHEL Linux®
- Database
- 48 database licenses

Assume 0.5 core factor for x86

versus



12 cores on one IBM LinuxONE III Express server

- RHEL Linux
- Database
- 12 database licenses

Assume 1.0 core factor for LinuxONE III Express

Saves 75% fewer licenses[2]
estimated for servers compared
(48 -12) / 48 licenses * 100% = 75%

Total Cost of Ownership

IBM internal tests show that a 12-core IBM LinuxONE III Express server running WebSphere® and Db2® workloads requires **18.7 times fewer cores** than compared x86 servers and delivers a **57% lower TCO** over three years.[3]

Target Use Cases

- Cloud native development
- OpenShift® Container Platform
- Database consolidation
- Digital asset workloads
- Data Privacy Passports

1. This price reflects the base hardware configuration and does not include additional items, maintenance, the operating system or other software. All prices are in USD. Prices shown do not include tax. Price will vary based on country and currency. Discounts available through existing agreements are not eligible.
2. This is an IBM internal study designed to replicate a typical IBM customer workload usage in the marketplace using an IBM LinuxONE III Express with 12 cores, 768 GB memory, z/VM, RHEL, and competitive database versus a comparably tuned x86 configuration with a quarter rack x86 systems with 96 x86 Broadwell cores, using 768 GB memory, RHEL Linux, and competitive database. LinuxONE Express and x86 TPS sizing requirements used in the study were extrapolated from a 48,974 TPS use case test on a LinuxONE III LT1 with 50 cores 2,048 GB memory, z/VM, RHEL, and competitive database and a comparably tuned x86 configuration with a total of sixteen x86 systems, each with 28 x86 Broadwell cores for a total of 448 cores, using 768 GB memory, RHEL Linux, and competitive database executing a materially identical order fulfillment database workload in a controlled laboratory environment and not in an actual customer environment. Results will vary. The test for the database workloads, each running as a guest on z/VM in a logical partition, executed an identical SQL query transaction mix for a total throughput of 48,974 transactions per second. For the x86 configuration, the test measured the same number of database workloads, each running on bare metal and executing an identical SQL query transaction mix at a total throughput of 48,974 transactions per second. LinuxONE III Express TPS extrapolation results were adjusted from LinuxONE III LT1 to LinuxONE Express processor speed, resulting in total throughput of 10,197 transactions per second for the 96 x86 core environment.
3. This is an IBM internal study designed to replicate usage of a typical IBM customer workload in the marketplace. Results may vary. The workloads consisted of a transactional core banking application running on WAS and Db2. Eight instances of the core banking application were run with four instances representing a Dev/Test/QA environment and four instances representing a Production environment. Dev/Test/QA and Production environments were differentiated by their CPU utilization levels ranging from 3% - 20% utilization based on IT Economics client assessment x86 workload data. Average aggregate throughput was within 5% across all instances on both platforms in the internal study. On LinuxONE the banking application ran on RHEL 7.6 in two LPARs with z/VM 7.1, with 4GB and16 GB memory, and 4 virtual CPs. Total number of LinuxONE cores needed to deliver the workloads was 20. To achieve the same workload throughput on x86, the banking application ran on a total of 24 2-processor Sandy Bridge, Haswell, and Broadwell x86 systems, with speeds ranging from 2.4-3.2 GHz with a total of 448 cores. Actual tests were run on a z14 M04/LinuxONE Emperor II, which is rated within 3% of LinuxONE III LT2 Express performance, when configured with 12 cores. Both the x86 and LinuxONE environments had access to the same storage array. Total cost of ownership is defined to include hardware, software, labor, networking, floor space and energy costs over a period of three years. IBM software pricing is based on standard U.S. list prices with a 40% discount. LinuxONE Express, RHEL and z/VM pricing is based on U.S. prices as of May 2021 and x86 hardware pricing is based on IBM analysis of U.S. prices as of April 2021 from IDC. Floor space, networking, energy, labor and other x86 software costs are based on data from IBM IT Economics assessments for clients. For additional information on the TCO model, contact the IBM IT Economics Team at IT.Economics@us.ibm.com.