

IBM ,

- IBM, (LinuxONE)



2022 9 13, – IBM (LinuxONE) . [i]. IBM 4(IBM LinuxONE Emperor 4) . , x86 5 IBM 4 , 75%, 50% (CO2e, ,) 850 [ii].

IBM (IBV) , CEO 48% 2~3 . 51% , , .

(Marcel Mitran), IBM IBM (CTO) “ ” . , “ IBM . IBM ” .

IBM 4 (scale-out-on-scale-up) , IBM (Instana Observability) .

IBM 9 14 , 2023 1 . IBM , IBM 4 2

. IBM , IBM (On-Demand Capacity) ,

IDC (Global Sustainability Research and Practice Lead) (Bjorn Stengal) "CIO" , "IBM" .

IBM DB

(Martin Kennedy) " IT , " , " DB IBM ,

(Pervasive Encryption) , IBM IBM 4

. IBM IBM (IBM Cloud Hyper Protect Virtual Servers) , IBM

IBM 4 , (Red Hat OpenShift) . IBM 4 (Ilmuio), (METACO), DB, NGINX,

(Nth Exception), (Penant), SQ (Sysdig, Inc.) (Temenos) IBM .

(Portable) (Agile) . IT , . IT
(DevSecOps) .

(Philip Barnett) (Temenos) " IBM , , ESG " , "
, " .

- IBM (TCO) (IBM LinuxONE TCO Calculator): IBM [iii]
- 2022 9 15 IBM z (IBM zDay) .
- IBM (Linux ONE Expert Care) . IT .

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[i] Performance result is extrapolated from IBM internal tests running in an IBM LinuxONE Emperor 4 LPAR with 24 dedicated cores, 1536 GB memory and FS9200 storage NGINX pods on Red Hat OpenShift Container Platform (RHOCP) 4.10 running on a RHEL 8.5 KVM host. 64 RHOCP Compute nodes with 230 NGINX pods were running in parallel. The KVM guests with RHOCP Compute nodes were configured with 2 vCPUs and 16 GB memory each. The KVM guests with RHOCP Management nodes were configured with 16 vCPUs and 128 GB memory each. Results may vary.

[ii] Compared 5 IBM Machine Type 3931 Max 125 model consists of three CPC drawers containing 125 configurable cores (CPs, zIIPs, or IFLs) and two I/O drawers to support both network and external storage versus 192 x86 systems with a total of 10364 cores. IBM Machine Type 3931 power consumption was based on inputs to the IBM Machine Type 3931 IBM Power Estimation Tool for a memo configuration. x86 power consumption was based on March 2022 IDC QPI power values for 7 Cascade Lake and 5 Ice Lake server models, with 32 to 112 cores per server. All compared x86 servers were 2 or 4 socket servers. IBM Z and x86 are running 24x7x365 with production and non-production workloads. Savings assumes a Power Usage Effectiveness (PUE) ratio of 1.57 to calculate additional power for data center cooling. PUE is based on [Uptime Institute 2021 Global Data Center Survey](#). CO2e and other equivalencies that are based on the [EPA GHG calculator](#) use U.S. National weighted averages. Results may vary based on client-specific usage and location.

[iii] Disclaimer: This tool provides a high level view of estimated costs and potential savings using publicly available IBM and third party server and pricing information in the United States as well as certain other information in consolidating from an x86 server environment to a LinuxONE environment. For a "Total Cost of Ownership" estimate, this tool considers certain factors involved in a three or five-year total cost of ownership including hardware costs, workload type, IBM and ISV software costs, certain facility costs (space, energy), maintenance charges, server utilization, hypervisors and migration. x86 hardware pricing is based on IBM analysis of U.S. prices as of February 2021 from IDC with a 30% discount. Certain assumptions used in the tool are based on data

from hundreds of client studies performed by IBM and your results will vary depending on your environment and other factors. The information and data used to generate the results in the tool is current as of February 2021. Results will also vary based on the selections you make in using the tool. The output from the tool, including, but not limited to any accompanying summary of potential savings are estimates only and are provided on an 'AS IS' BASIS. Any reliance by you on using the tool and any output is at your sole risk and will not create any liability or obligation for IBM. IN NO EVENT WILL IBM BE LIABLE TO ANY PARTY FOR ANY DIRECT, INDIRECT, SPECIAL OR OTHER CONSEQUENTIAL DAMAGES FOR ANY USE OF THIS TOOL, WEB SITE, OR ON ANY OTHER HYPER LINKED WEB SITE, INCLUDING, WITHOUT LIMITATION, ANY LOST PROFITS, BUSINESS INTERRUPTION, LOSS OF PROGRAMS OR OTHER DATA ON YOUR INFORMATION HANDLING SYSTEM OR OTHERWISE, EVEN IF WE ARE EXPRESSLY ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. This tool is not for use in countries where such comparisons are limited or prohibited by law.

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