

Sharing the LinuxONE Excitement

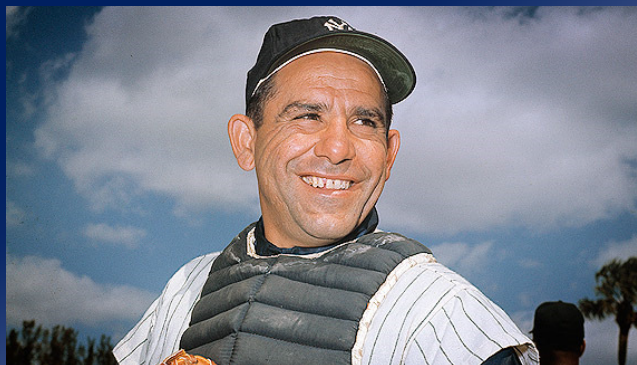
A z/VMer's Perspective

MVMUA | January 12, 2016

Reed A. Mullen (*material from Bill Bitner*)
ramullen@us.ibm.com
z/VM Development Product Planning
January 12, 2016

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The Yogi Version



Questions to Answer

- What is LinuxONE?
- Why should a z/VMer be excited?
- How do I reach out to a non-mainframer?

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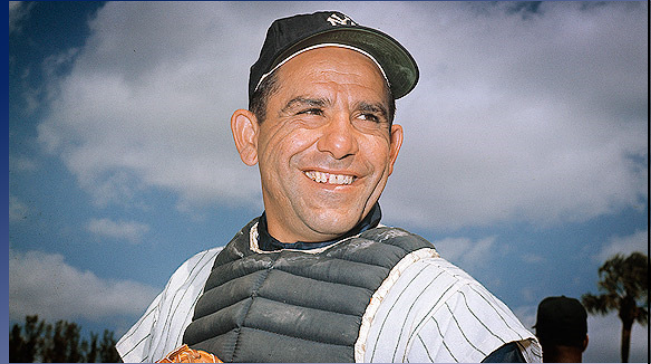
Great demo on LinuxONE from Donna Dillenberger
Search: Donna Dillenberger LinuxONE Demo
<https://www.youtube.com/watch?v=VWBNoIwGEjo>
Watch it! Share it!

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What role does Market Branding play in this?

“All pitchers are liars or crybabies.”



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IBM LinuxONE

Linux
**YOUR
WAY**

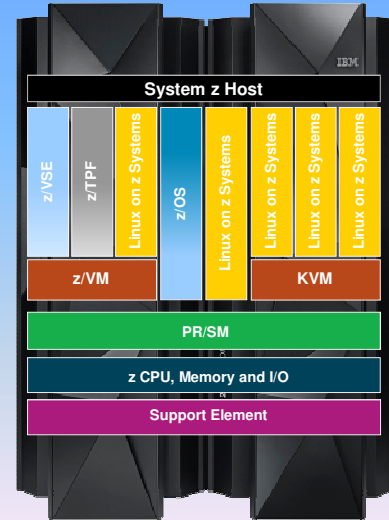
Linux
**WITHOUT
LIMITS**

Linux
**WITHOUT
RISK**

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KVM for IBM z Systems

- Announced: August 17, 2015
- General Availability: September 18, 2015
- An additional hypervisor for z Systems, joining z/VM and PR/SM
- Meant for customers with rich KVM skills on other platforms who want to leverage z Systems hardware and infrastructure.
- Not meant as a replacement for z/VM
- KVM for IBM z Systems V1.1.0
 - Product ID: 5648-KVM
 - Licensed but no OTC
 - S&S fee based



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KVM for IBM z Systems Requirements

KVM for IBM z v1.1.0 Pre-reqs	
Servers	IBM z13™ IBM zEnterprise® zEC12 IBM zEnterprise zBC12 IBM LinuxONE Rockhopper™ IBM LinuxONE Emperor™
Operating systems supported	SUSE Linux Enterprise Server (SLES 12 SP1)
Networking features supported	IBM OSA-Express5S IBM OSA-Express4S IBM OSA-Express3S (zEC12 and zBC12 only) -- OSA-Express3S in KVM for IBM z does not support using VLANs or flat networks together with OpenvSwitch
Storage devices are supported	ECKD™ DASD: <ul style="list-style-type: none"> • DS8000® (FICON®-attached) FCP SCSI disks: <ul style="list-style-type: none"> • XIV® • Storwize® V7000 • FlashSystems™ • SAN Volume Controller • DS8000 (FCP-attached)

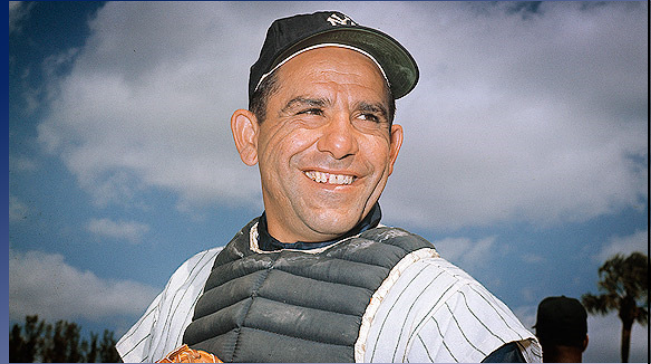
Note: Refer to the KVM for IBM z Systems: Planning and Installation Guide (SC27-8236) for the most current information.

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Is z/VM going away?

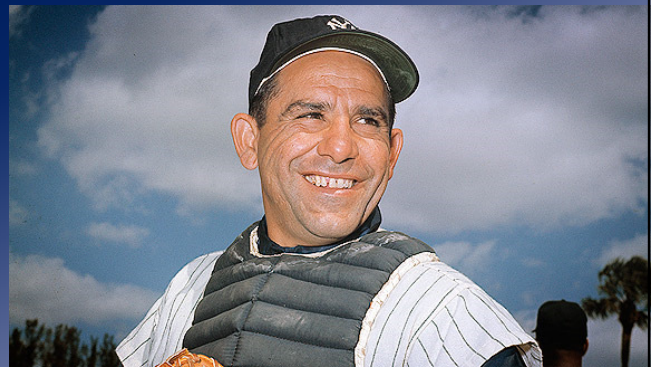
*“It ain’t over till
it’s over.”*



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Should I use z/VM or KVM for IBM z Systems?

*“If you come to a
fork in the road,
take it.”*

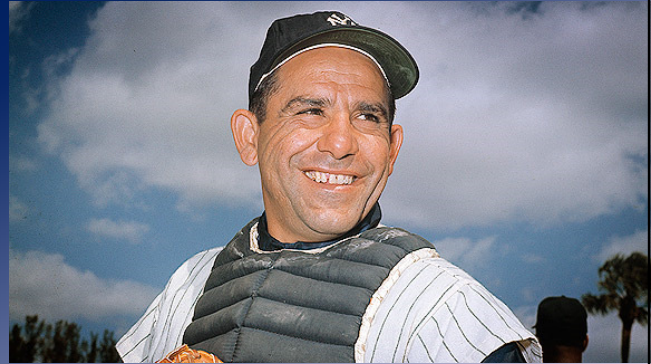


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Are there differences between z/VM and KVM?

*“In theory, there is no
difference between
theory and practice.
In practice, there is.”*

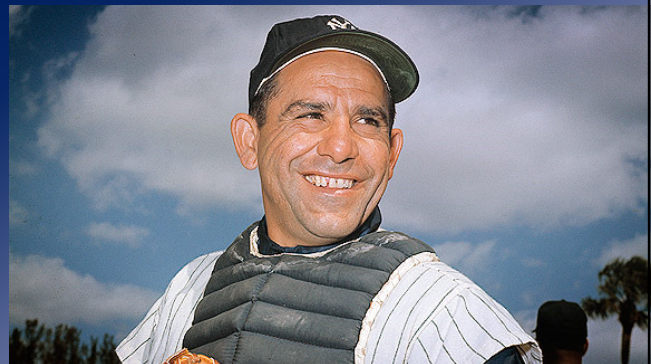
More likely quoted by: Jan L. A. van de Snepscheut



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How is the choice between z/VM and KVM like
the choice between LPAR and z/VM?

*“It’s déjà vu all over
again.”*



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LINUX YOUR WAY

Distributions	Hypervisors	Languages	Runtimes	Management	Database	Analytics
 Supported by Canonical  	 	         	     	       	      	   

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LINUX WITHOUT LIMITS




Scale Out

8,000 Virtual servers and thousands of containers



Scale Up

Largest single instance database with single digit millisecond response time



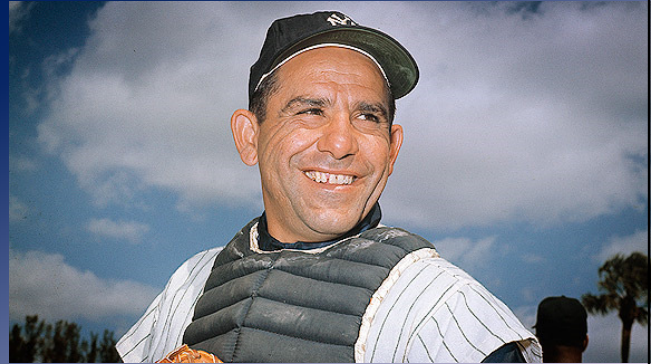
Built for Speed

2x better performance for open SQL/NoSQL databases

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Can a LinuxONE server really run 8000 servers?

“Take it with a grin of salt.”



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LINUX WITHOUT RISK



Unmatched Security

28x improved performance
over standard secure-key
technology



Highest Availability



Designed to provide
100% uptime for decades

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IBM LinuxONE Portfolio

IBM LinuxONE Emperor

IBM LinuxONE Rockhopper

Positioning	<i>Ultimate flexibility, scalability, performance and trust for business-critical Linux applications. With a huge capacity range you can grow with virtually limitless scale to handle the most demanding workloads in a single system</i>	<i>An entry point into the LinuxONE Systems family offering all the same great capabilities, innovation and value of LinuxONE with the flexibility of a smaller package</i>
Hardware	SMT, large memory, more cores, more I/O, enhanced crypto performance, more Logical Partitions, zAware	Better environmentals, lower cost, less memory, fewer cores, no SMT
Cores	6 to 141 LinuxONE Cores (up to 10 TB)	2 to 13 LinuxONE Cores
Hypervisor	z/VM and/or KVM for IBM z	

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NEW IBM LinuxONE ELASTIC PRICING



All IBM
Linux Software

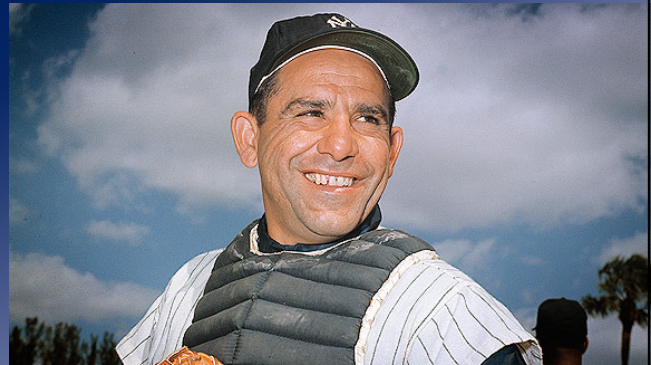


LinuxONE HW with
no up front payment

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How exactly will this change the cloud world?

*“It’s tough to make
predictions,
especially about the
future.”*





OPEN MAINFRAME PROJECT



IBM MARIST

ADP bmc ca technologies

East Carolina University of Georgia

Hitachi Data Systems SUSE

DATA IN FOCUS Compuware AT&T L3C

RSM PARTNERS SPECIALISTS

VICOM infinity

LinuxONE™

- ◆ Bring together under a formal structure, an open source, technical community with a mutual interest in advancing the surrounding ecosystem and adoption of Linux on the mainframe as an enterprise-grade platform
- ◆ Open collaboration across academic, government and corporate partners to advance z Systems as an enterprise-grade platform for Linux.
- ◆ Design and develop shared technology elements
- ◆ Provide development and test resources through a collaboration hub that lowers barriers to joint development activities
- ◆ Provide access to free education and information
- ◆ Improve the experience of users of the mainframe platform when running Linux

Open Access

IBM LinuxONE COMMUNITY CLOUD



ISV



Developers
Students



Clients

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What Else?



Bounties for OpenSource Solutions
www.bountysource.com/teams/ibm/bounties



VMware vRealize interaction with IBM z Systems

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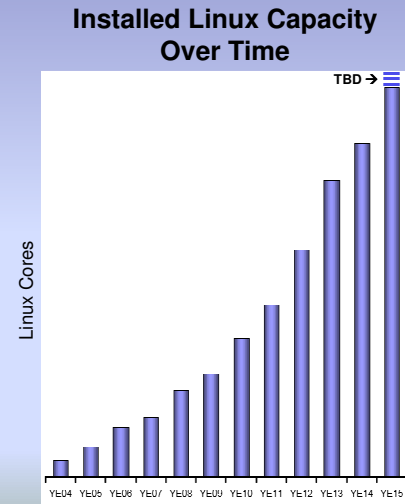
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z/VM Investment Continues

- Innovative enhancements rolling out almost quarterly
- Continued growth in usage
- 28% of z MIPS are Linux
- 81% of the top 100 customers are running Linux on the mainframe*

* Top 100 based on total installed MIPS



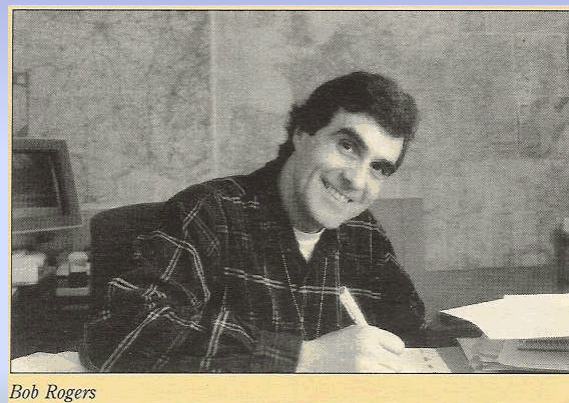
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z/VM Personnel Investment

- Hiring both experienced and university grads

Meet one of the rookies.



Bob Rogers

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Why Bit and Reed are Excited!!

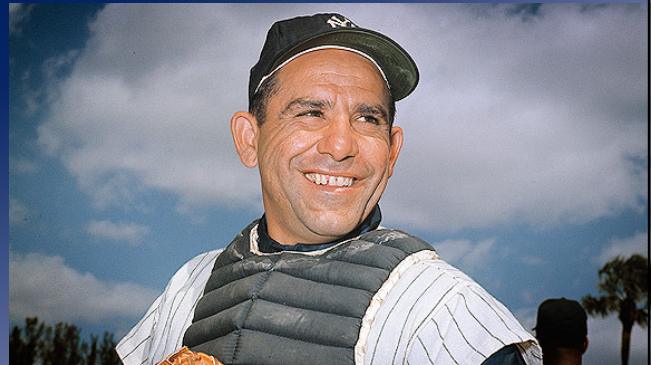
- What's good for the platform is good for z/VM
- IBM thinking outside the box
- People who didn't want to talk about the mainframe want to talk about LinuxONE

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How will Reed explain these charts to IBM Marketing?

"I never said most of the things I said."



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The image features a 3D rendering of an IBM LinuxONE server rack, composed of several dark grey vertical units with a prominent orange vertical stripe on the right side. The server is set against a background of soft, out-of-focus bokeh lights in shades of purple, blue, and yellow, with faint hexagonal patterns overlaid.



The logo consists of a stylized 'L' shape formed by two overlapping geometric shapes: a grey one on top and an orange one on the bottom, with a blue circle in the center.

IBM LinuxONE

Unleash the full
potential of Linux

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