

ORACLE

Virtualization with Oracle Linux KVM

Managed by OLVM

Name

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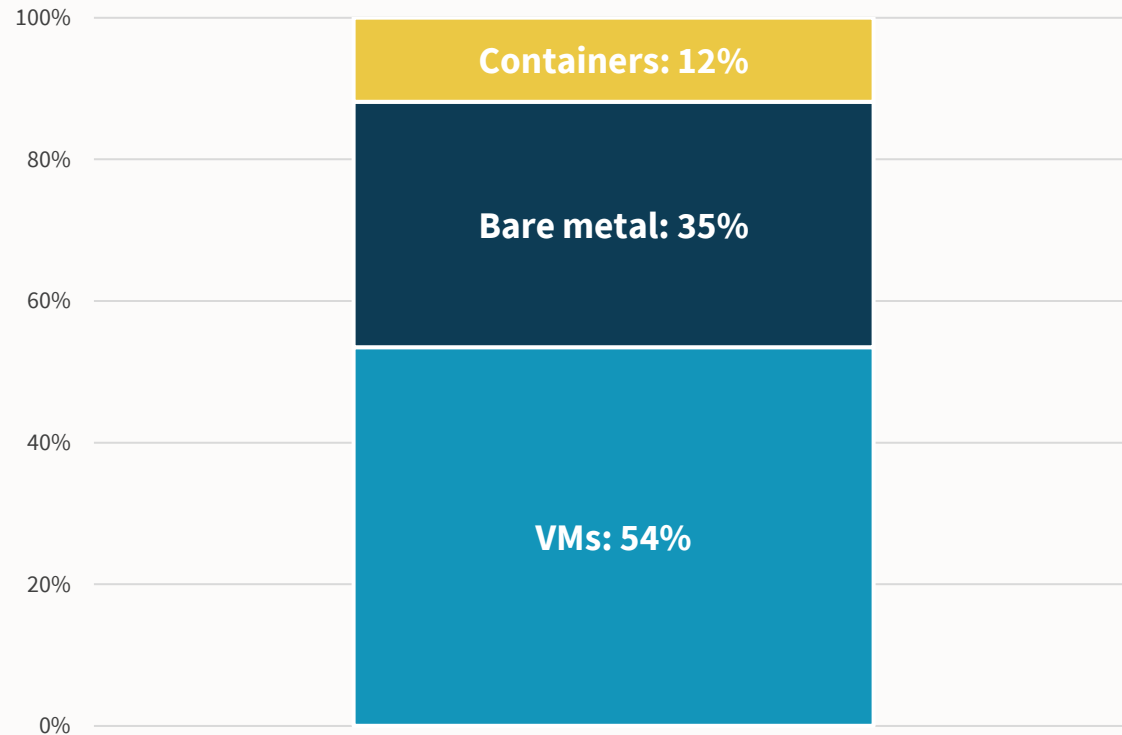
Oracle Linux & Virtualization – EMEA / DACH

May 24th, 2022

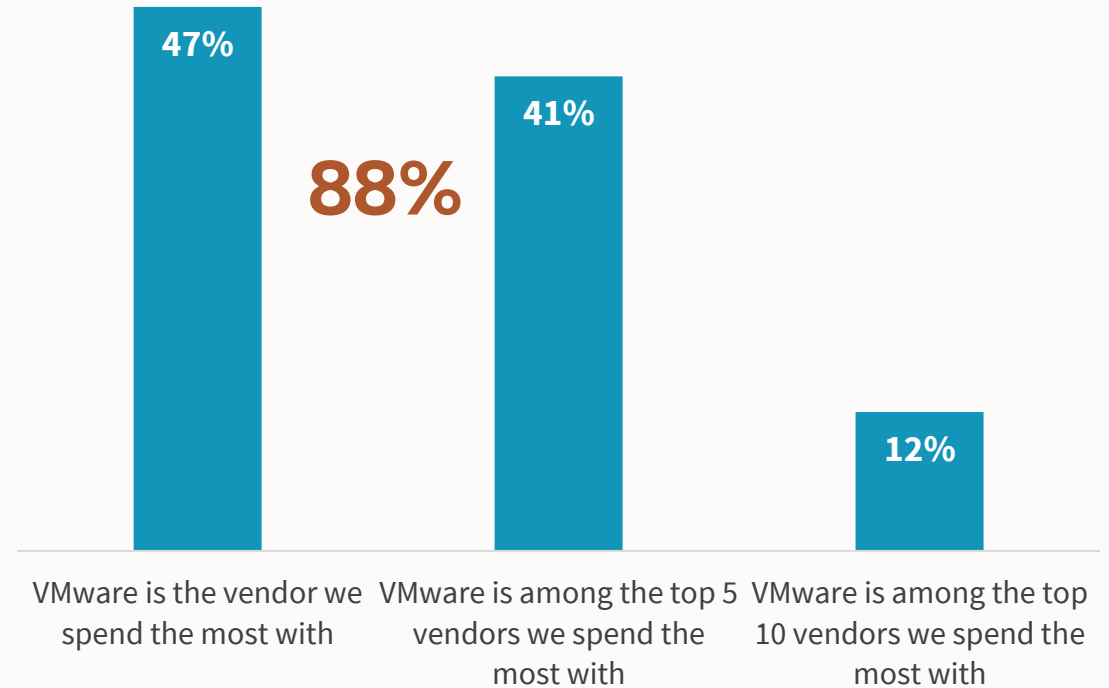


Virtualization adoption is growing and so are the costs

VMs are the primary platform for Linux-based workloads*



VMware users rank it as top-5 vendor they spend most with*



KVM - An open source alternative

Ubiquitous in the cloud

- Kernel-based Virtual Machine (KVM)
- Virtualization module in the Linux kernel
- Performance advantages
 - Lower overhead
 - Runs applications faster than any other hypervisor
 - Takes much less time to start a virtual server
- Significant scalability advantages
- Hypervisor of choice for public clouds



See also: <https://www.oracle.com/a/ocom/docs/why-kvm-is-winning.pdf>

OLVM - An alternative to expensive VMware vSphere

Designed for hybrid cloud



- Oracle Linux KVM (Host(s))
 - KVM hypervisor included in Oracle Linux
 - Hypervisor of choice at Oracle
- Oracle Linux Virtualization Manager (Management)
 - Based on open source oVirt project
 - Enterprise solution, integrated, tested and supported by Oracle
 - Supports latest features
- Oracle VirtIO drivers for Microsoft Windows

ORACLE
Linux
KVM

ORACLE
Linux
Virtualization Manager





Why Oracle Virtualization?

All the modern technology benefits of KVM and oVirt

- + No licensing costs
- + Support included with Oracle Linux Premier Support
- + Increases security and uptime with Oracle Ksplice
- + Lowers costs with hard partitioning for Oracle products
- + Provides rapid application deployment with templates for full software stack
- + Certified for Oracle software
- + Designed for hybrid cloud
- + Single pane of glass management with Oracle Enterprise Manager integration
- + No vendor lock-in

Security updates with no down time - Ksplice

Maximizing virtualization with reduced risk

- **Rapidly patch security vulnerabilities with no downtime**
 - Kernels and hypervisors including KVM and QEMU
 - Critical user space packages (glibc and openssl)
- **Known Exploit Detection**
 - As CVEs are patched, Ksplice adds 'tripwires' for privilege escalation vulnerabilities to code that fire when erroneous conditions trigger
- **Enforce security standards by keeping critical systems patched with latest errata without impact to production workloads**

“Ksplice reduces our time and cost for patching significantly. As we patch our systems with zero downtime, we don’t need to align with customers and test system availability.”

Manfred Konrad
Software Developer
Kristl, Seibt & Co GmbH

ORACLE
Ksplice



Hard partitioning lowers costs

Oracle software licensing recognizes hard partitioning

Example: Server with 32 cores

0	1	2	3	4	5	6	7
Oracle DB EE VM Guest License for only 6 cores							
8	9	10	11	12	13	14	15
Licensing cost reduced from 32 to 14 cores total							
16	17	18	19	20	21	22	23
24	25	26	27	28	29	30	31
Oracle DB EE VM Guest 2 Licensed for only 8 cores							

- With Oracle Linux KVM, virtual machines can be pinned/hard partitioned to specific physical cores on a server.
- Each Oracle Database EE VM Guest only needs to be licensed for the number of physical cores it is pinned to.

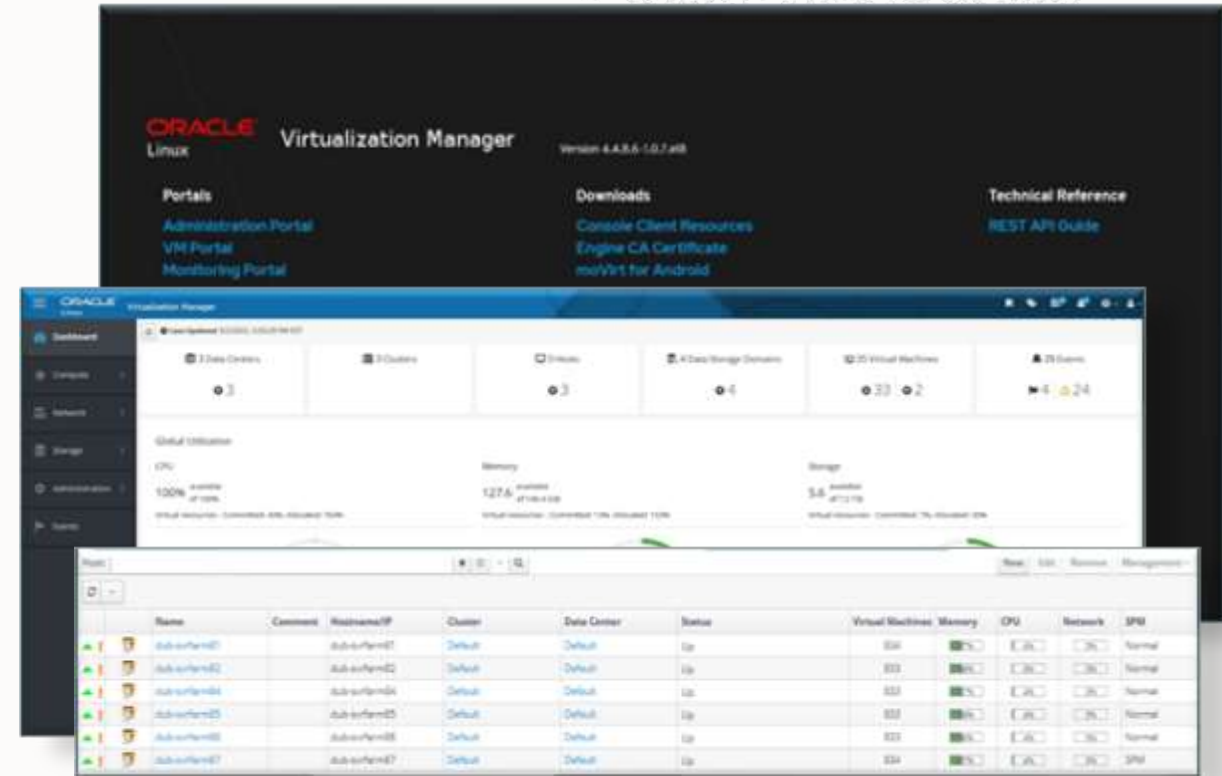
“We saw several advantages with Oracle Virtualization, specifically the licensing savings that came with pinning CPUs to specific VMs. We saw savings of 75% coming from physical servers to virtualization.”

Shane Tucker
Senior Linux Administrator
Pella Corporation

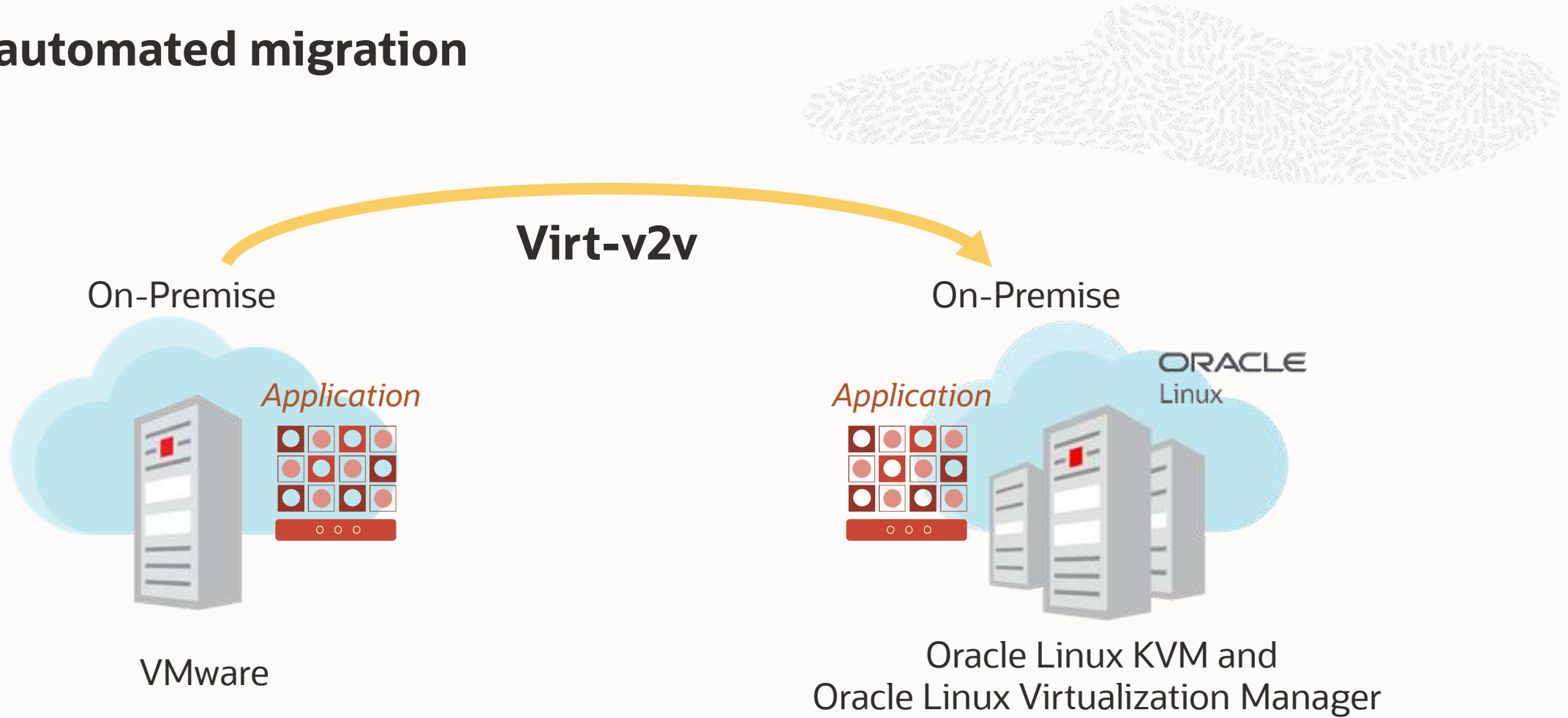
Oracle Linux Virtualization Manager

Advanced management with zero licensing cost

- Easily deployed to configure, monitor, and manage an Oracle Linux KVM environment with enterprise-grade performance and support from Oracle
- Built from the open source oVirt project
- Comprehensive guest OS support
 - Oracle Linux
 - RHEL
 - CentOS
 - Ubuntu
 - SUSE
 - Solaris
 - Windows



Easy automated migration



Migration tool Virt-v2v is integrated with Oracle Linux Virtualization Manager
Automates the direct migration from VMware to Oracle Linux KVM



Feature comparison with VMware vSphere

Components	Oracle	VMware vSphere
Hypervisor	open source KVM	Proprietary – ESXi
Manager	Open source oVirt based	Proprietary - vCenter
Live patching of hypervisor	Yes - Ksplice	No
Public cloud foundation	Yes - OCI	No
Engineered System foundation	Yes - Exadata	No
Backup Solution	Partner Integration	Partner Integration
Networking Solution	Partner Integration	Yes - NSX
Enterprise Support	Yes	Yes
Pricing	\$	\$\$\$\$\$

oVirt and KVM managed by Orcharhino



orcharhino

- ▶ can control oVirt clusters
- ▶ is compatible to oVirt API v4

With ovirt and orcharhino you

- ▶ can deploy KVM hosts within minutes
- ▶ provision all tested distributions – rpm- or deb-based

Orcharhino and oVirt Instances



Compute Resources > ovirt-compute-ressource

Associate VMs Edit Create Image

Compute Resource Virtual Machines Images Compute profiles

Filter...

Name	CPUs	Memory	Power	Actions
alvin-dolese.em.atix	2	4 GB	Off	Power On
HostedEngine	5	23.8 GB	On	Power Off
joey-inagaki.coco.yt	4	6 GB	Off	Power On
jossie-danesh.coco.yt	4	6 GB	Off	Power On

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Q & A

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