Competing with VMware for Linux workloads

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Agenda

- What is VMware?
- Why are they so successful?
- How does VMware position their solutions?
- What is the buying criteria?
- How can z/VM more effectively compete?

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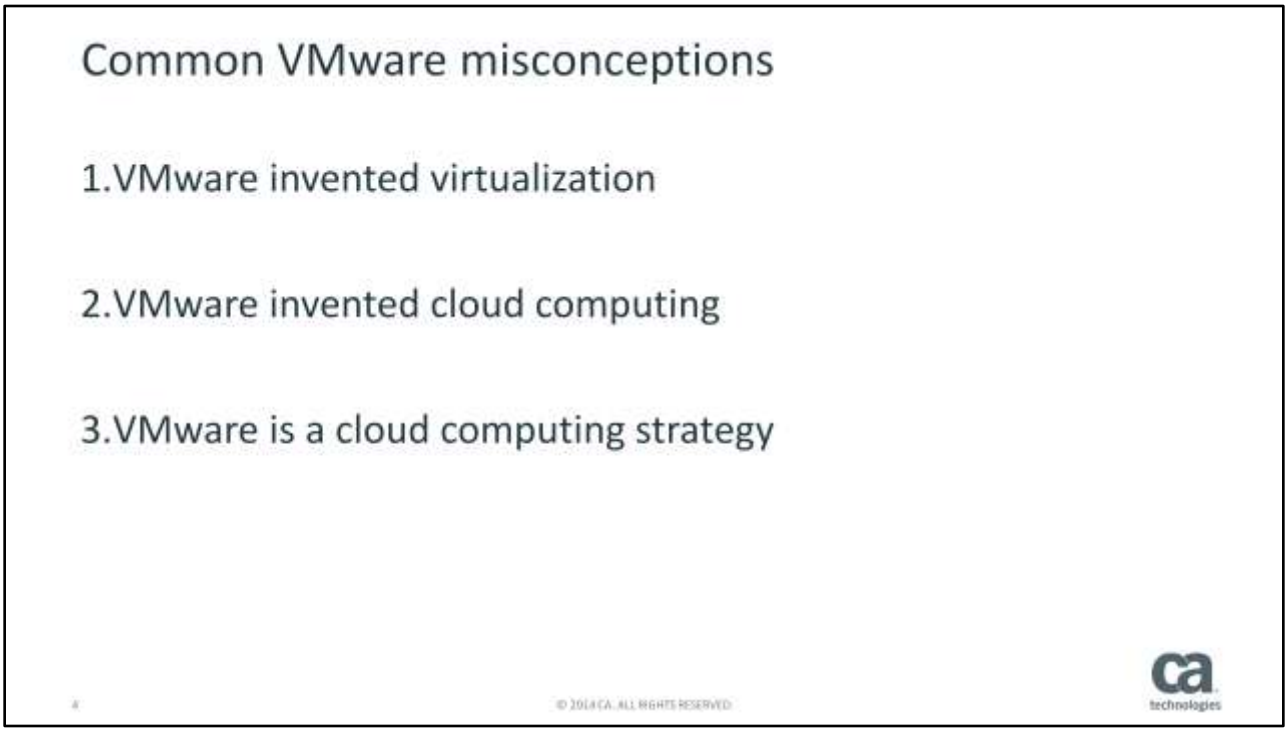

1. VMware is part technology and part sales and marketing genius. As a result of their marketing efforts many people in IT (especially the newer generations) believe that VMware invented virtualization.
2. VMware does not recognize z/VM as a real competitor. They do not reference z/VM in literature or in their sales training, etc.
3. Obviously, z/VM is the original and most powerful hypervisor in the world.

4. “Cloud” in its modern incarnation, is a formalization of compute models that have existed well before VMware. Again, marketing genius…
5. The Mainframe has championed many aspects of cloud (or utility) computing for most of its history, poor marketing by mainframe community to date…

6. Similar to “no one gets fired by buying Oracle”, there are IT leaders who basically equate buying the VMware stack with having a cloud strategy. A product is not a strategy.
7. A cloud computing strategy spans platforms, both inside and outside of a companies data center. System z must become a core participant in an enterprise’s cloud strategy.

What is VMware?

Image: VMware

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vCloud Suite provides all components for building and running a private cloud infrastructure, based on VMware vSphere, that leverages the software-defined data center architecture.

This architectural approach delivers virtualized infrastructure services (compute, network, security and availability) with built-in intelligence to automate the on-demand provisioning, placement, configuration and control of applications based on defined policies.

vCloud Suite 5.5 is composed of the following integrated products:

- **VMware vSphere**: Compute virtualization platform with policy-based automation
- **VMware® vCenter™ Operations Management Suite™**: Integrated, proactive performance, capacity, and configuration management for dynamic cloud environments.
- **VMware vCloud Director®:** Virtualized data centers with multi-tenancy and public cloud extensibility “
- **VMware® vCenter™ Site Recovery Manager™**: Automated disaster recovery planning, testing, and execution
- **VMware vCloud® Networking and Security™**: Networking and security with ecosystem integration for a virtualized compute environment
- **VMware vCloud® Automation Center™**: Self-service and policy-enabled cloud service provisioning

Source: https://www.vmware.com/files/pdf/products/vCloud/VMware-vCloud-Suite-Datasheet.pdf

So what does VMware do?

Simply put…

- vSphere – combines the ESX x86 hypervisor with a variety of management utilities and interfaces for admins

- vCenter – wraps vSphere with a layer of APIs and operationally focused UI (dashboards, reports, configuration, monitoring)
  - Allows for policy-based automation
  - Useful for DC operators and managers to manage server environment

- vCloud – wraps vCenter in a layer of APIs, and presents all virtualized infrastructure and services in catalog form.
  - Main construct is Virtual Data Center (vDC) – vDCs are templated IT services that can be cloned, moved, ordered, etc.
  - vCloud bridges on-premise and MSP data centers, allows for workload portability between the two.

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What is the VMware ESX?

- Linux based hypervisor
  - Intel arch based
- Multiple management options
- Part of larger package

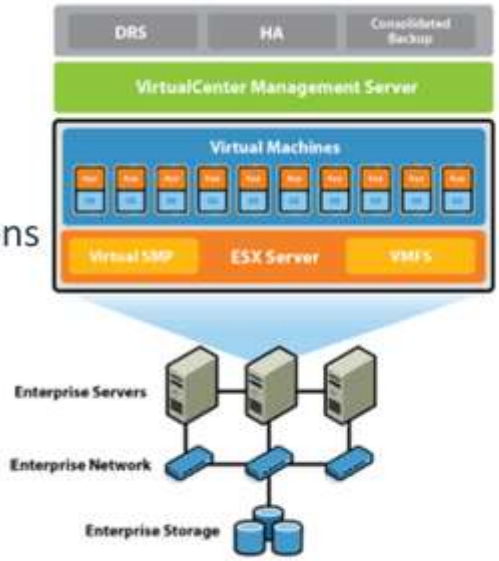

Image: VMware

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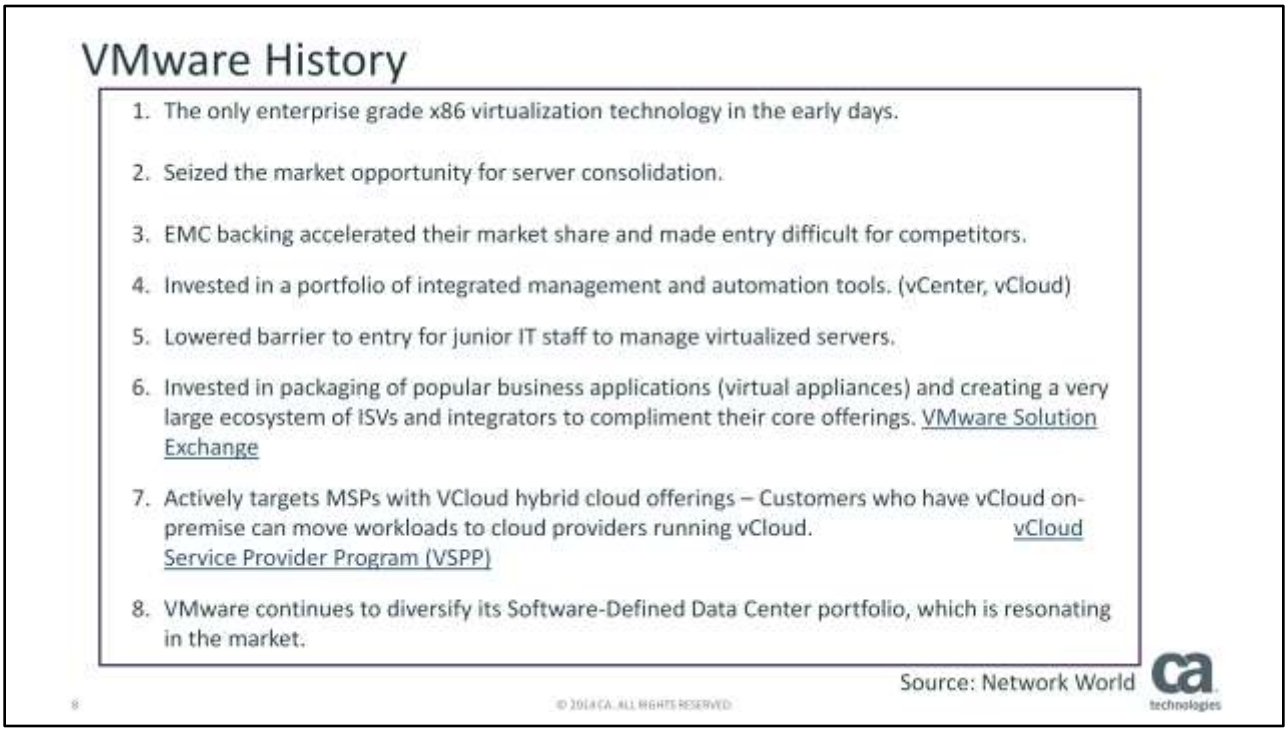
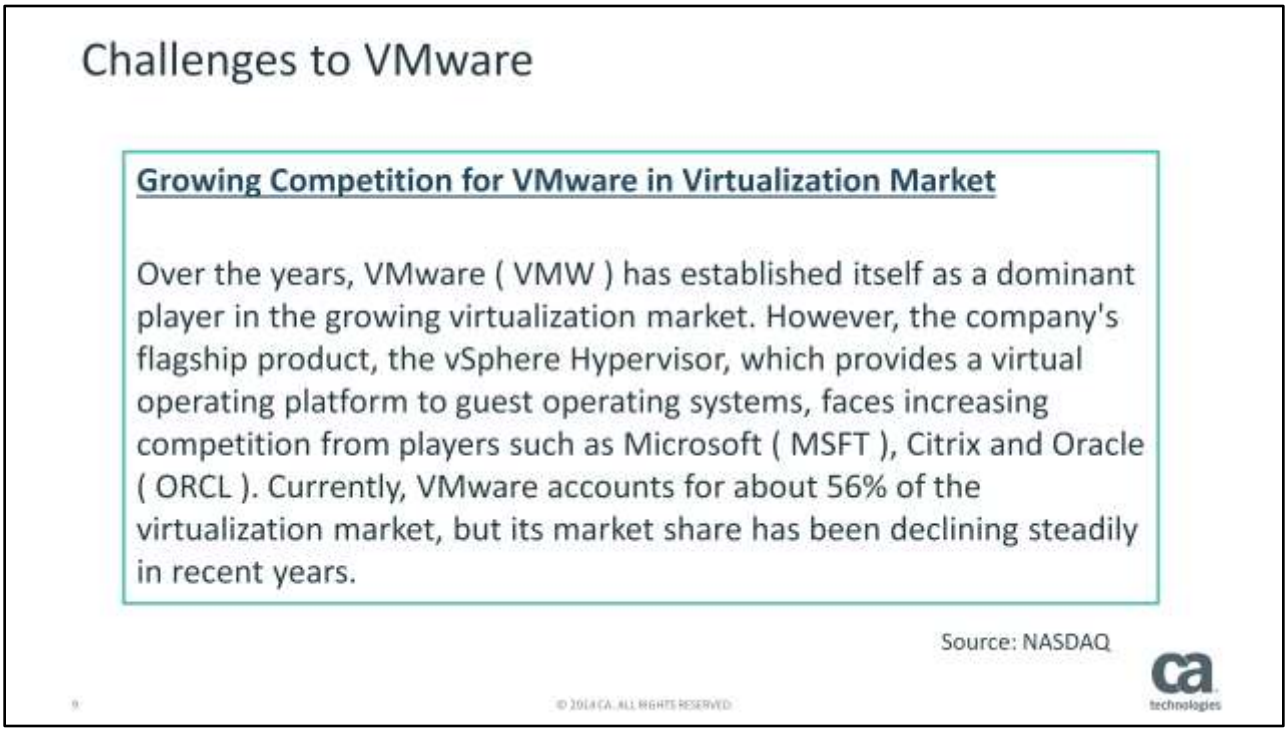
- ESX ("Elastic Sky X") is a Linux based hypervisor (variant of Red Hat Linux), that emulates the Intel architecture for guest machines created on top of ESX host.
  - Intel architecture was not originally designed for virtualization, which results in higher CPU overhead than z/VM.
  - ESX hypervisor can be managed by CLI, web UI and remote console with a familiar interaction model / language to Linux folks.
  - ESXi is a compact version of ESX, available as free download
  - Both ESX and ESXi can host Linux and Windows guests
- ESX is not typically purchased on it's own, but as part of a vCenter license, that includes vSphere (the management layer wrapped around ESX)

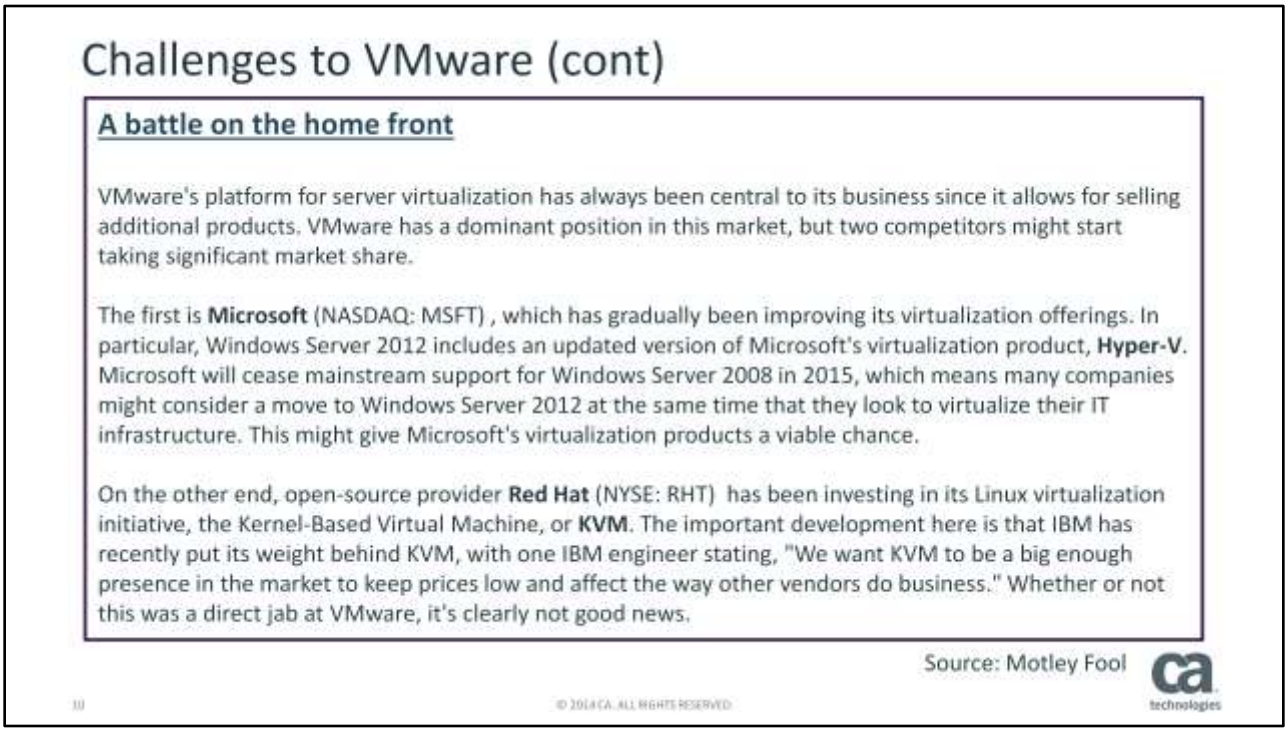
Source: http://en.wikipedia.org/wiki/VMware_ESX



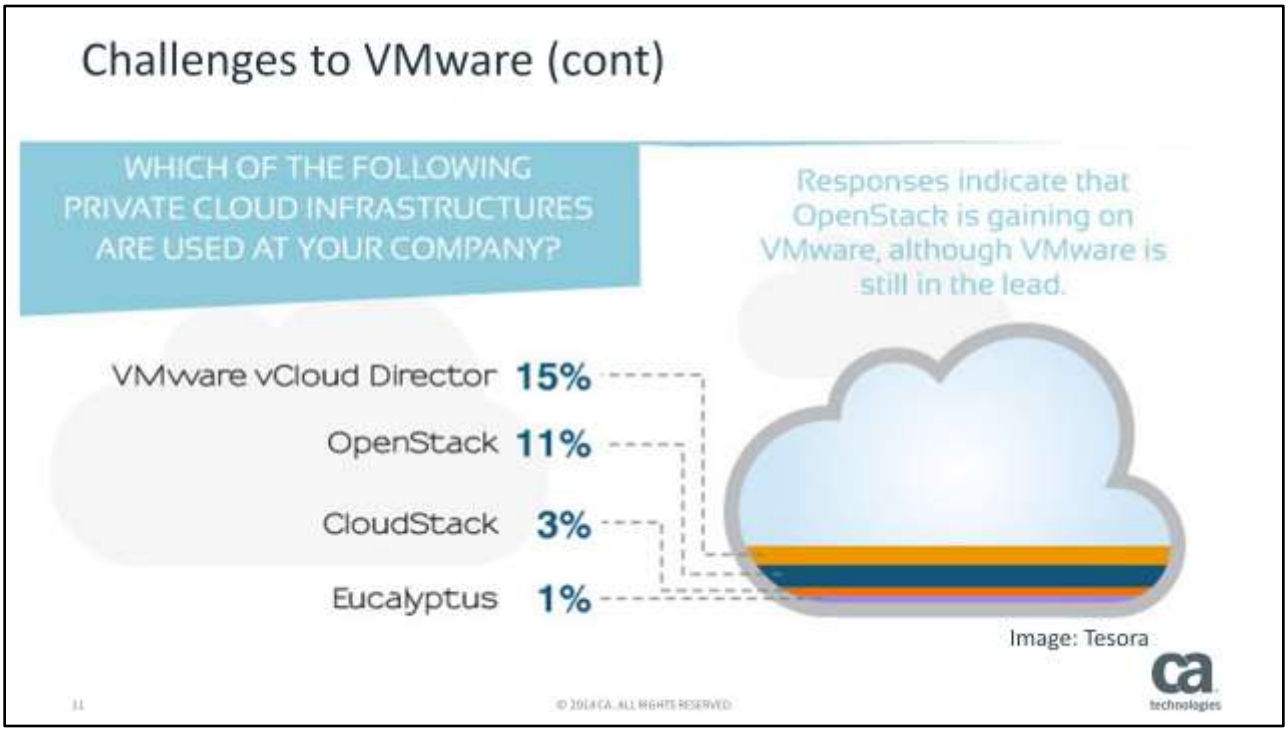
Source: http://www.networkworld.com/article/2222838/virtualization/vmware-success-relies-on-diversification.html
Source: http://en.wikipedia.org/wiki/VMware



Source: http://www.nasdaq.com/article/growing-competition-for-vmware-in-virtualization-market-cm316783



Source: http://www.fool.com/investing/general/2014/04/07/who-can-stop-vmware.aspx



Tesora commissioned a survey of North American developer communities to better understand the database choices they are making, and their preferences and expectations going forward. The survey had more 500 respondents, with 40% from organizations with more than 1,000 employees.

Source: http://www.tesora.com/resources/infographic

vCenter – examples of systems admin user experience

Image: Virtualization Impact

- Effective use of dashboards to help operations visualize anomalies. They have a robust policy engine, so sysprogs can configure the alerting that drives the displays

Source: http://www.virtualizationimpact.com/?cat=75

vCenter – examples of systems admin user experience

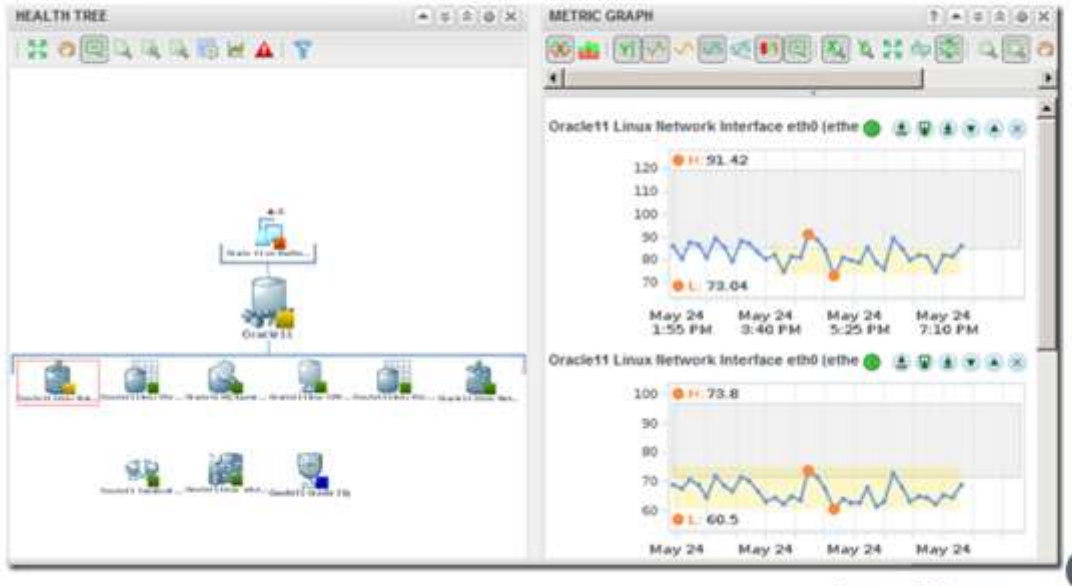


Image: VMware

- A specific screen monitoring health and network performance of an Oracle Linux guest.

Source: http://blogs.vmware.com/management/2013/06/now-available-vcenter-operations-management-5-7-1-with-hyperic-5-7-2.html

vCenter – examples of systems admin user experience

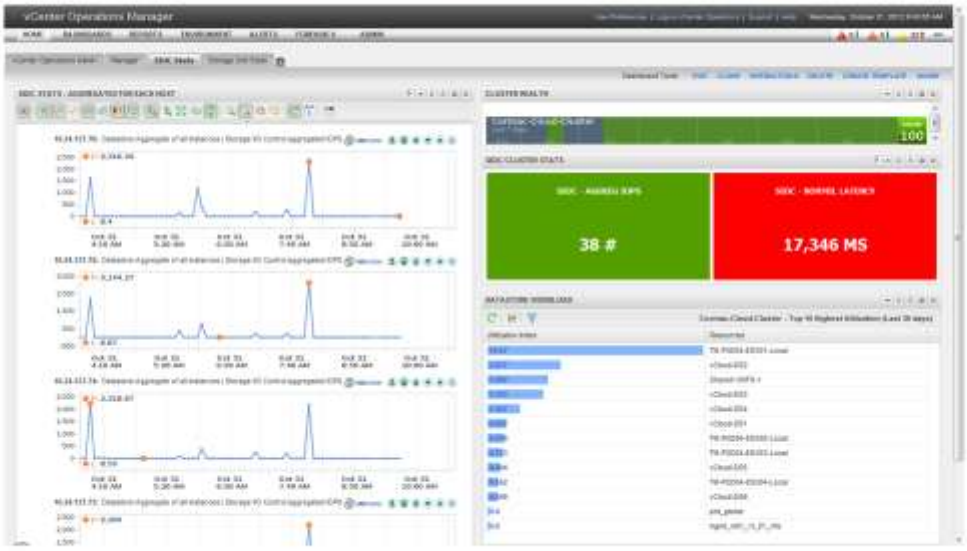


Image: Blog of Cormac Hogan

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Source: http://cormachogan.com/2012/11/06/vcenter-operations-manager-caught-out-by-new-sew-solution-licensing-step/

Hypervisor Selection Criteria

Criteria 1:

- Performance
- Hardware Compatibility
- Ease of use/management
- Reliability
- Scalability
- Costs

Are these technical or business?

Source: KEMP Technologies

Criteria 2:

- Configuration granularity
- Performance
- Scalability
- Integration with Mgmt Tools

Source: Burton Group

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Business Buying Criteria

- Costs
  - Energy Savings
  - Operational Cost
- Politics
  - Relationships
  - Market Leadership
  - Knowledge (or lack thereof)

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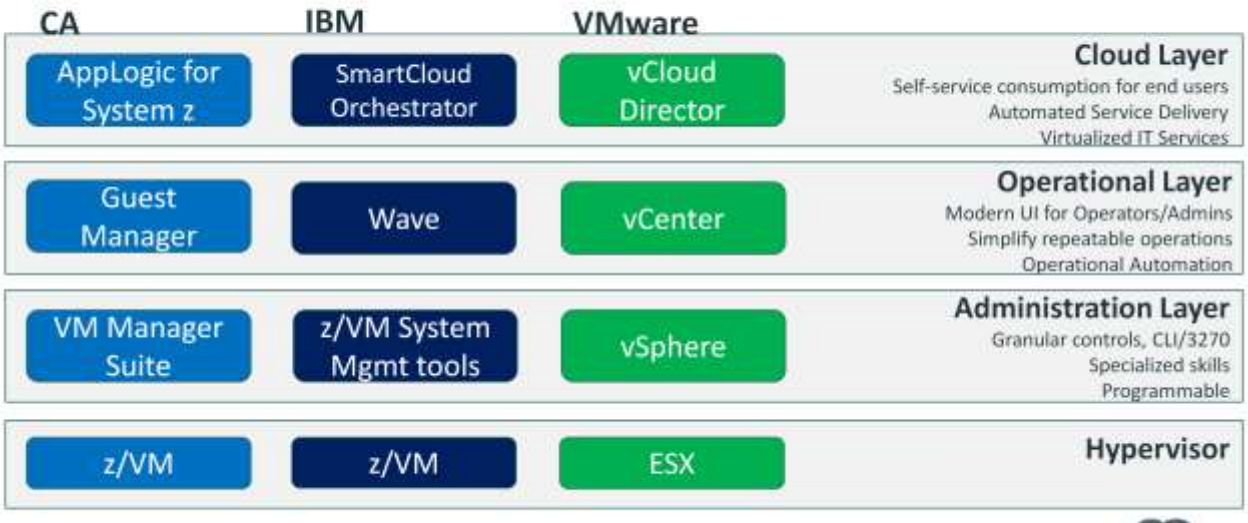
Competing with VMware for Linux Workloads



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How do we effectively compete?

- Identify z executive sponsor?
- Drive Linux on z with the same tools as on x?
- Prepare business case?
  - Performance?
  - Identify suitable workloads?
  - Applicable cost savings?
- What worked for you? What didn't?

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Further Discussion / Questions

Image: freeimages

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Resources For Your Edification

- The Mainframe and Virtualization
- A Comparison of Management of Virtual Machines with z/VM and ESX Server
- Be Our Guest
- Wikipedia - VMware
- Wikipedia - VMware ESX
- Wikipedia - Comparison of Virtualization Platforms
- Motley Fool - VMware Competition
- https://dancingdinosaur.wordpress.com/tag/zvm/
- VMware's Success Relies on Diversification
- Virtualization 101 - Everything you need to know to get started with VMware
- LinkedIn Conversation - zLinux vs x86 Costs
- VMware vCloud Suite Datasheet

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