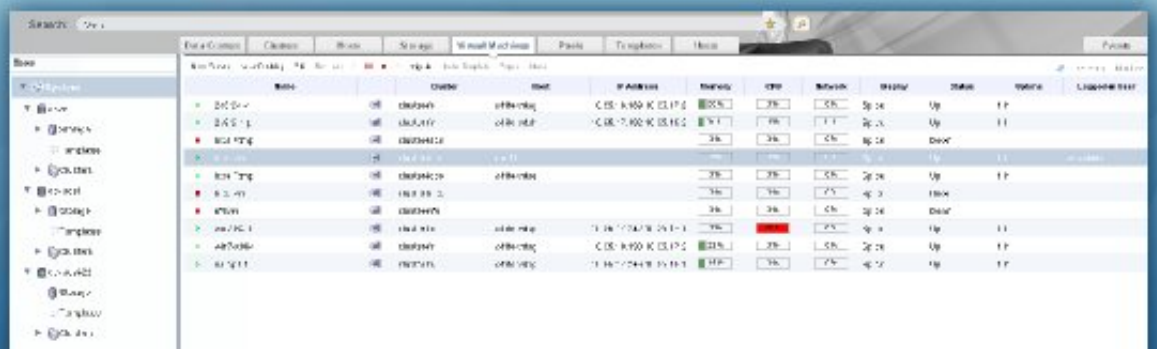
oVirt

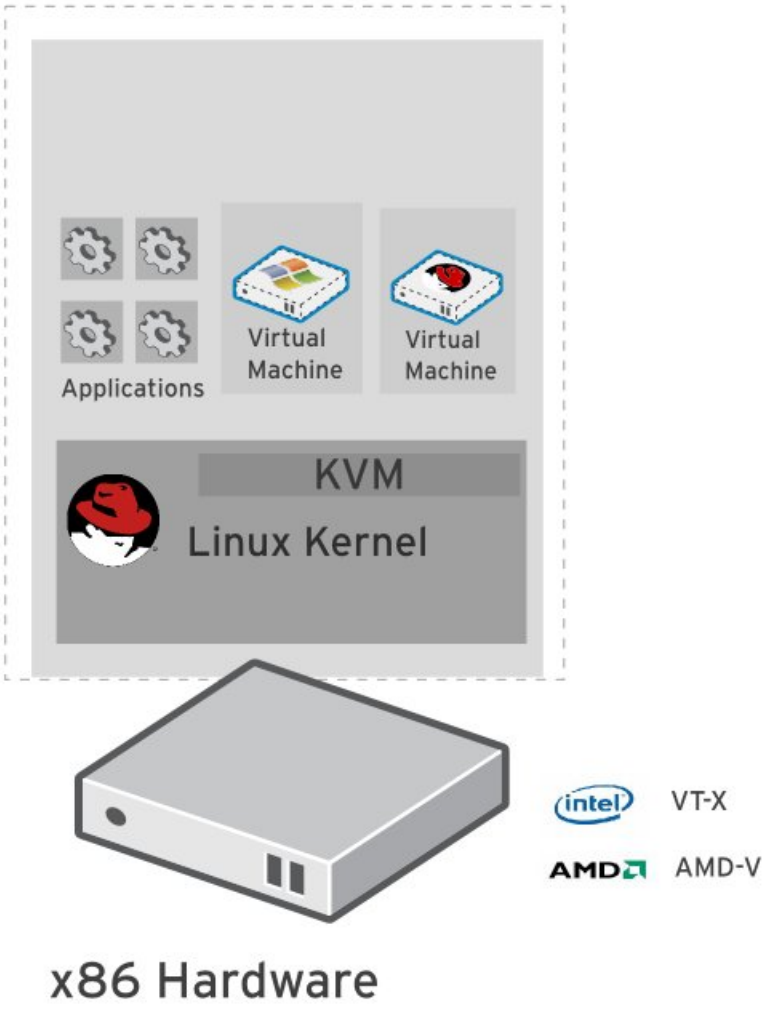


oVirt Overview

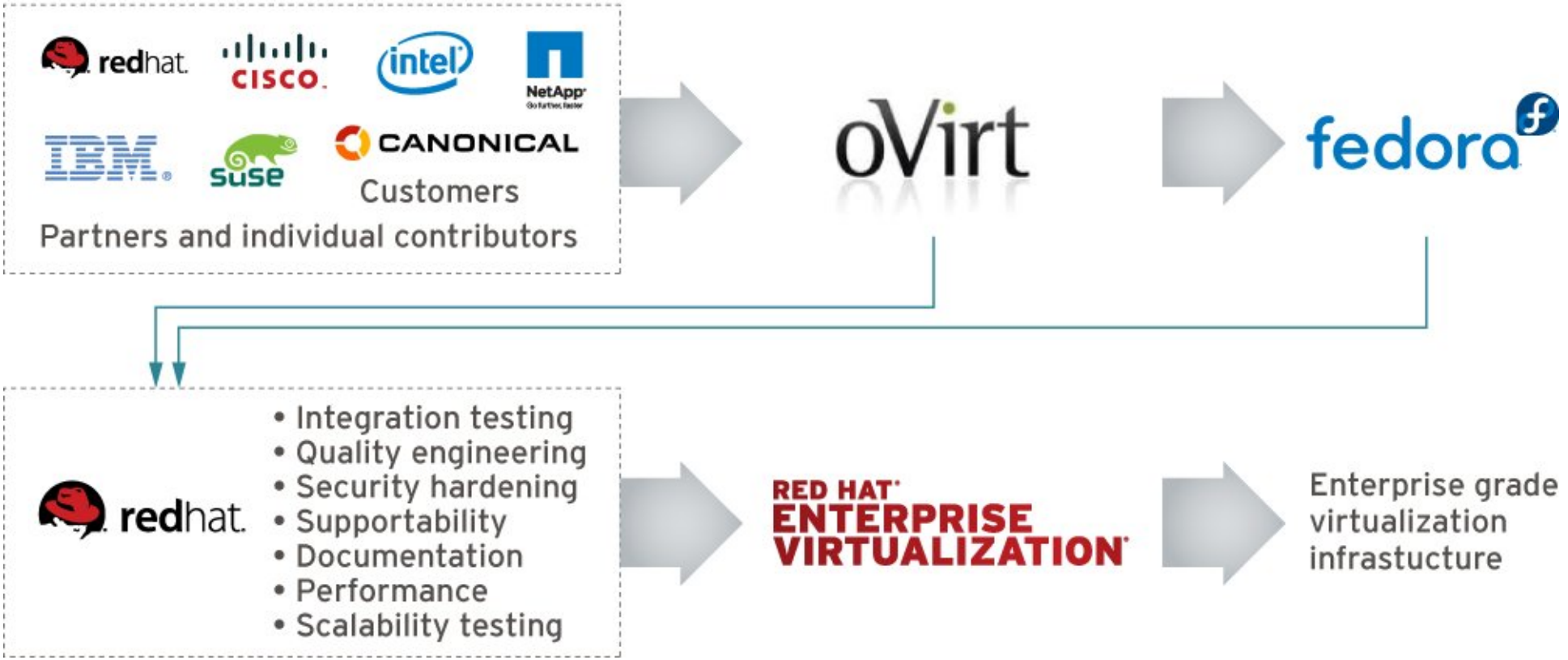
Scott McCarty
Solutions Architect, Red Hat
@fatherlinux

Kernel-based Virtual Machine (KVM)

- Included in Linux kernel since 2006
- Runs Linux, Windows and other operating system guests
- Advanced features
  - Live migration
  - Memory page sharing
  - Thin provisioning
  - PCI Pass-through
- KVM architecture provides high “feature-velocity” – leverages the power of Linux



What is oVirt



Supported by the Open Virtualization Alliance

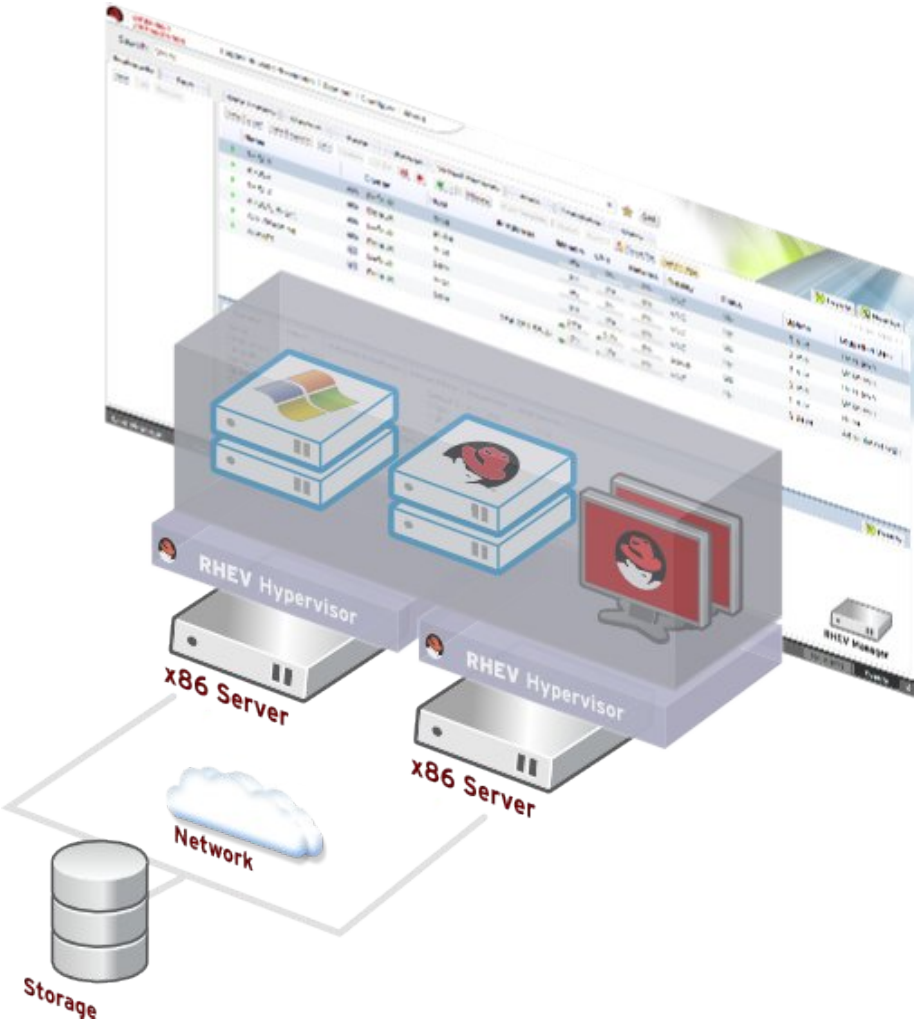
Open Virtualization Alliance

oVirt

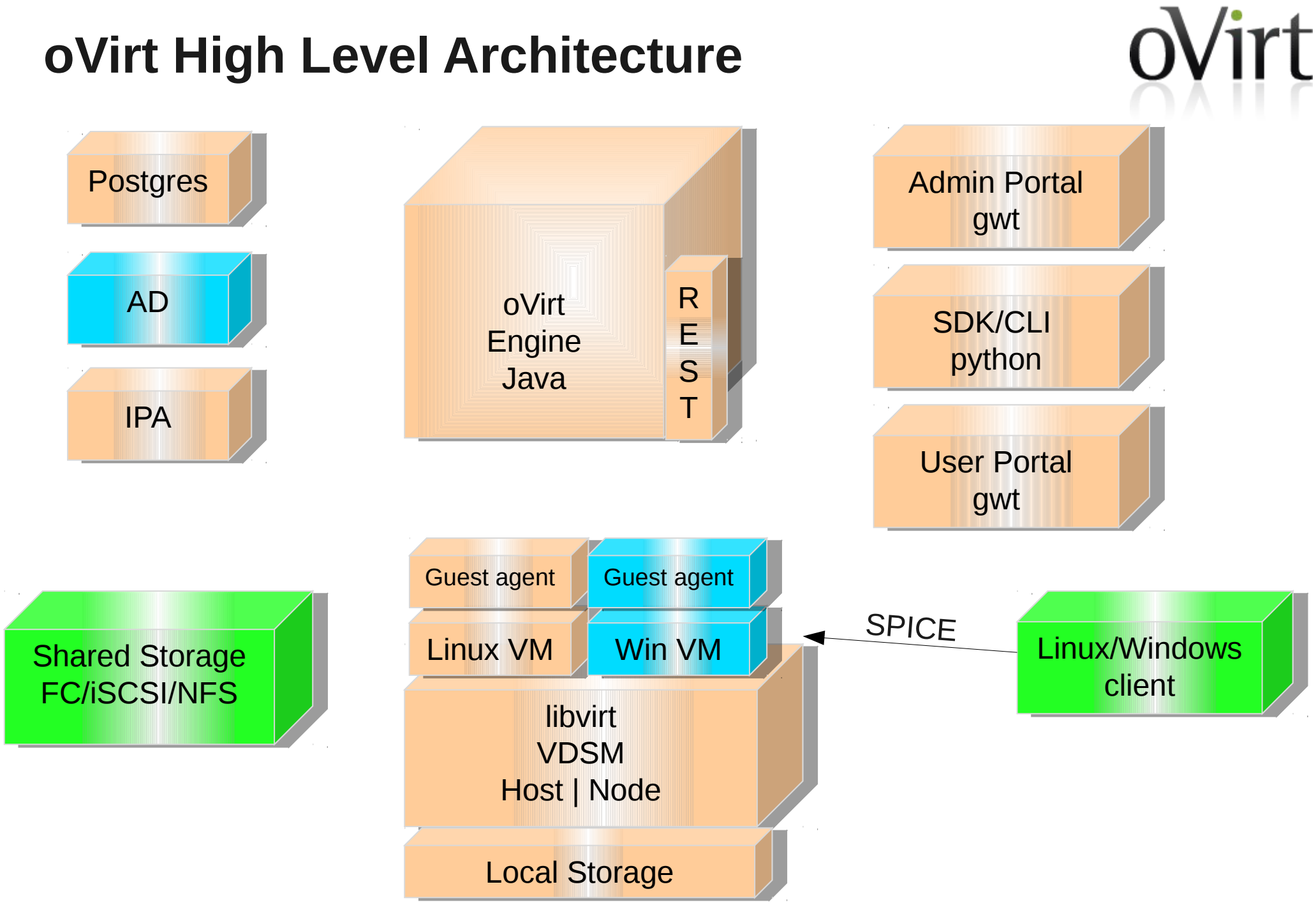
- Formed in May 2011 with 7 founding members
- Now 200+ member organizations and growing ....
- 4 Governing members: HP, IBM, Intel, Red Hat
- Formed to promote Open Virtualization
  - Increase awareness and understanding of KVM
  - Foster the adoption of KVM
  - Build an ecosystem of third-party solutions
  - Promote interoperability, best practices, and successes

oVirt Architecture

- oVirt Engine
- User Portal
- Admin Portal
- REST API
- Authentication
- VDSM



oVirt High Level Architecture



oVirt Host Agent - VDSM

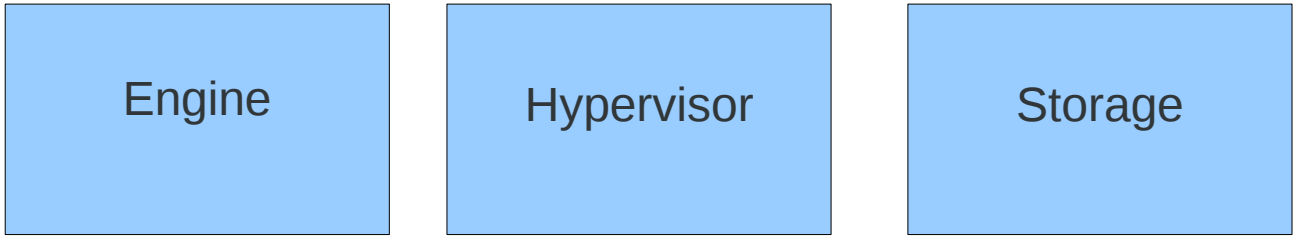
- Covers all functionality required by oVirt Engine
- Configures host, networking, and shared storage
- Uses libvirt for VM life cycle operations
- VDSM manages a Storage Pool, comprised of Storage Domains
  - **Storage Pool** - a VM repository that contains meta data about storage domains, storage tasks, VMs, locks, etc.
  - **Storage Domain** - a disk image repository
  - **Disk Image -** a collection of volumes (chain of snapshots)
  - **Volume** - stored as files in NFS, and as Logical Volumes for FC/iSCSI
  - Thin provisioning for SAN supported (storage mailbox based)

Management Features

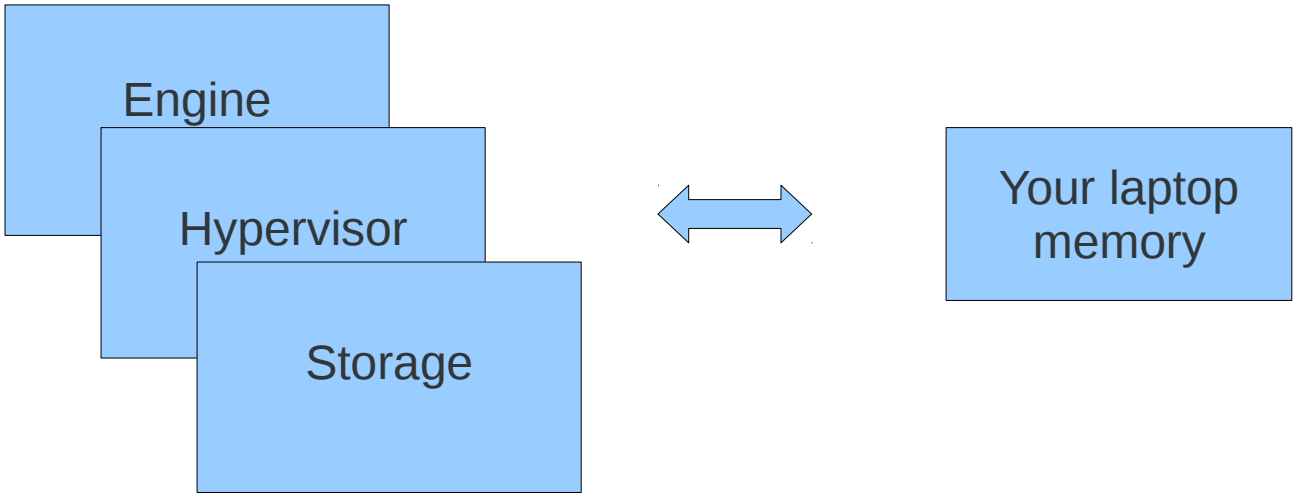
Feature	Description
High Availability	Restart guest VMs from failed hosts automatically on other hosts
Live Migration	Move running VM between hosts with zero downtime
System Scheduler	Continuously load balance VMs based on resource usage/policies
Power Saver	Concentrate virtual machines on fewer servers during off-peak hours
Maintenance Manager	No downtime for virtual machines during planned maintenance windows. Hypervisor patching
Image Management	Template based provisioning, thin provisioning, and snapshots
Monitoring & Reporting	For all objects in system – VM guests, hosts, networking, storage etc.
OVF Import/Export	Import and export VMs and templates using OVF files
V2V	Convert VMs from VMware and RHEL/Xen to RHEV

Structure

Scalable deployment-



All In One USB deployment-



oVirt on a Stick!

- Live Fedora spin
- Demo/POC purposes
- Don't overload: storage=memory
- Requirements: VT/AMD-v 4/8GB ram
- Stateless
- Boot from USB and let's start playing

Get Involved!

oVirt

- Wiki
  - http://www.ovirt.org/wiki
- Mailing lists
  - users@ovirt.org — oVirt Platform user list
  - announce@ovirt.org — oVirt Platform announce list
  - arch@ovirt.org — oVirt general devel/project list
  - engine-devel@ovirt.org — oVirt-engine devel list
  - node-devel@ovirt.org — oVirt-node devel list
- IRC
  - #ovirt on irc.oftc.net

THANK YOU !

http://www.ovirt.org