NetApp Virtual Storage Console

Integrating oVirt with Enterprise Storage
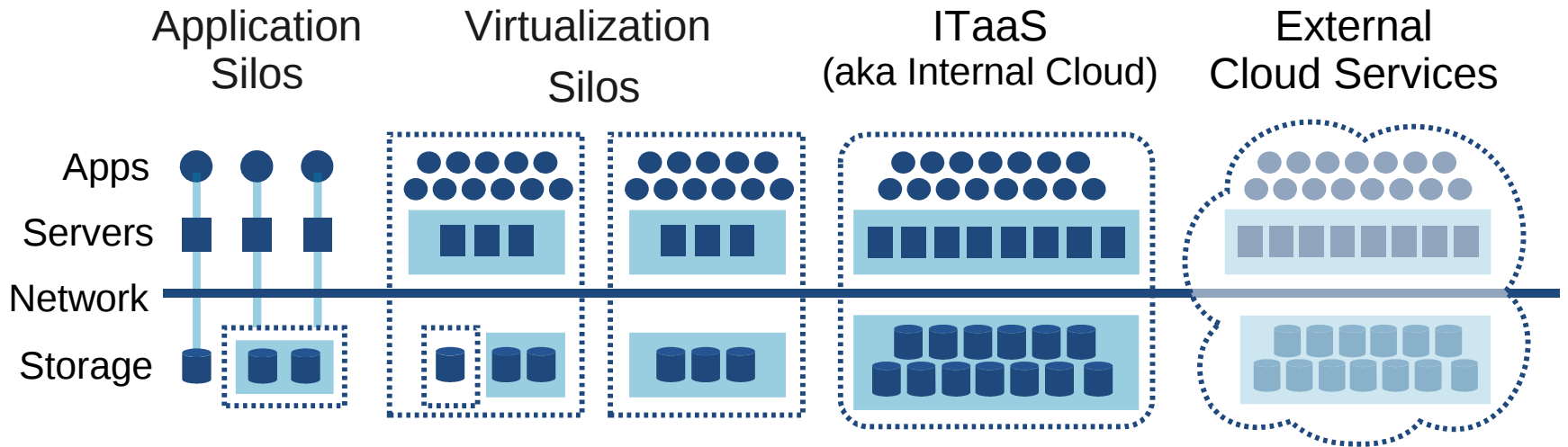
Jon Benedict - TME & Sr Virtualization Architect
@CaptainKVM, http://captainkvm.com

Chris Morrissey - VSC for RHEVM Lead Developer

oVirt

Key Points
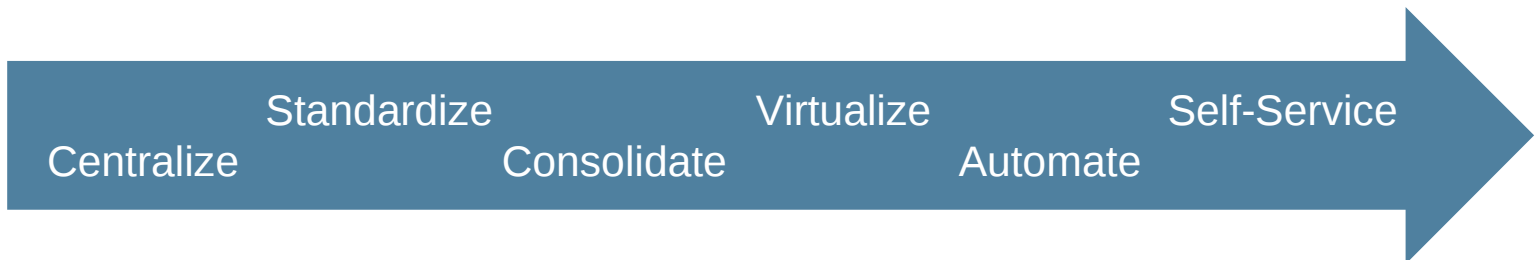
- NetApp view on virtualization

- VSC 1.0 capabilities

- UI plugin integration

- Future direction

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NetApp View on Virtualization

Application Silos • Virtualization Silos • ITaaS (aka Internal Cloud) • External Cloud Services

Apps • Servers • Network • Storage

From **Silos**… …to **Flexible IT**

Centralize • Standardize • Consolidate • Virtualize • Automate • Self-Service
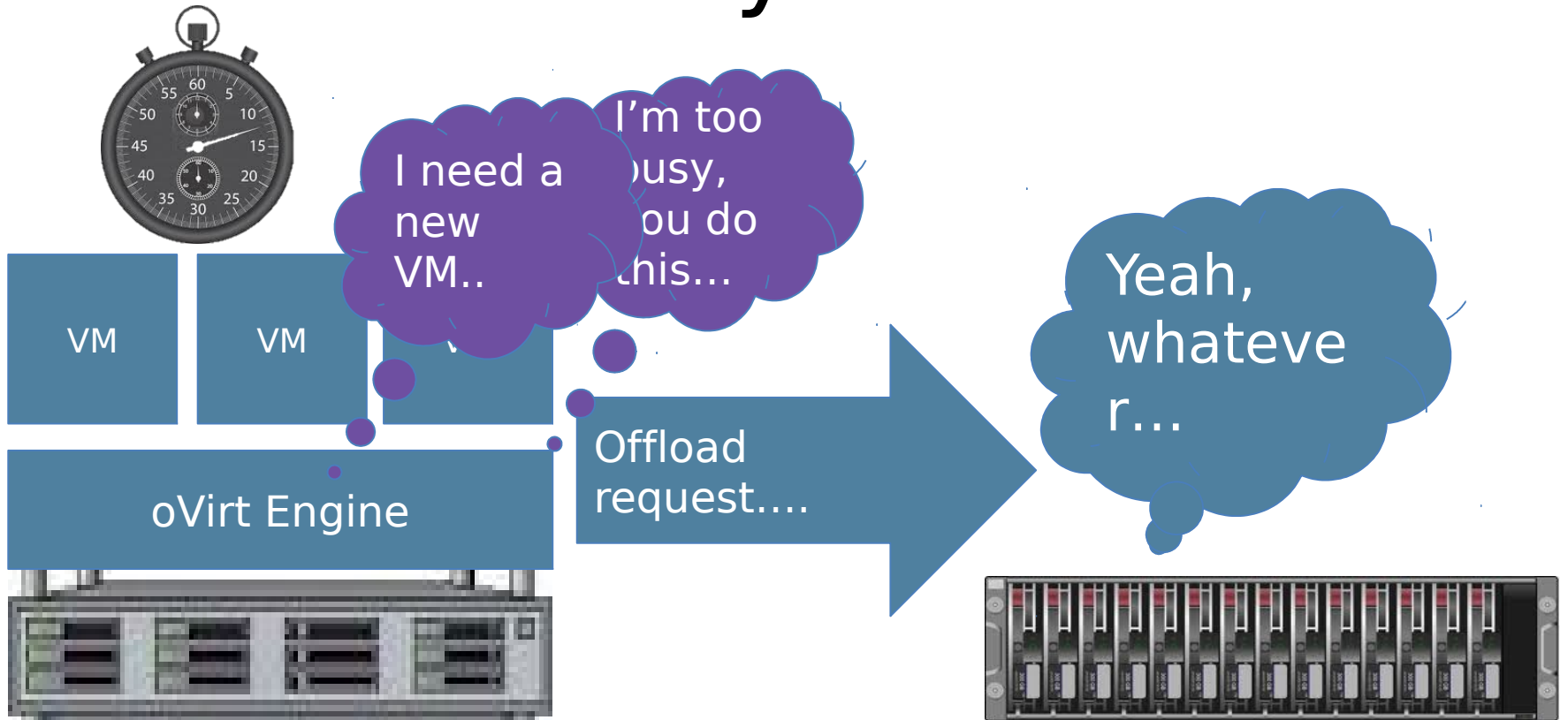
oVirt
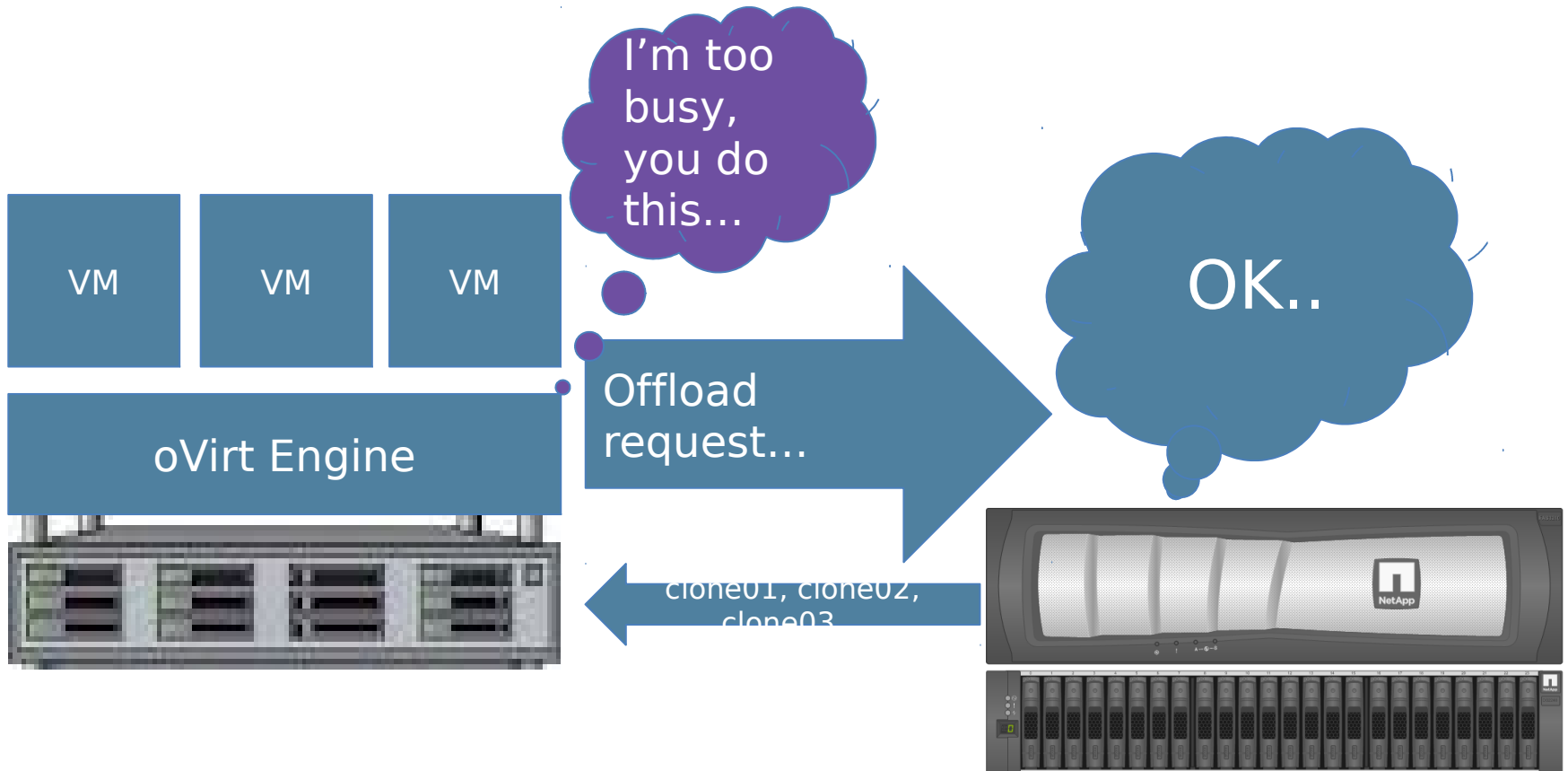
NetApp's interest in oVirt

- Customer Choice

- Open Source Commitment
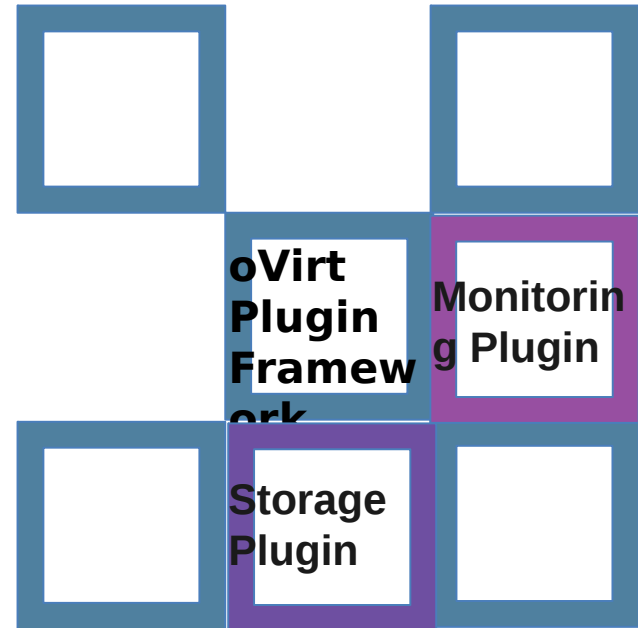
- oVirt Board Representation
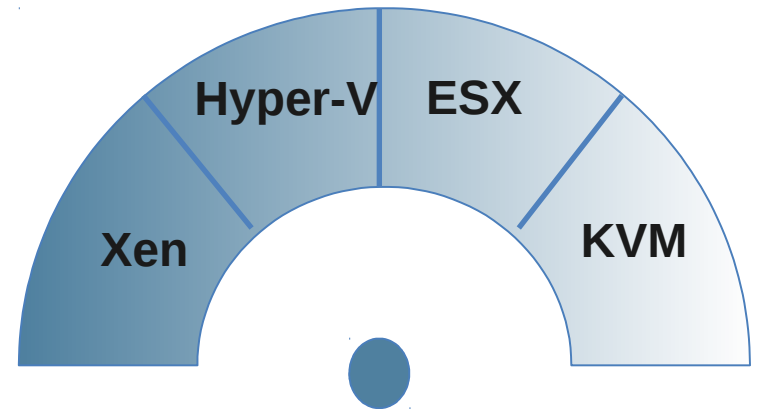
Commodity Disk Shelf

Enterprise Array

Plugin Framework

- Currently being dev'd by (Red Hat)

- Virtual Storage Console

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Monitoring Plugin

Storage Plugin

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Virtual Storage Console 1.0

- Provision storage domain

- Rapid cloning of virtual machines

- Manage available NetApp controllers

- NFS support only

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Provision Storage Domain

- Storage domain may be created against any available controller

- Includes settings specific to a NetApp controller

  - Auto-grow

  - Thin provision

  - Aggregate selection

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Rapid Cloning

- Creates FlexClones for the specified VM/Template

- Multiple clones in a single action

- Clones are created and ready in a matter of seconds

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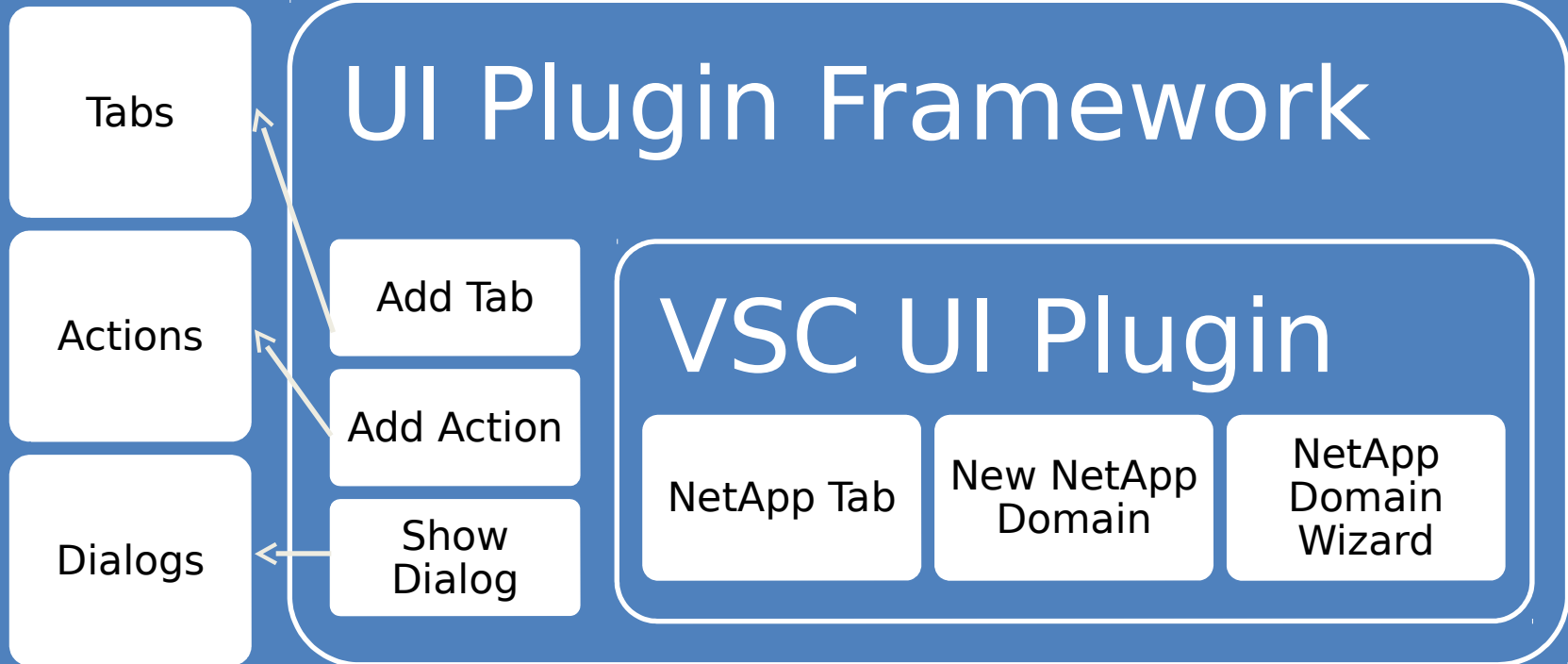
Manage NetApp Controllers

- Controllers shown in a NetApp tab

- Add/remove controllers for use in other actions

- View information about vServers and filers
  - free capacity
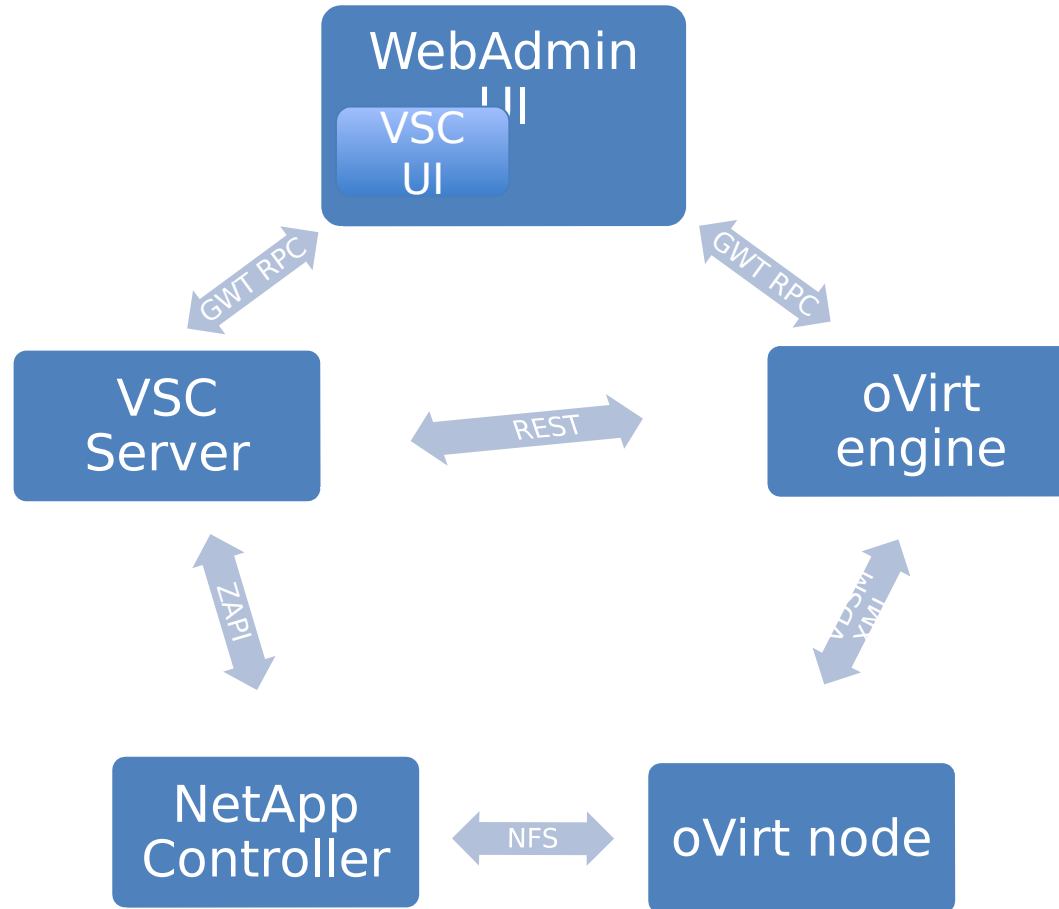 - status

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UI Plugin Integration

- NetApp capabilities plugged into oVirt UI using new UI Plugin framework

- Integration javascript lives on oVirt engine

- UI is served from separate NetApp VSC server

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UI Plugin Integration

oVirt WebAdmin UI

- Tabs
- Actions
- Dialogs

UI Plugin Framework

- Add Tab
- Add Action
- Show Dialog

VSC UI Plugin

- NetApp Tab
- New NetApp Domain
- NetApp Domain Wizard

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VSC and oVirt Interactions

Demo Time!

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Lessons Learned

- Having content loaded from separate domain will cause issues

  – Worked around using Window.postMessage() and REST API

- oVirt UI code base is large and complex

  – A deep knowledge of GWT and GWTP is necessary

- UI plugin framework is young and still being formed

  – On the plus side, we get to help form it

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Future Direction

- SAN support for 1.0 functionality

- Looking at direct integration with VDSM and/or libstorage

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Additional Resources

- vdsm-devel@lists.fedorahosted.org

- engine-devel@ovirt.org

- http://communities.netapp.com

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Wrap-up

Offload! !!!

| Integration | Automation | Efficiency | Wider Acceptance of KVM |

oVirt

Thanks!

Jon Benedict
@CaptainKVM
http://CaptainKVM.com

Chris Morrissey
cmorriss@netapp.com

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Backup Slides

oVirt

VSC

Backup & Restore

Snap Creator

Snap Creator Demo

oVirt

KVM Plugin for Snap Creator
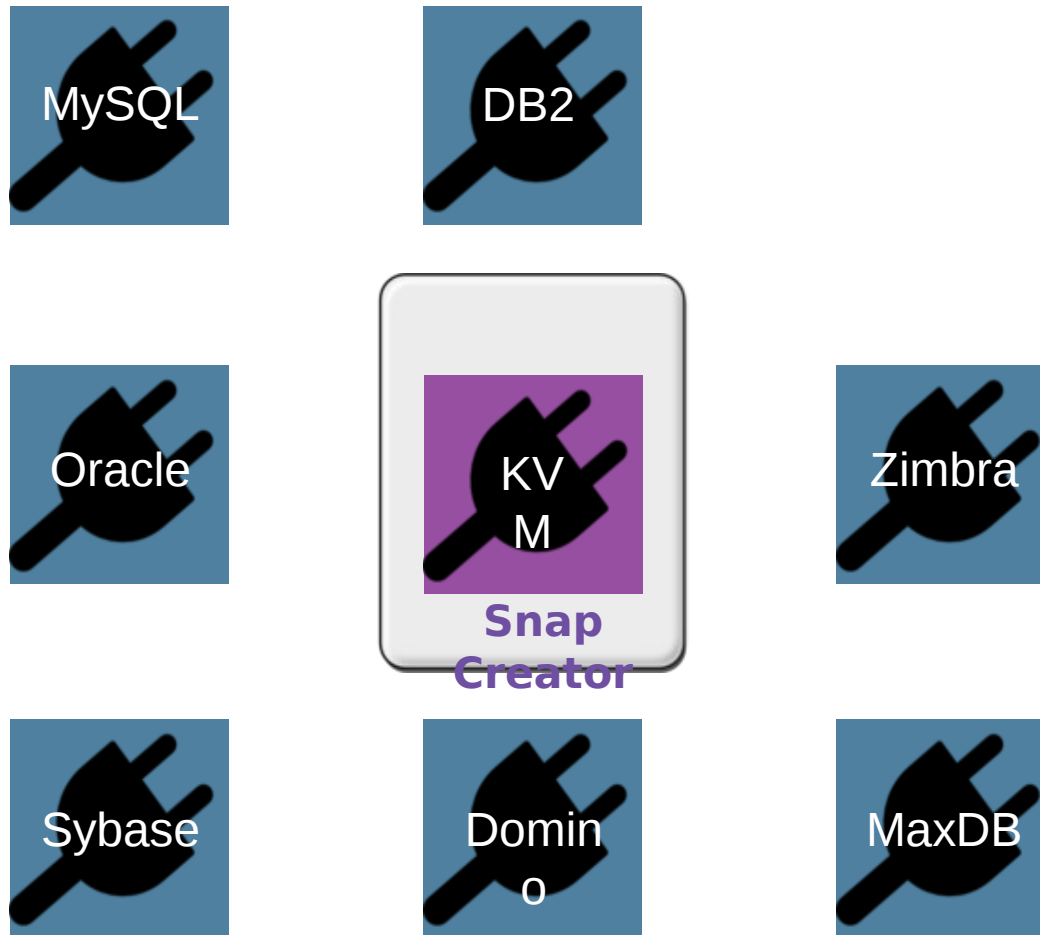
Stacked & Nested Configurations

DB

VM

SCA

oVirt Engine SCA