

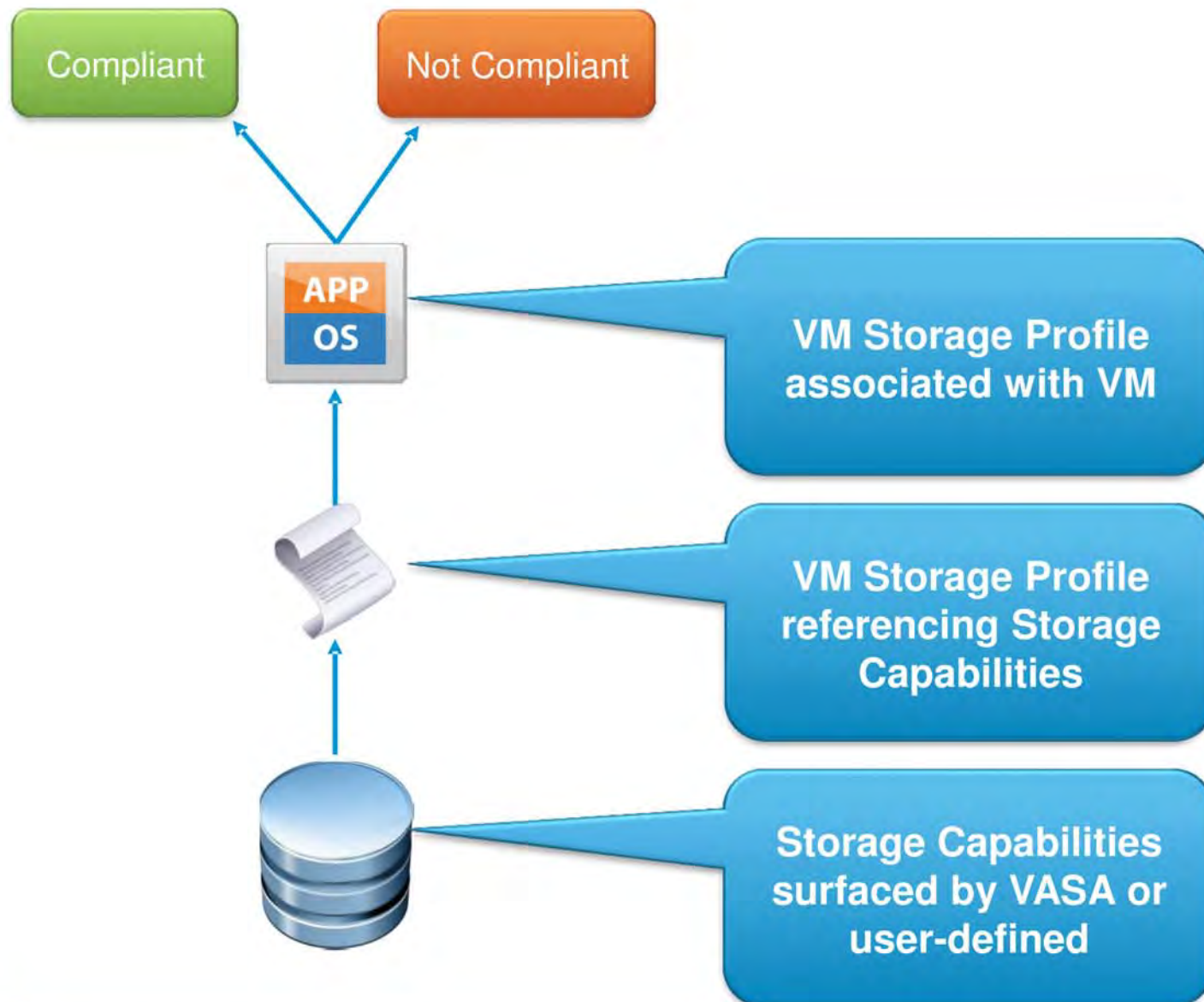
vSphere 5 What's New - Profile-Driven Storage

Why Profile-Driven Storage?

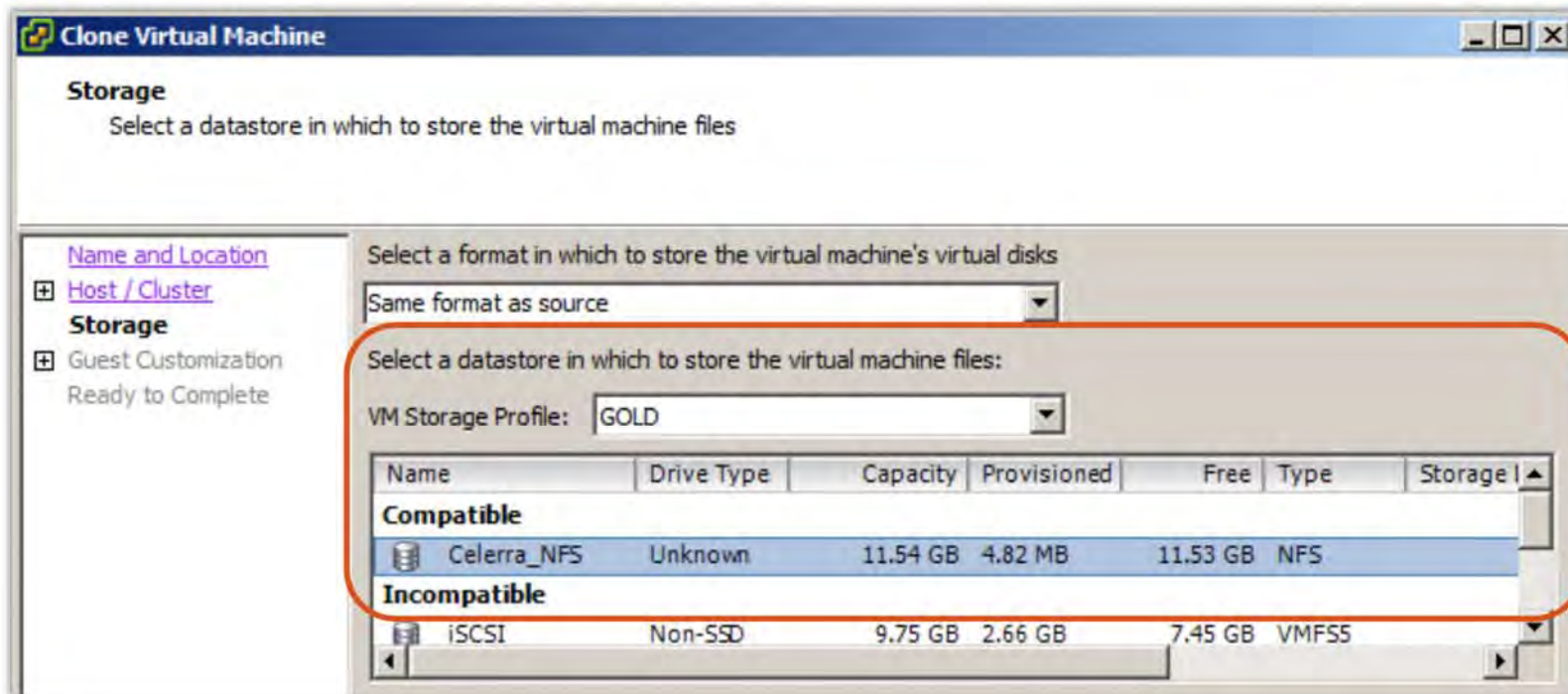
Save OPEX by reducing repetitive planning and effort!

- **Minimize per-VM (or per VM request) “thinking” or planning for storage placement.**
 - Admin needs to identify VM storage requirements and match to physical storage properties.
- **Increase probability of “correct” storage placement and use (minimize need for troubleshooting, minimize time for troubleshooting).**
 - Admin needs more insight into storage characteristics.
 - Admin needs ability to custom-tag available storage.
 - Admin needs easy means to identify incorrect VM storage placement (e.g. on incorrect datastore).

Storage Capabilities & Profile-Driven Storage



Selecting a Profile During Provisioning



- By selecting a VM Storage Profile, datastores are now split into **Compatible & Incompatible**.
- The **Celerra_NFS** datastore is the only datastore which meets the GOLD Profile requirements – i.e. it is the only datastore that has our user-defined storage capability associated with it.

Profile-Driven Storage Compliance

The screenshot displays the VMware vSphere interface for a virtual machine named 'jeos2'. The 'Summary' tab is active, showing various system metrics and storage details. A red box highlights the 'VM Storage Profiles' section, which indicates that the VM is compliant with the 'GOLD' profile as of 3/15/2011 9:56:50 AM.

jeos2

Summary | Resource Allocation | Performance | Tasks & Events | Alarms | Console | Permissions | Maps | Storage Views

General

Guest OS: Ubuntu Linux (32-bit)
VM Version: 7
CPU: 1 vCPU
Memory: 128 MB
Memory Overhead: 33.48 MB
VMware Tools: Out of date
IP Addresses: 192.168.0.154 [View all](#)

DNS Name: jeos2
EVC Mode: N/A

State: Powered On
Host: esx50a.mn.vmware.com
Active Tasks:
vSphere HA Protection: ? N/A

Resources

Consumed Host CPU: 113 MHz
Consumed Host Memory: 85.00 MB
Active Guest Memory: 14.00 MB [Refresh Storage Usage](#)

Provisioned Storage: 1.09 GB
Not-shared Storage: 1.09 GB
Used Storage: 1.09 GB

Storage	Status	Drive Type
Celerra_NFS	✓ Normal	Unknown

Network	Type	Sta
VM_Traffic_dvPG	Distributed port group	✓

Commands

- Shut Down Guest
- Suspend
- Restart Guest
- Edit Settings

VM Storage Profiles [Refresh](#)

VM Storage Profiles: GOLD
Profiles Compliance: ✓ Compliant (3/15/2011 9:56:50 AM)

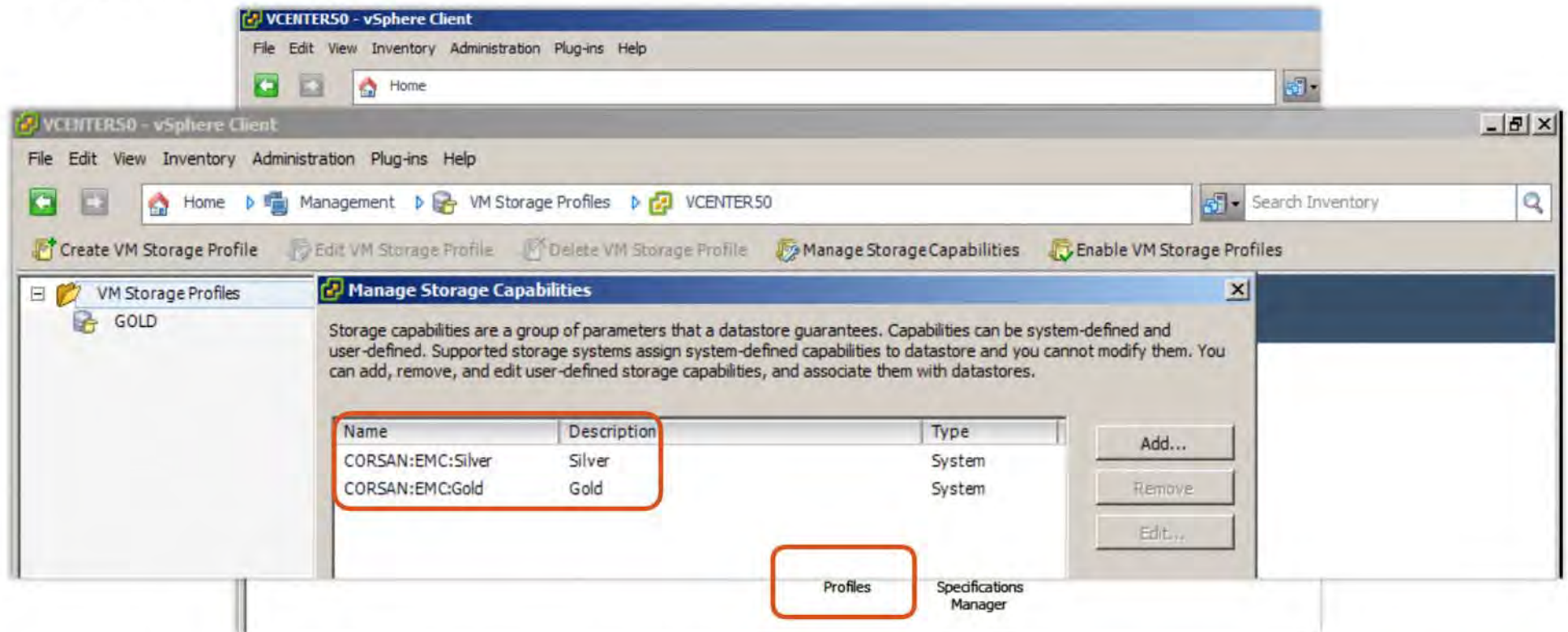
- Profile Compliance is visible from the Virtual Machine Summary tab.

vSphere Storage APIs for Storage Awareness

- Storage Awareness is an Extension of the vSphere Storage APIs, vCenter-based extensions.
- It allows storage arrays to integrate with vCenter for management functionality via server-side plug-ins or Vendor Providers.
- This in turn allows a vCenter administrator to be aware of the topology, capabilities, and state of the physical storage devices available to the cluster.
- VASA enables several features.
 - For example it delivers System-defined (array-defined) Capabilities that can greatly enhance **Profile-Driven Storage**.
 - Another example is that it provides array internal information that helps several **Storage DRS** use cases to work optimally with various arrays.

Storage Capabilities

- Once the Vendor Provider has been successfully added to vCenter, the **profiles** should also display the storage capabilities provided to it by the Vendor Provider.



- The above example contains a 'mock-up' of some possible **Storage Capabilities** as displayed in the profiles. These are retrieved from the Vendor Provider.

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