App Volumes Technical Overview

App Volumes 3.0

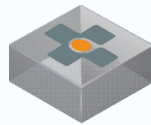Sascha Dobrowsky / Andre Lahrmann

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App Volumes Components

UNIFIED ADMIN CONSOLE

- Dashboard console for assignments and configuration, App Volume agent brokering and Assignment of applications + Writable Volumes

APP VOLUMES AGENT

- Redirects file system and registry write operations to writable volume (if required)
- Checks-in with App Volumes Manager

APPCAPTURE, APPMERGE

- Application capture tools
- Bundling tools used to leverage AppToggle
- Application Customization

APPSTACK

- Read-only volume containing applications
- One AppStack : Multiple Users
- Policy-Driven Virtualization

WRITABLE VOLUME

- One writable volume : One user
- Policy-Driven application virtualization

App Volumes: Requirements

System Requirements

- Server
  - Hypervisor: ESX/Virtual Center 5.x or later or Hyper-V with SCVMM 2012 SP1
  - 3 vCPUs (set during OVA deployment)
  - 4GB of RAM
  - 1GB of Disk Space
  - PostGRES database (Embedded)
- Client
  - Windows 7, 8.1, 10
  - 1GB of RAM
  - 5MB of Disk Space

Software Requirements

- App Volumes Mgmt Server
  - Microsoft Active Directory Domain – 2003 functionality or above
  - Supported Browser – Access Mgmt Console
    - IE 9, 10
    - Firefox 10, 11
    - Safari 5.1x

- App Volumes Agent
  - Windows 7 or above

App Volumes Pre-Requisites

- Active Directory users
  - Account with standard permission for initial setup/connection
  - Administrator level account for AppStack VM Provisioning (Microsoft requirements for Application install)

- vCenter & vSphere Administrator access***

- End-users administrator privileges required to install applications into their writable volumes (UIA).
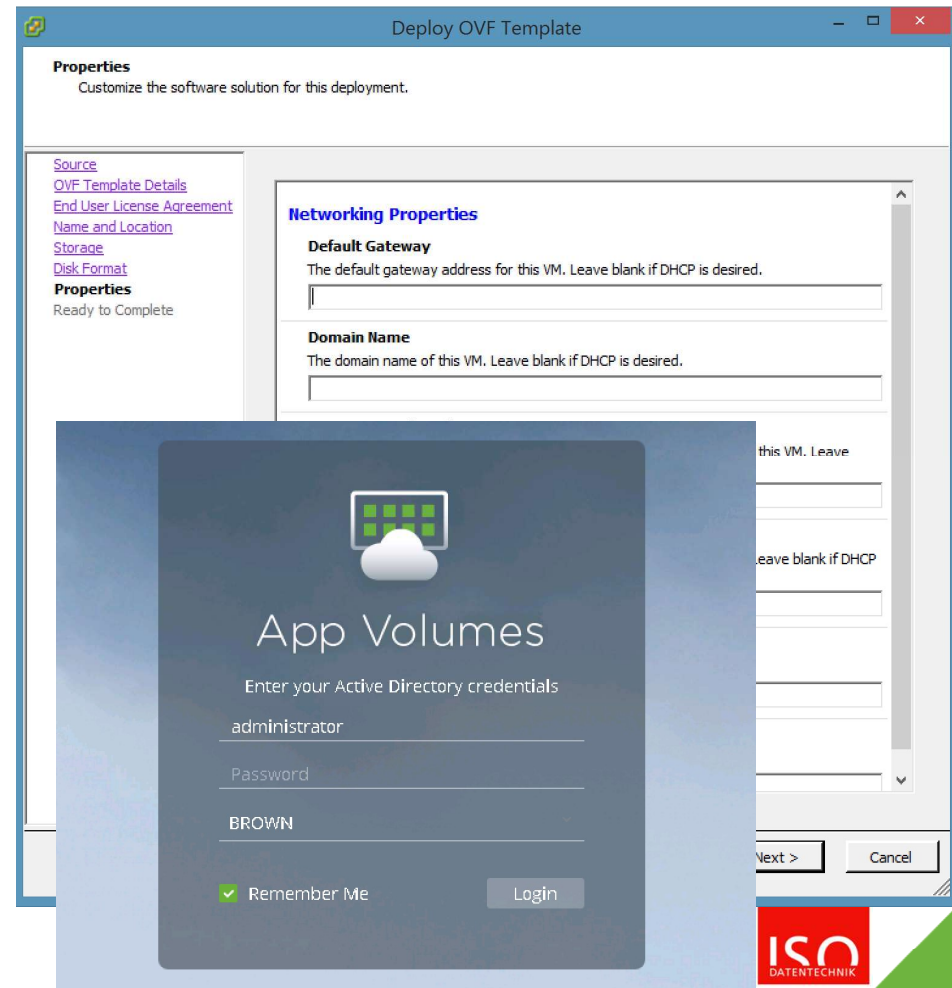
- Agent/Manager communication on port 80/443

*** *vSphere & vCenter 6.0U1*

App Volumes 2.10 versus 3.0 Deployment
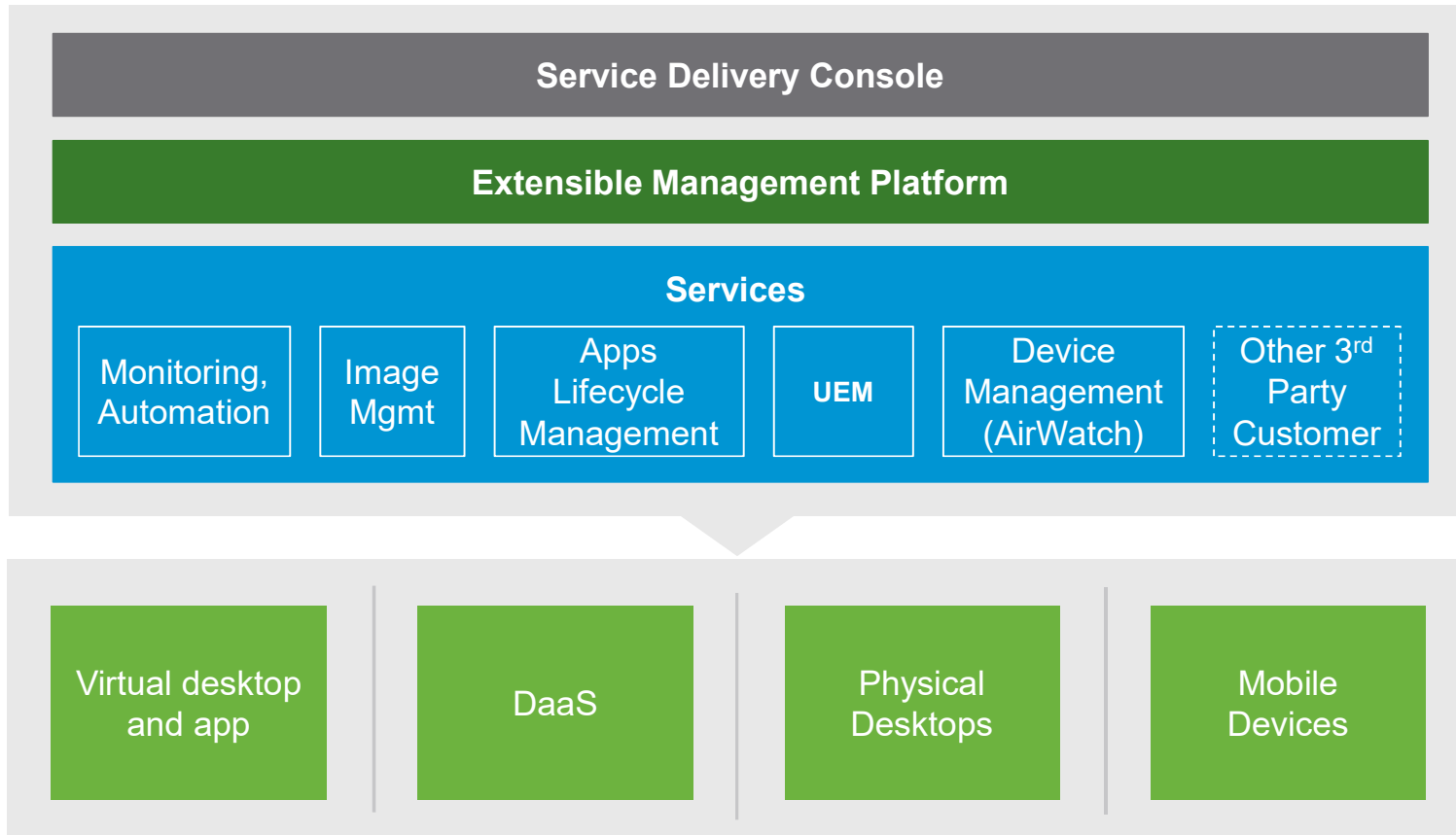
App Volumes 3.0 deployment
Previous solution App Volumes:
deployment required:

- Download OVA & Deploy Virtual
  Appliance on Windows Server
  2008r2 or 2012r2
- Initial Configuration and setup
- Install SQL Database or connect
  to existing SQL instance

- Install App Volumes Manager

- Initial Configuration and setup

***SSL validation to configure
if needed***

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App Volumes 3.0: Designed for Service Delivery

Service Delivery Console

Extensible Management Platform

Services

Monitoring, Automation	Image Mgmt	Apps Lifecycle Management	UEM	Device Management (AirWatch)	Other 3rd Party Customer

Virtual desktop and app	DaaS	Physical Desktops	Mobile Devices

Approach

- Multi tenant service built on a micro services architecture and REST APIs

- Great Flexibility to add additional components

Benefits

- Role based service delivery

- Extensible by partners and customers, while preserving integrity of experience

- As a service delivery enables IT to deliver value vs being a cost center

App Volumes Virtual Appliance

Overview

- Single Linux Based appliance (Ubuntu)
- Web Based console
- Application & Customization Assignment
- Environment Health Monitoring

Benefits

- Leverage and Extend existing investments in AD/identity infrastructure
- IT admins have a single place to publish, entitle and audit all resources.
- Admins can efficiently entitle resources
- Granular controls enables IT to efficiently set policies at desired level

Not officially supported

App Volumes - 1.0.0.241 alpha
To manage this VM browse to https://10.138.38.189:5480/

App Volumes by vmware

| DASHBOARD | VOLUMES | DIRECTORY | INFRASTRUCTURE | ACT |

Licensed to: VMware App Volumes v3.0 EULA Enforced Eval License

User Licenses: 1 of 5000

User Utilization

Online Users   Total Users

Computer Utilization

Online Computers   Total Computers

Remember Me   Login
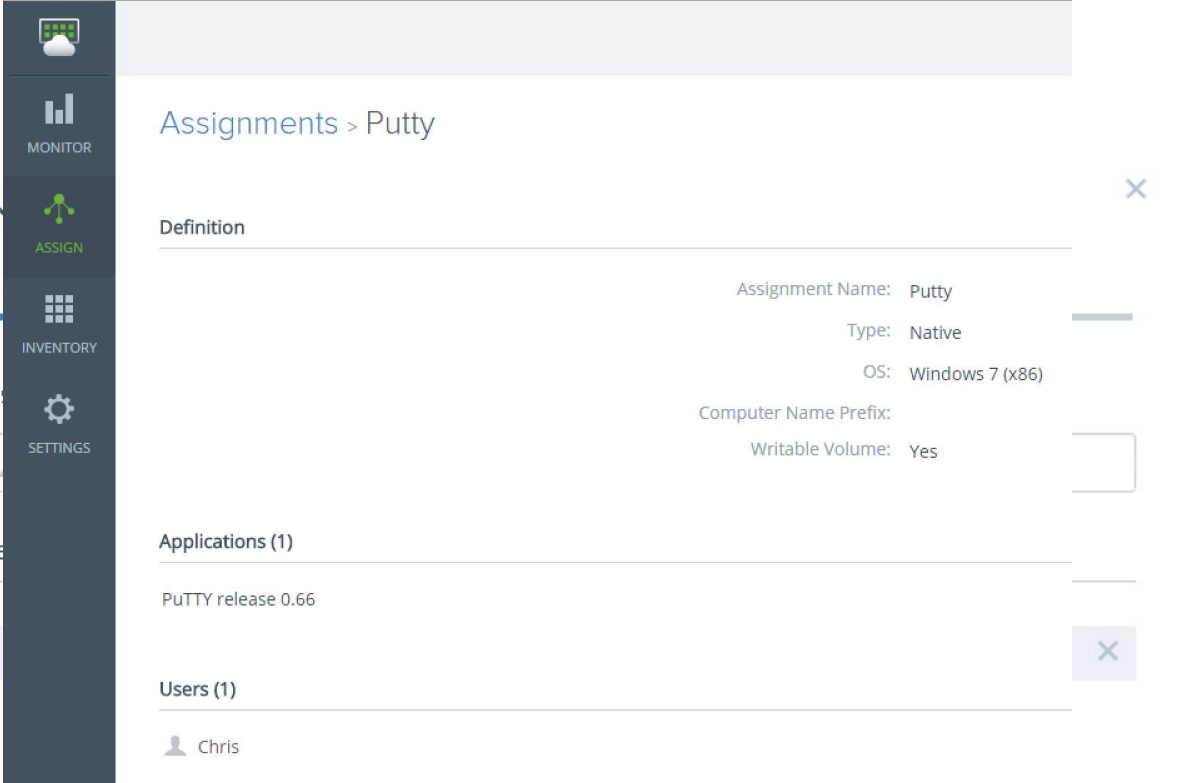
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Applications Assignment

Create New Application Assignment

Target Computers / WV *(Optional)*

Select Application

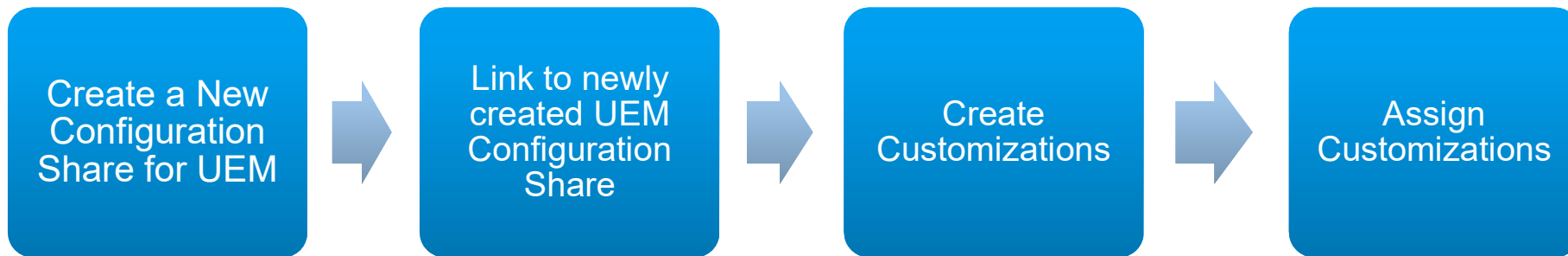**Select Users and/or User Groups**

Validate Users Entitlement on Desktop

MONITOR

ASSIGN

INVENTORY

SETTINGS

Assignments > Putty

Definition

Assignment Name: Putty
Type: Native
OS: Windows 7 (x86)
Computer Name Prefix:
Writable Volume: Yes

Applications (1)

PuTTY release 0.66

Users (1)

Chris

Unified Admin Console – UEM Integration

Beta

Create a New Configuration Share for UEM	→	Link to newly created UEM Configuration Share	→	Create Customizations	→	Assign Customizations

*Do not point to an existing Production UEM configuration share*

App Volumes AppCapture

Features

- Standalone Application
- Single format to deliver and manage Applications
- PowerCLI support
- Supports for AppIsolation

Benefits

- Allows Administrators and Developers to build AppStacks
- Enables possible Automation of packaging
- Native and ThinApp Applications delivered in one consistent way

Start AppCapture and install applications

Horizon

Virtual Desktop

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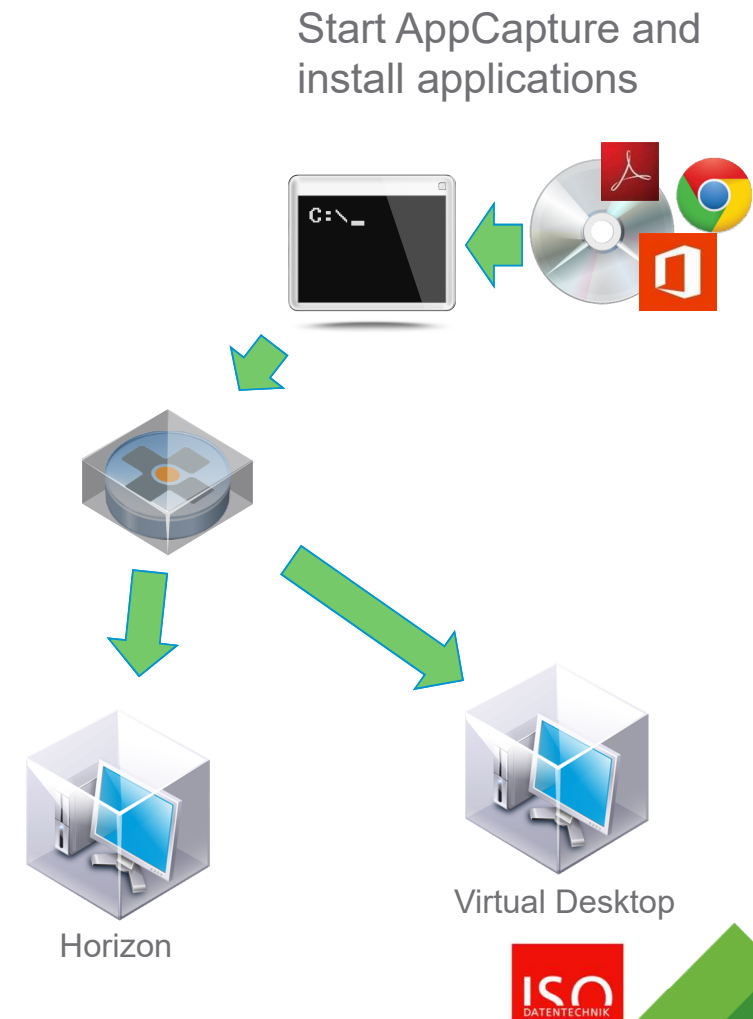
Updating and Adding Applications
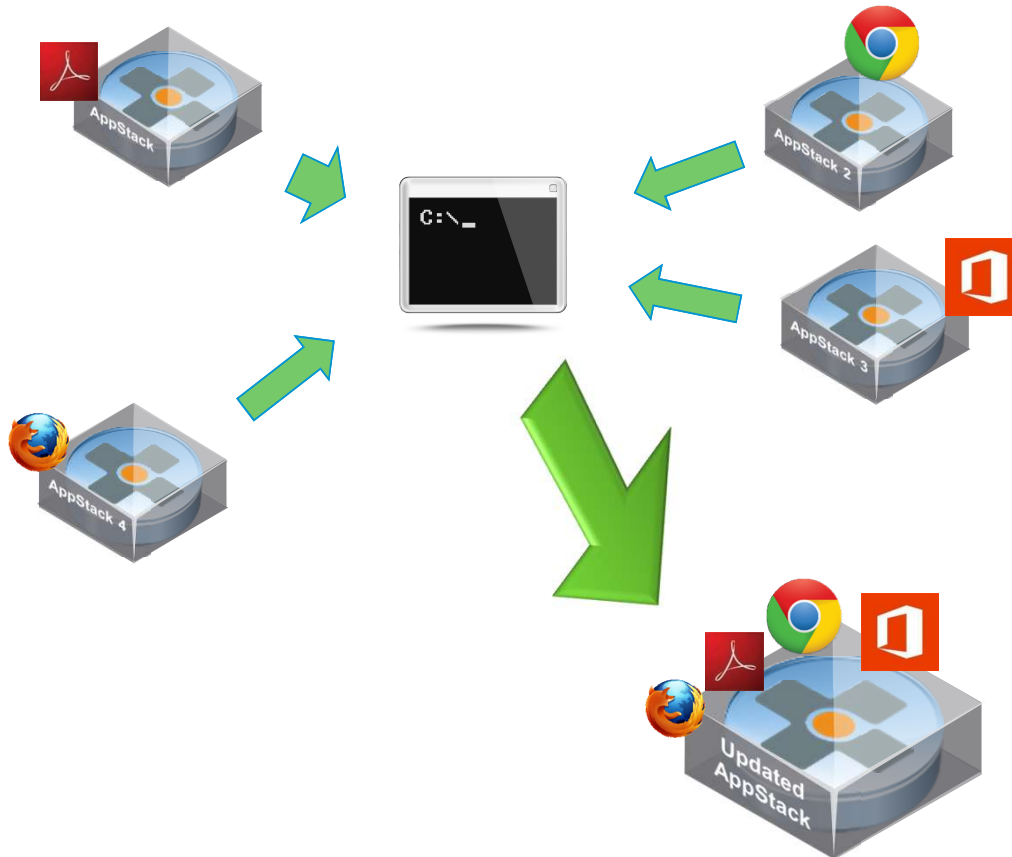
- Start with existing AppStacks from Application Share
- Run **Merge** on **2 or more** AppStacks
- Create VMDK file from VHD to prepare for import
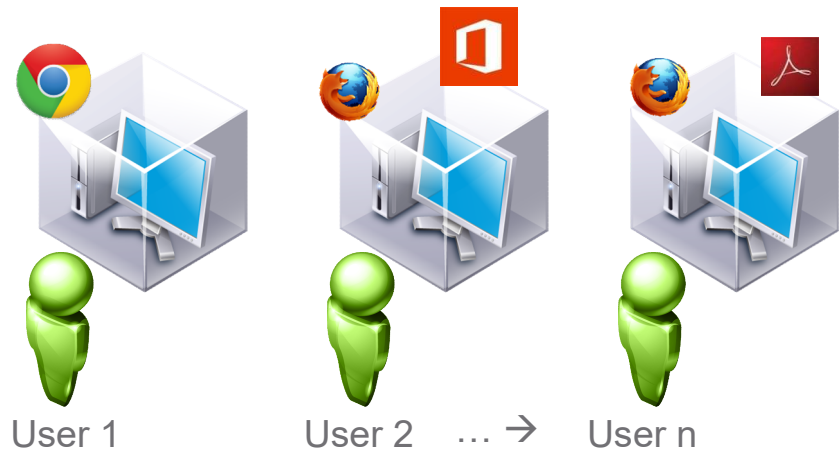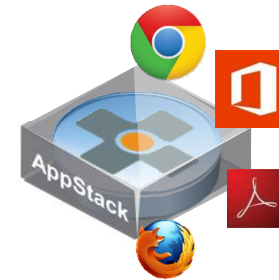- Copy Updated AppStacks to Application Share
- Sync Application Share

AppToggle

Features

- Deliver applications to users targeted specifically for them
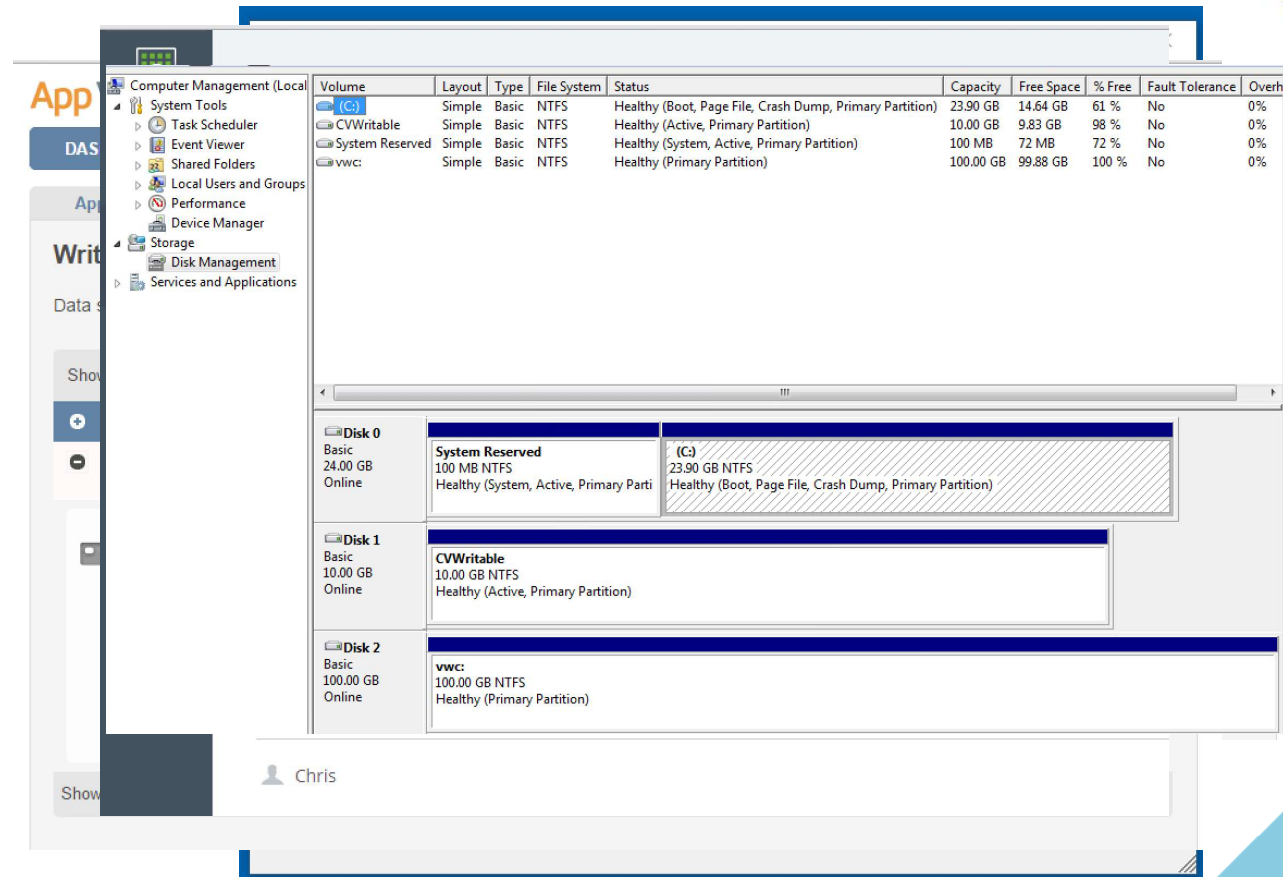- Entitle users based on applications, not AppStacks

Benefits

- Fewer AppStacks makes maintenance easier
- Simplified Application Lifecycle
- Individual AppStacks makes updates simpler

User 1   User 2   … →   User n

Writable Volumes in App Volumes 3.0

- Assignments are done in Unified Admin Console

- Template used is User Installed Applications plus Profile

- Assignment require minimum 1 Application

- After Assignment, remember to wait a few minutes for Writable VMDK creation
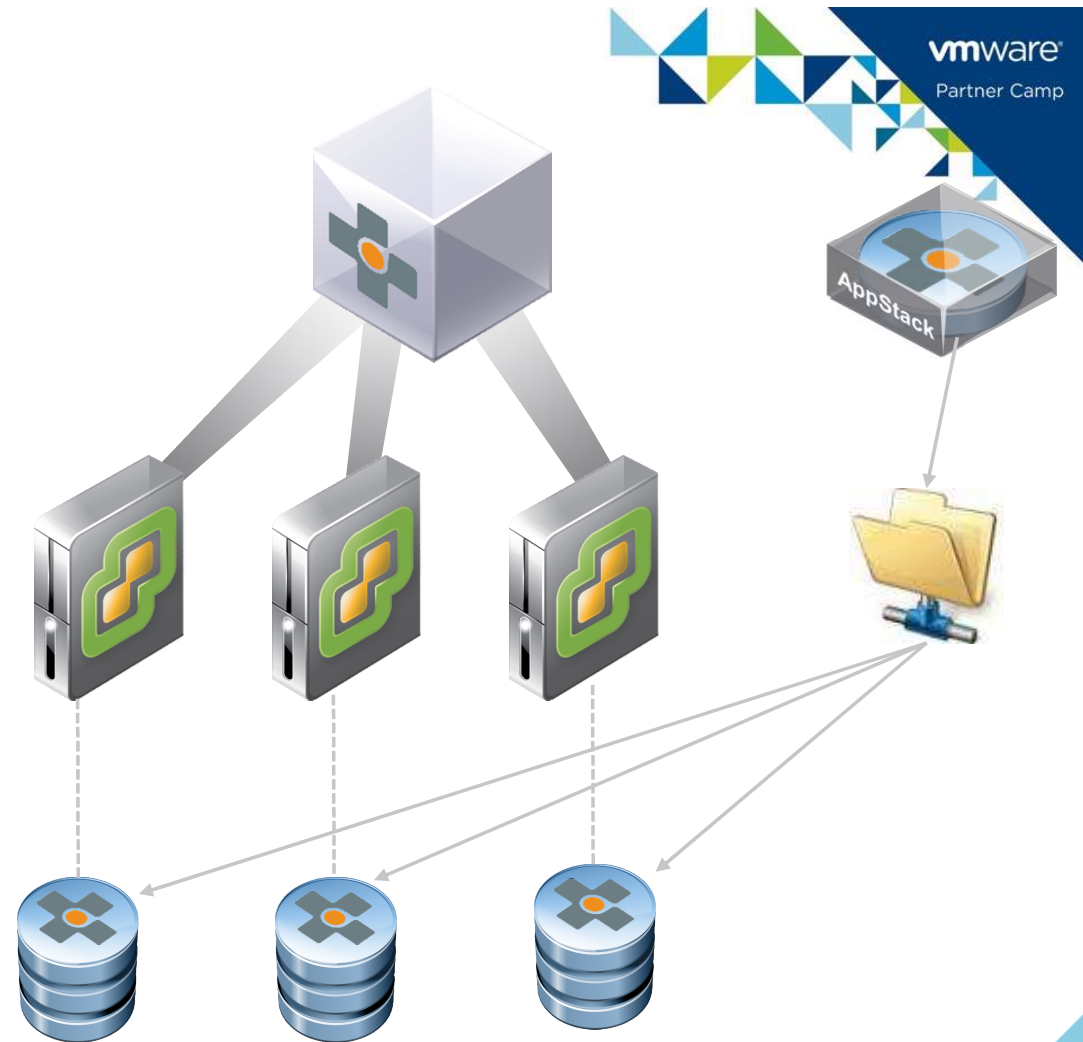
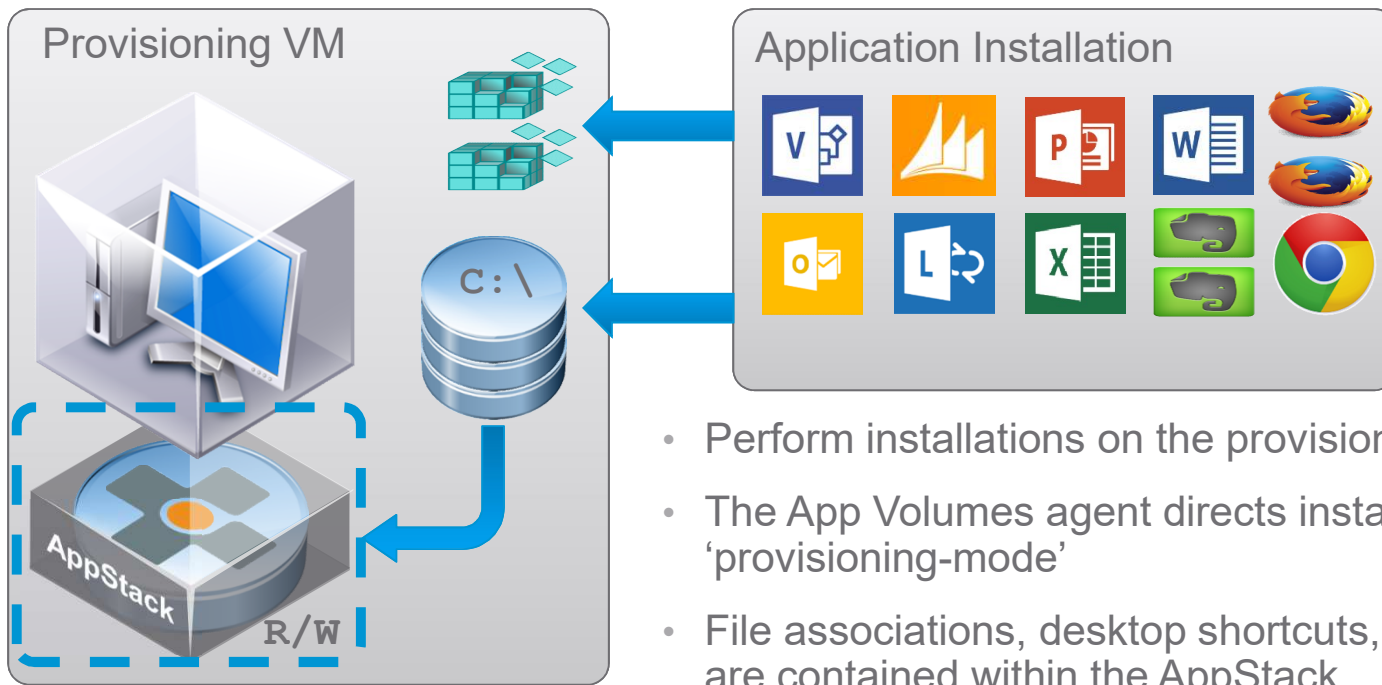# AppScaling with Multizones

Features

- AppStacks are placed in 1 Shared location
- vCenter automates AppStack Replication

Benefits

- Simplifies and automates AppStacks distribution
- Allow AppStacks to be used across multiple vCenter

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Provisioning Applications into a Single AppStack

Provisioning VM

Application Installation

`C:\`

AppStack
`R/W`

- Perform installations on the provisioning virtual machine

- The App Volumes agent directs installation to the AppStack in 'provisioning-mode'

- File associations, desktop shortcuts, registry entries, files and folders are contained within the AppStack

- Once provisioning is complete, the AppStack is made read-only and ready for assignment…

User Installed Applications and Settings (Writable Volumes)
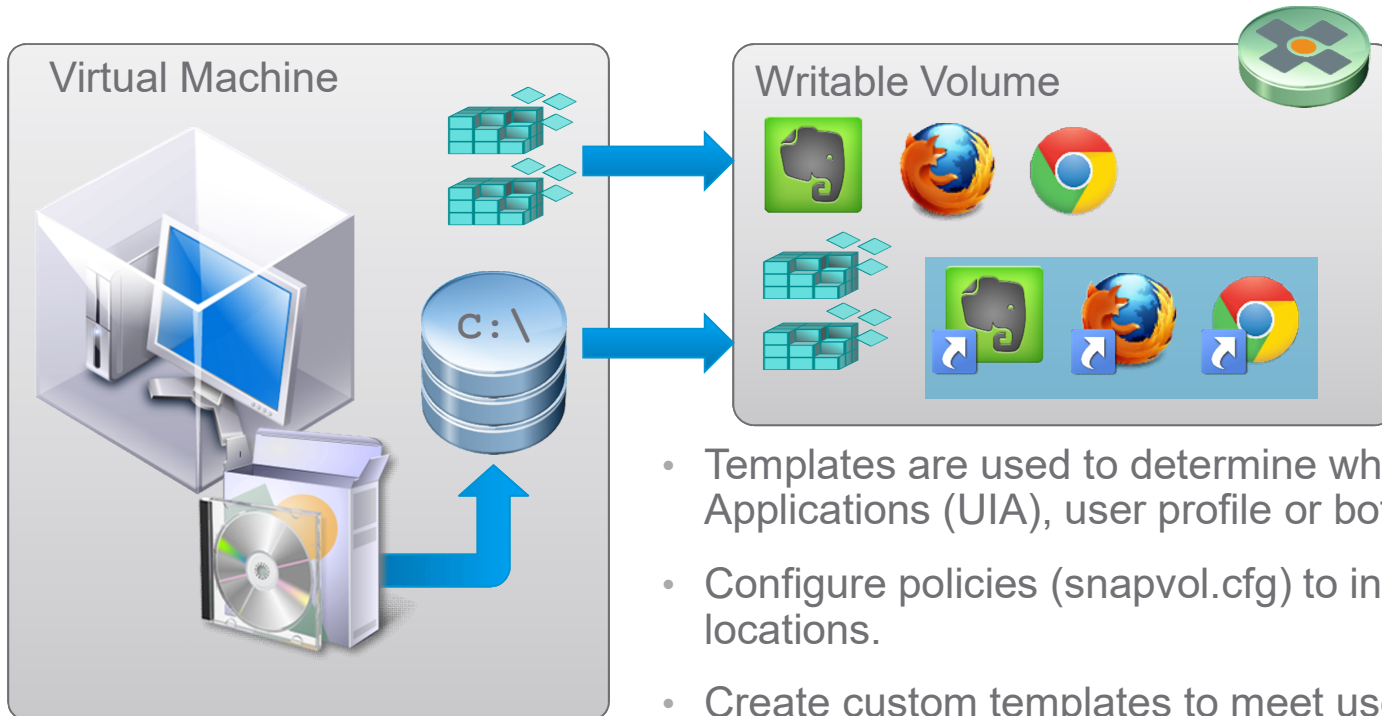
- Templates are used to determine whether to capture User Installed Applications (UIA), user profile or both.

- Configure policies (snapvol.cfg) to include / exclude file and registry locations.

- Create custom templates to meet use case requirements.

Note: Applications can also be uninstalled! (changes stored in the writable volume)

AppIsolation with App Volumes
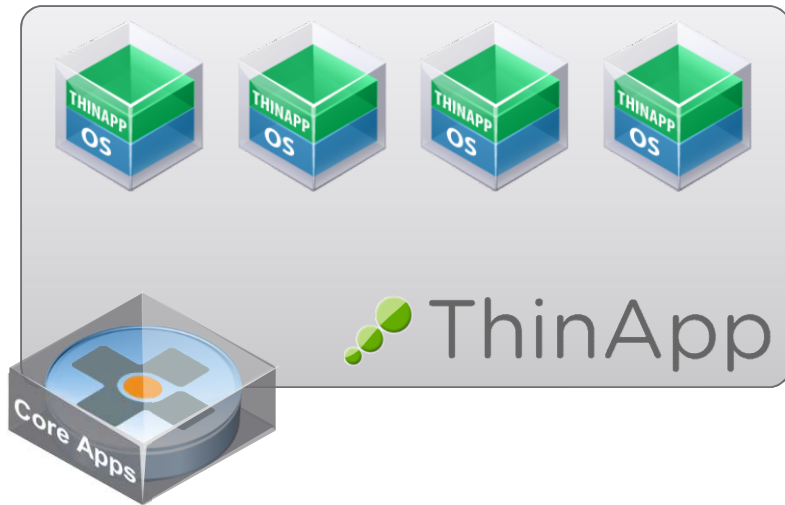
- Avoid network transfer overheads due to ThinApp application streaming

- Isolate applications to avoid conflicts (DLL, shared libraries, Java versions)

- Use existing ThinApp packaged applications and avoid re-provisioning

- Ease of portability between different AppStacks

App Volumes Storage Group

Features

- AppStacks Storage Group:
    - Automatic Replication – Datastore copied every 4 hours
    - Automatic Import – Automatically available in Manager after replication
- Writable Volumes Storage Group:
    - Spread – Distribute evenly
    - Round-Robin – Distribute sequentially
- Used to group Datastores together

Benefits

- IOPS aggregation, Reduce overall workload
- Distributes resource utilization
- Eliminates Attach Limitation
- Distribute storage cost more evenly

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Storage Group

DATASTORE 1

DATASTORE 2

DATASTORE 3
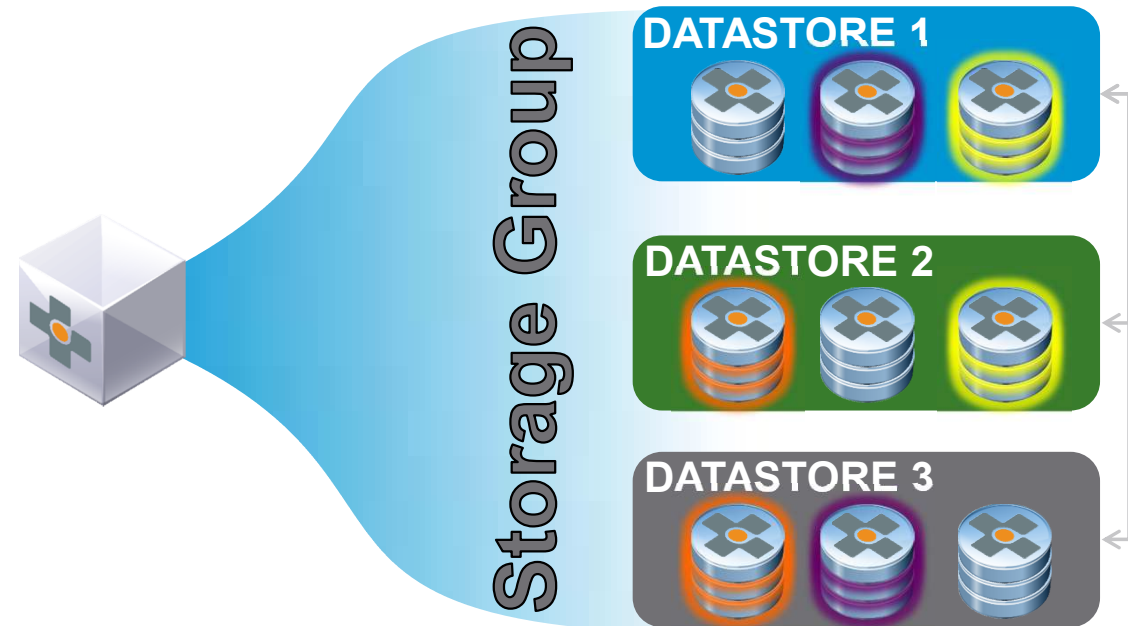
Legend

AppStacks

Writable Volumes

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Office Supported versions

Features

- Support for Office365 (2013 version)

- Additional delivery options for Office 2010 and 2013

- Office in base image and Visio and/or Projects in AppStacks is supported

Benefits

- Flexible delivery of multiple versions of Office including latest release of Office365

- To Leverage AppToggle, Office applications needs separate installation

Microsoft® Office 2010

Office 365

Microsoft® Office 2013

Office

***2016 not officially supported

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Thank You!