

Module 4

Configuring Application Delivery

Module Overview

- Dynamic Application Deployment Overview
- Web Deployment Packages
- Server Application Virtualization Overview
- Configuring Server App-V Components
- Sequencing and Deploying Virtual Applications

Lesson 1: Dynamic Application Deployment Overview

- What Is Dynamic Application Deployment?
- Overview of the Web Deployment Tool
- Server Application Virtualization Overview

What Is Dynamic Application Deployment?

Dynamic application deployment enables simplified deployment of prepackaged services:

- Web applications
- Multi-tier LOB applications
- SQL Server

Technologies used to make dynamic application deployment possible:

- Web Deployment Tool
- Server App-V
- SQL Server data-tier applications

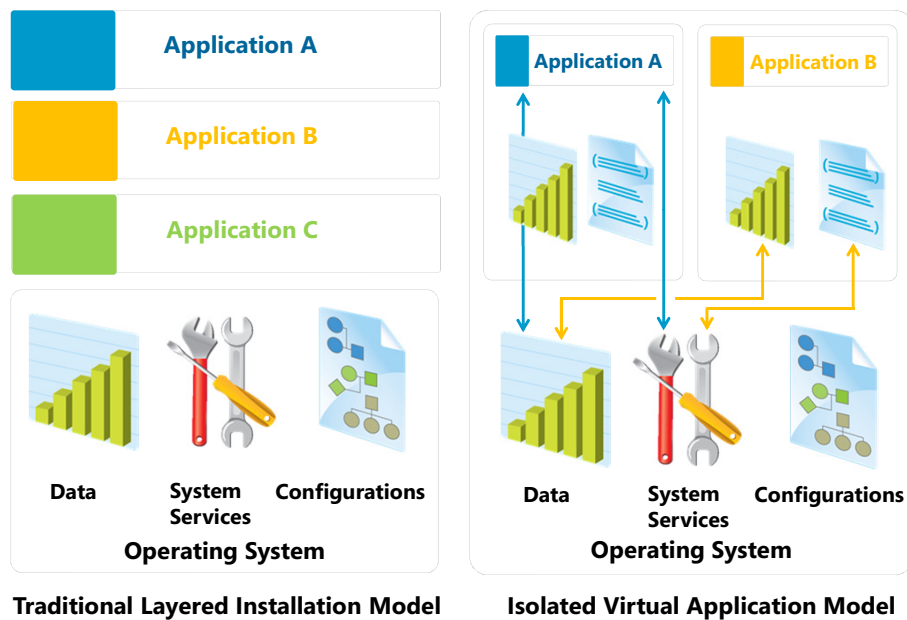
Overview of the Web Deployment Tool

Web Deploy creates packages, which you can then use to deploy a virtual application.

Web Deploy:

- Simplifies website deployment
- Allows you to package many of the settings and content needed for a website
- Creates a zip file with content and settings for easy deployment

Server Application Virtualization Overview



Lesson 2: Web Deployment Packages

- Overview of the Web Deployment Process
- Creating Web Deployment Packages
- Discussion: Using Web Deployment Packages with VMM

Overview of the Web Deployment Process



Creating Web Deployment Packages

You can:

- Create a web deployment package with IIS Manager, Visual Studio 2010, Visual Studio 2013, or the Web Deployment Tool
- Choose the content and settings included in the package, such as ACLs; COM, global assembly cache, and registry settings; and SSL certificates
- Choose settings that must be defined—such as connection strings and passwords—when the package deploys

Discussion: Using Web Deployment Packages with VMM

- What types of deployments might benefit from web deployment packages?
- What methods can you use to create web deployment packages?



Lesson 3: Server Application Virtualization Overview

- Server App-V Fundamentals
- Server App-V Usage Scenarios
- Invalid Server App-V Usage Scenarios
- Key Server App-V Terms
- Overview of the Application Sequencing Process
- The Server App-V Package
- Differences Between Server App-V and App-V

Server App-V Fundamentals

When virtualizing an application, Server App-V uses an application sequencing process to:

- Capture an application's settings and configuration prior to deployment
- Retain the runtime state of the deployed applications

After sequencing, you can:

- Back up a deployed Server App-V application
- Deploy the backup to another server with the application's last runtime state intact

Server App-V Usage Scenarios

Applications that require you to perform the following tasks may be candidates for Server App-V:

- Save runtime state to local disk
- Install Windows services
- Create IIS applications
- Add and change registry settings
- Install and use COM+ and DCOM objects
- Use text-based configuration files
- Install WMI providers
- Install and use SQL Reporting Services
- Add, modify, or use Local Users and Groups
- Install and use Java-based applications

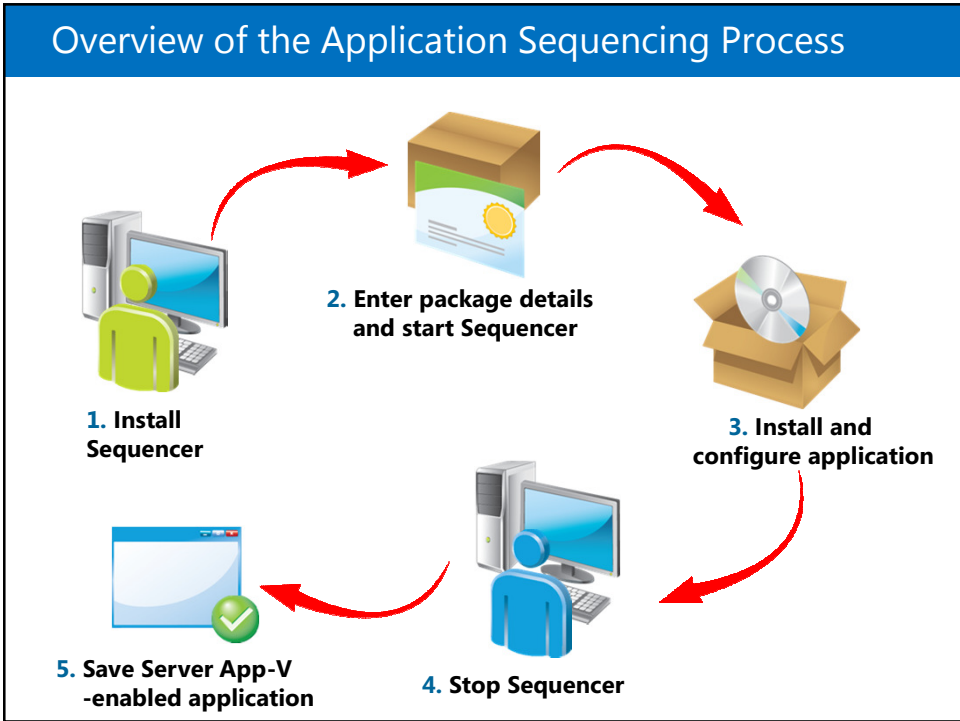
Invalid Server App-V Usage Scenarios

Applications that require the following **are not suitable** for virtualization using Server App-V:

1. Windows drivers
2. SharePoint Server or applications that install SharePoint Server
3. SQL Server databases



Key Server App-V Terms	
Term	Definition
Application	Binaries, configuration, and settings that you plan to virtualize
Server App-V Sequencer	Component that is used to package an application
Server App-V agent	Component that gets installed on the server that will run the virtualized application
Package	A collection of binaries, configuration, and runtime state information for the virtualized application
Server App-V virtual drive (Q:\)	The drive that stores the binaries and settings for the virtualized application, which the App-V Agent creates and maintains in a folder on your system drive



The Server App-V Package

The Server App-V package includes the following:

- Sequencer project (.sprj) file
- Package payload (.sft) file
- Open Software Descriptor (.osd) file
- Package manifest (_manifest.xml) file
- Deployment configuration (DeploymentConfig.xml) file



Differences Between Server App-V and App-V

Server App-V	App-V
Delivers applications directly to the running server	Streams applications using protocols over an App-V streaming server or file location
Sequences and delivers services and various components	Provides more limited virtualization capabilities than Server App-V
Designed for server-based applications and services	Designed for user-based applications

Lesson 4: Configuring Server App-V Components

- Server App-V Software Requirements
- Configuring the Server App-V Agent and Agent Cmdlets
- Best Practices for Configuring the Server App-V Sequencer

Server App-V Software Requirements

Server App-V supports the following operating systems:

- Windows Server 2003 R2 SP2, x86 and x64
- Windows Server 2008 SP2, x86 and x64
- Windows Server 2008 R2, x64
- Windows Server 2012, x64

Installation files are located in *Install Drive*:\Program Files \Microsoft System Center 2012 R2\Virtual Machine Manager\SAV

The Server App-V agent and Sequencer require Microsoft Visual C++ 2005 SP1 Redistributable Package

Configuring the Server App-V Agent and Agent Cmdlets

When installing the Server App-V agent:

- Use the correct architecture installer, either x86 or x64
- Do not install the Server App-V agent on the same server as a Sequencer
- Also install the Server App-V PowerShell agent cmdlets so that you can test packages

You must set the execution policy from an elevated Windows PowerShell session before you import that ServerAppVAgent module



Best Practices for Configuring the Server App-V Sequencer

Best practices for configuring the sequencing server are:

- Set up the sequencing machine with the same base configuration as the target servers
- Verify that the default sequencing drive is valid for your deployments
- Disable unused applications
- Document your sequencing environment
- If you are deploying the virtualized application to multiple operating system types, use the lowest version to sequence the application
- Use a virtual machine for sequencing, and create a checkpoint

Lesson 5: Sequencing and Deploying Virtual Applications

- Creating a Server App-V Package
- Server App-V Agent and Sequencer Cmdlets
- Testing a Server App-V Package
- Backing Up and Restoring a Server App-V Package

Creating a Server App-V Package

To create a Server App-V package, do the following:

1. Deploy a sequencing server
2. Install the Server App-V Sequencer
3. Install Windows roles and features
4. Run the New Virtual Application Wizard Package
5. Select your application's installer
6. Install the application to the Server App-V virtual drive (Q:\)
7. Run any other installers
8. Perform configuration changes
9. Customize the package information

Server App-V Agent and Sequencer Cmdlets

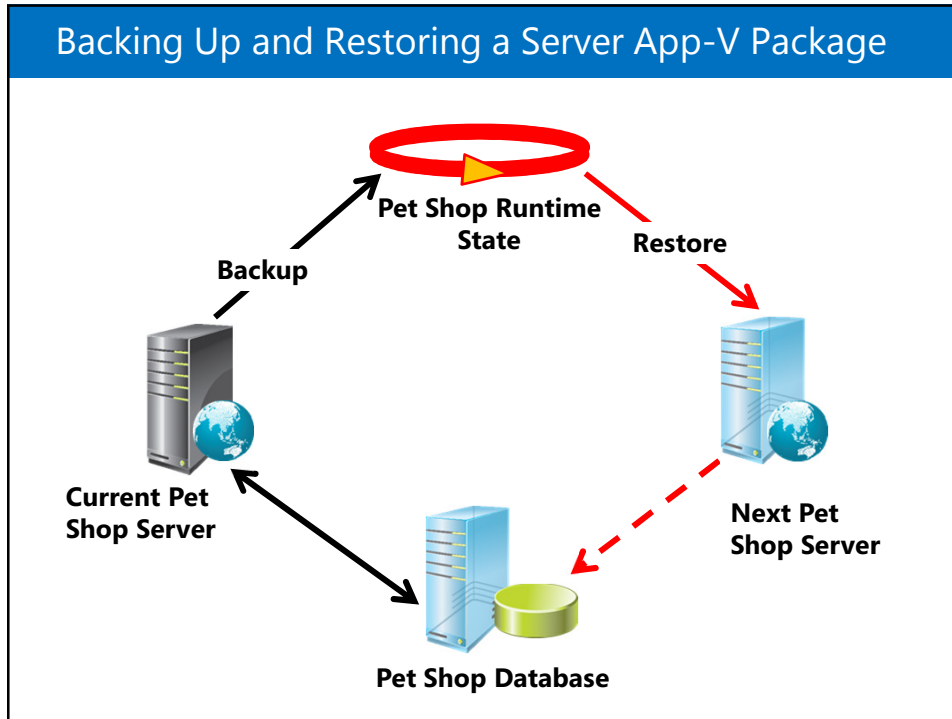
Agent Cmdlets	Sequencer Cmdlets
Add-ServerAppVPackage	New-ServerAppVSequencerPackage
Remove-ServerAppVPackage	Protect-UpdateConfiguration
Get-ServerAppVPackage	Unprotect-UpdateConfiguration
Backup-ServerAppVPackageState	Update-ServerAppVSequencerPackage
Restore-ServerAppVPackageState	
Remove-ServerAppVPackageState	
Get-ServerAppVAgent	
Set-ServerAppVPackageConfiguration	
Start-ServerAppVPackage	
Stop-ServerAppVPackage	

Testing a Server App-V Package

To test a Server App-V package, do the following:

- Customize the DeploymentConfig.xml file
- Run the Add-ServerAppVPackage cmdlet to add the Server App-V package
- Run the Start-ServerAppVPackage cmdlet to start the Server App-V package





Lab: Configuring Virtual Application Delivery

- Exercise 1: Configuring the Server App-V Sequencer
- Exercise 2: Configuring the Server App-V Agent
- Exercise 3: Sequencing an Application
- Exercise 4: Testing the Server App-V Package Deployment

Logon Information

Virtual Machines: 20247D-LON-DC1, 20247D-LON-SQ1,
20247D-LON-VM1, 20247D-LON-AP1, 20247D-LON-AP2,
20247D-LON-DM1

User Name: Contoso\Administrator

Password: Pa\$\$w0rd

Estimated Time: 60 minutes

Lab Scenario

As a part of the move to a private cloud infrastructure, Contoso, Ltd has decided to change its server application delivery strategy so that it can provide a more scalable platform.

Contoso, Ltd has decided to use Server App-V to deliver existing applications. You are tasked with virtualizing the .NET Pet Shop application using Server App-V. You will need to test the virtualized Pet Shop application before you deploy it.

You must configure Server App-V so that you can use it to sequence and deploy an application virtually.

Lab Review

- What are web deployment packages used for?
- What types of applications can you virtualize using Server App-V?

Module Review and Takeaways

- Review Question(s)
- Real-world Issues and Scenarios
- Common Issues and Troubleshooting Tips