Microsoft Application Virtualization

Saving Time, Improving Quality, and Reducing Costs

October 2010

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Microsoft®
Desktop Optimization Pack
for Software Assurance

The Windows Optimized Desktop

Make People Productive Anywhere

- Provide seamless access to data from anywhere
- Give people access to the right applications from anywhere
- Everyday tasks are faster and easier

Manage Risks Through Enhanced Security And Control

- Protect Desktop and Mobile Resources
- Monitor Compliance with software licenses
- More secure Web Browsing

Reduce Costs by Streamlining PC Management

- Simplify application and desktop lifecycle management
- Improve control and automation
- Keep PCs running smoothly
- Manage physical and virtual assets from one place

Windows 7

Microsoft Desktop Optimization Pack for Software Assurance

Microsoft Forefront

Microsoft System Center

Windows Server 2008 R2

Windows Internet Explorer 8

Microsoft Desktop Optimization Pack

What you need to know

What the Desktop Optimization Pack provides

- Microsoft® Enterprise Desktop Virtualization
- Microsoft® Diagnostics and Recovery Toolset
- Microsoft® Asset Inventory Service
- Microsoft® Application Virtualization
- Microsoft® System Center Desktop Error Monitoring
- Microsoft® Advanced Group Policy Management

Microsoft® Desktop Optimization Pack for Software Assurance

1	Provide immediate ROI	•Regular updates •Faster upgrade cycle, separate from Windows® •Minimal deployment effort
2	Deliver end-to-end solutions	•Run out of the box •Integrate with existing management solutions
3	Lower Desktop TCO	•>95% of MDOP customers are (very) satisfied *1 •$70-$80 net cost savings per PC per year using MDOP *2

**1, Microsoft MDOP customer study. Base: Current MDOP customer n=108, non-MDOP customer n=367*

*2, MDOP ROI Analysis by Wipro

Microsoft Application Virtualization

Dynamically streaming software as a centrally managed service

Microsoft® Application Virtualization

What it Does

- Streams applications to users
- Centralizes permissions
- Never installs applications
- Isolates applications
- Provide real-time metering reports

Benefits

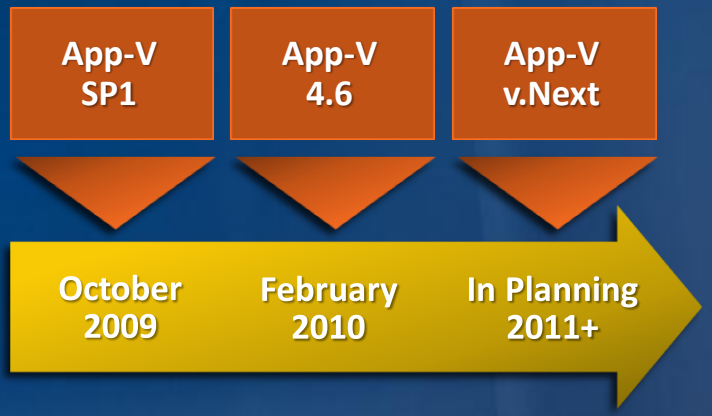
- Readily accessible applications
- Accelerate Windows deployment
- Accelerate application recovery
- Reduced application conflicts
- Minimize app-to-app compatibility testing
- Leverage existing PC Management investments

Total Direct Cost Savings of $82/PC/year*

Heidelberg

"Microsoft Application Virtualization helps us dramatically reduce packaging time, optimize application delivery and management processes, and cut the total cost of ownership for our client environment. It paid for itself in just six months."

Axel Junghans
Global Client Manager
Heidelberg



** Microsoft App-V Cost Reduction Study, Sept. 2009*

Introducing App-V 4.6

App-V and the Microsoft Platform deliver a seamless user experience, streamlined application deployment and simplified application management.

Broadening Windows Platform Coverage

- Enable App-V to run on 64-bit Windows®-based desktops and servers
- Enable integration with Windows 7 Applocker™, BitLocker®, and BranchCache™
- Thirteen new languages in support of global businesses

Windows Server 2008 R2
Windows 7 X64

Offering Microsoft Office 2010 User Productivity Enhancements

- Extend virtual Microsoft® Office 2010 usage via improved SharePoint integration to open, save, and edit files
- Find e-mail items quickly with Microsoft Outlook Fast Search
- Connect to your inbox using the Outlook Send To functionality

Microsoft® Office 2010

Optimizing Server Disk Storage when using App-V in VDI scenarios

- Point virtual desktops to a shared cache for applications instead of streaming to each individually
- Reduces storage requirements on SAN by eliminating redundancy of application binaries

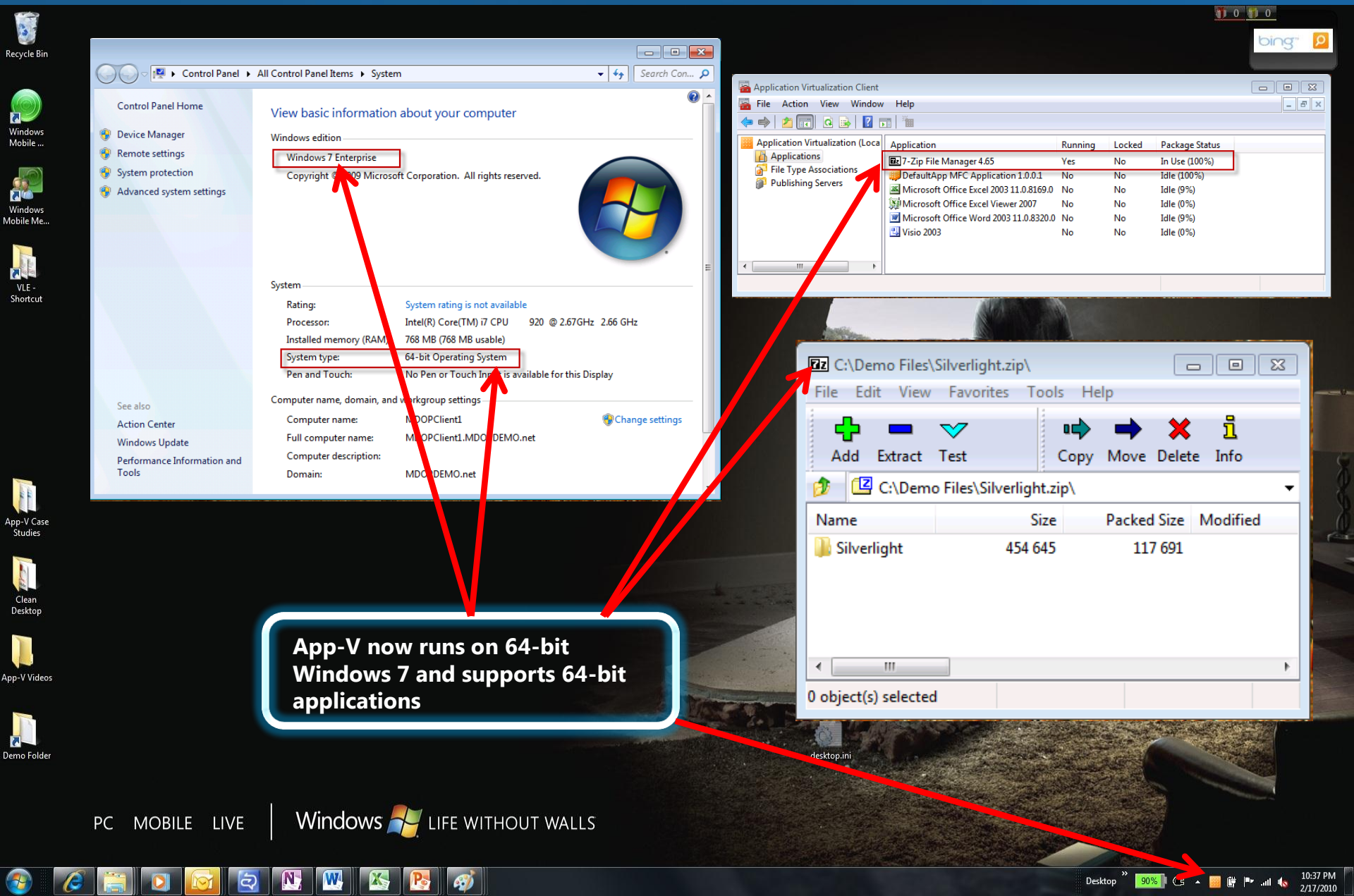
Windows Server 2008 R2

Expanding on Core Management Capabilities

- Enable App-V to launch true 64-bit applications
- Improved Sequencer Experience with ability to sequence true 64-bit applications
- Faster virtual application availability when using Microsoft System Center Configuration Manager 2007 R2 SP2

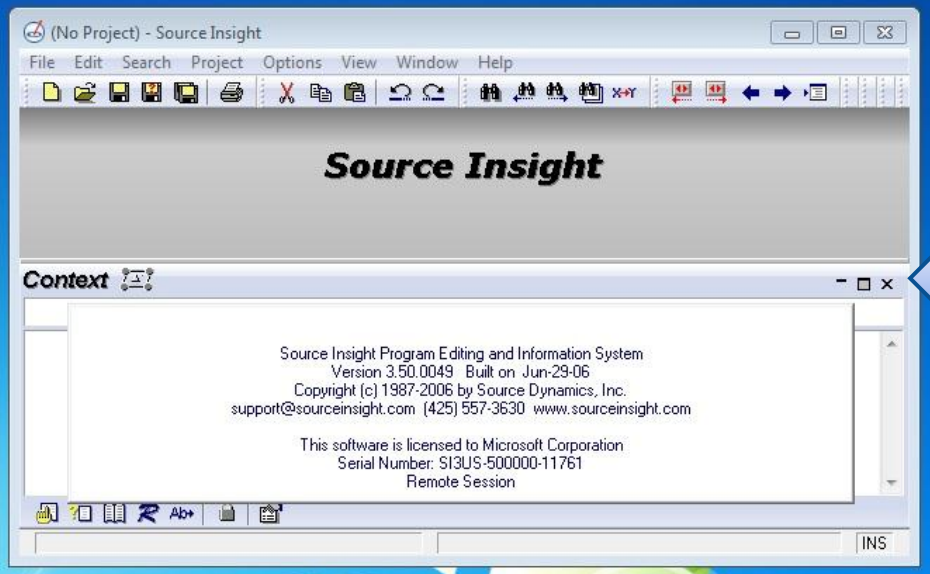
Microsoft System Center X64

App-V 4.6 and Windows 7 (64-bit)



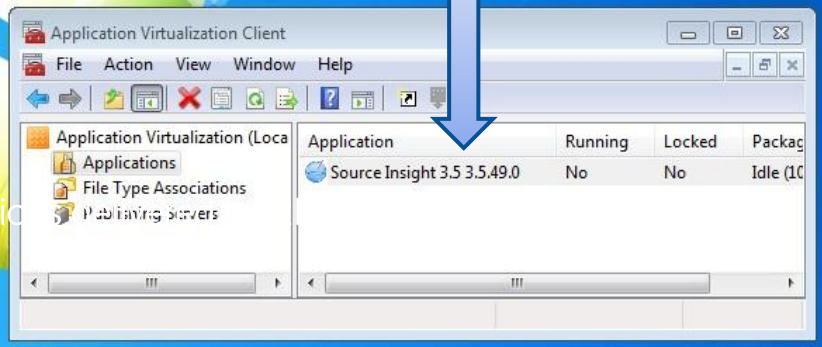
App-V 4.6 and Windows Server 2008 R2

User connects to VDI and receives a Windows 7 Virtual Desktop



Virtual Application launched within VDI Desktop

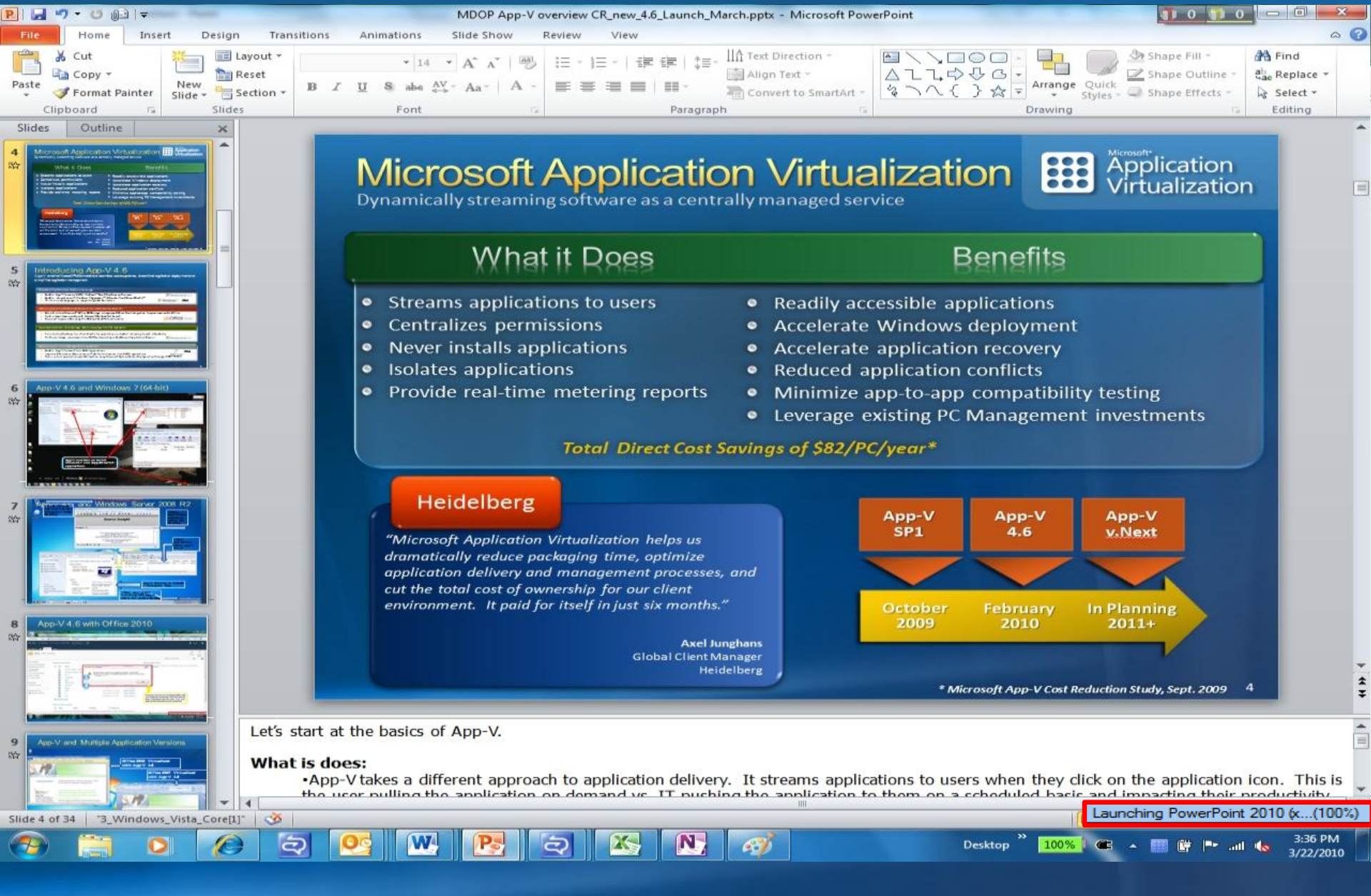
Virtual Application within App-V Client



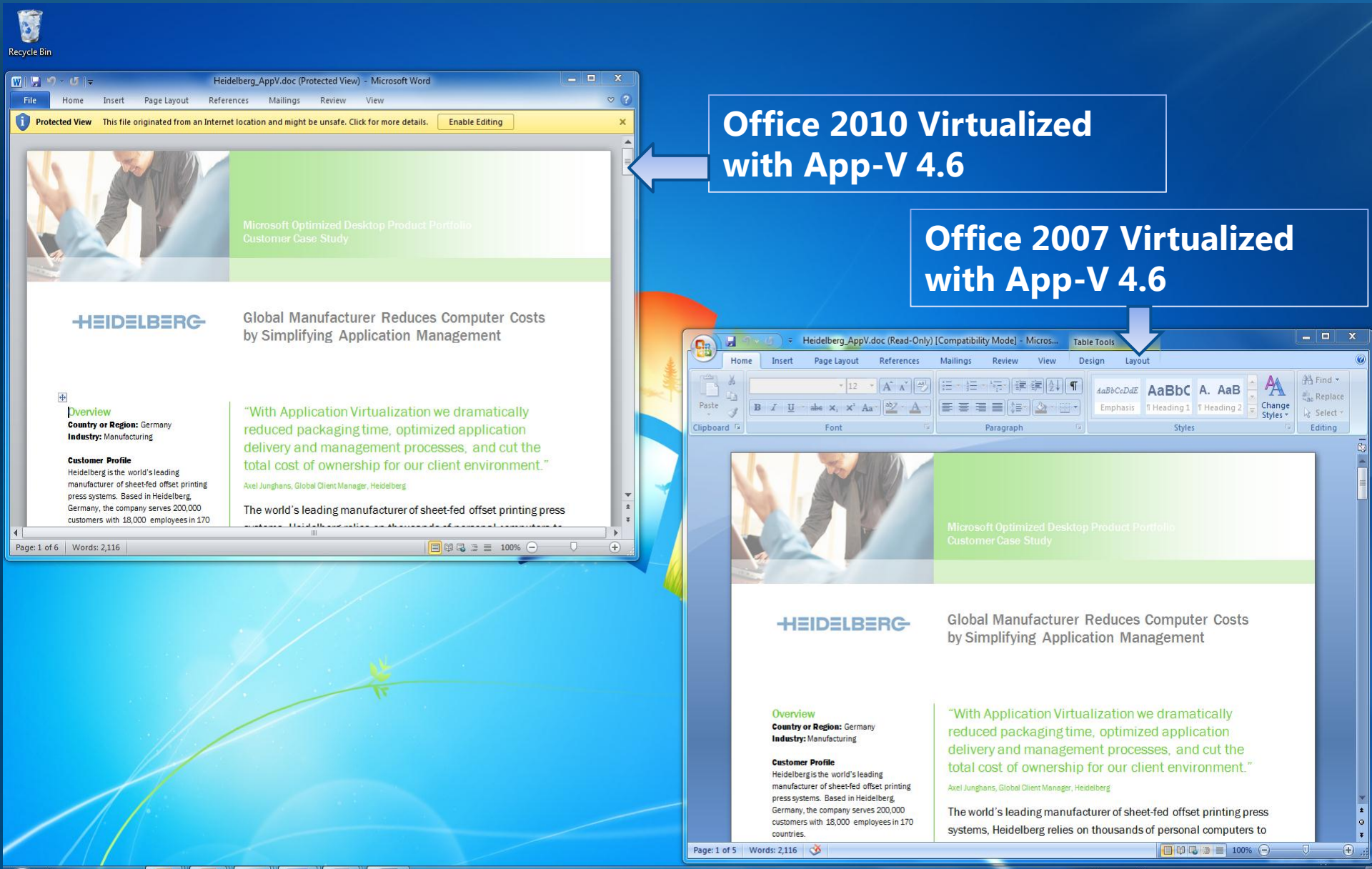
App-V running in Windows 7 Enterprise x64

Virtual Application launching with App-V within the Hosted Desktop

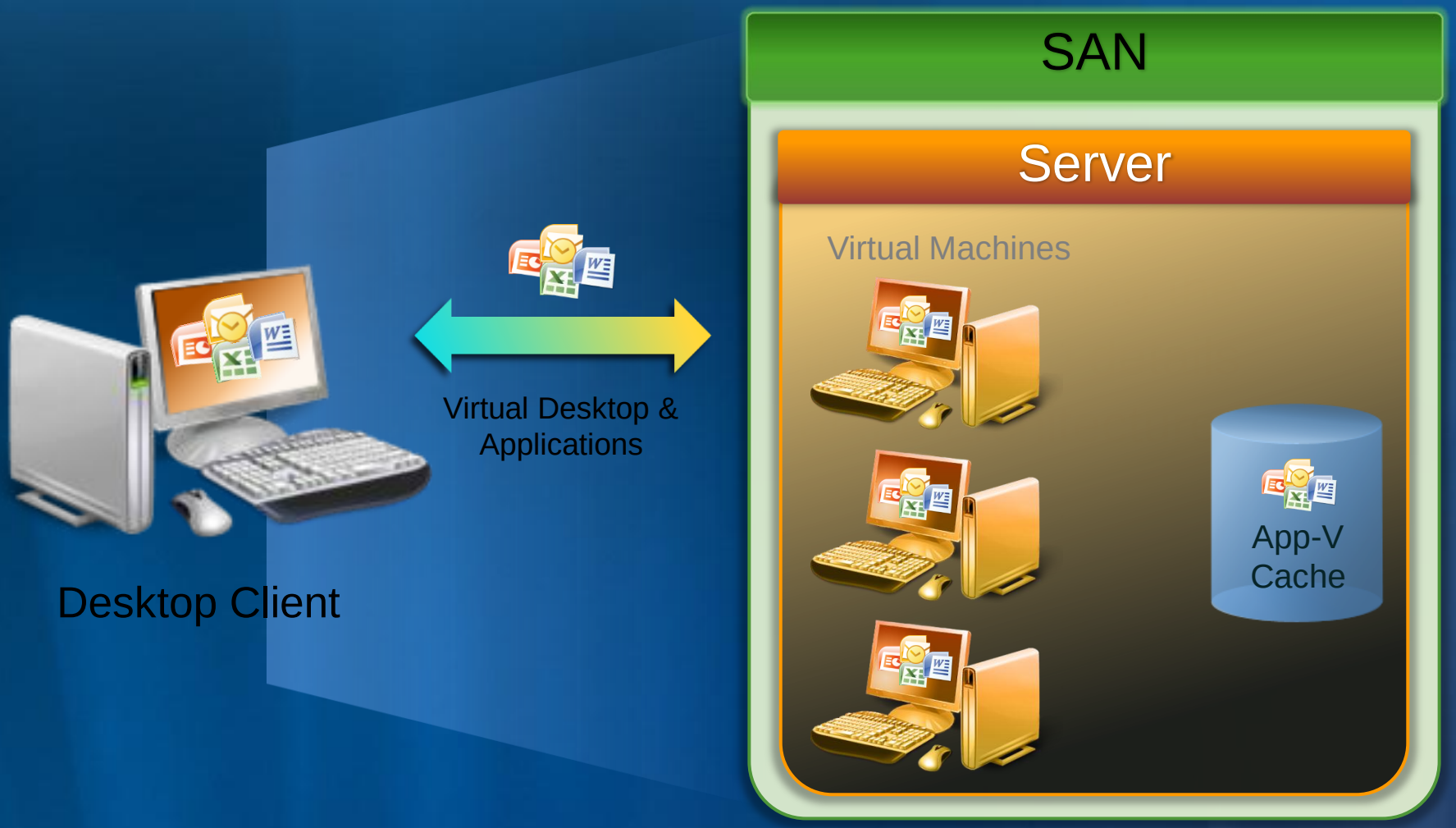
App-V 4.6 with Office 2010



App-V and Multiple Application Versions



App-V 4.6 and VDI Shared Cache

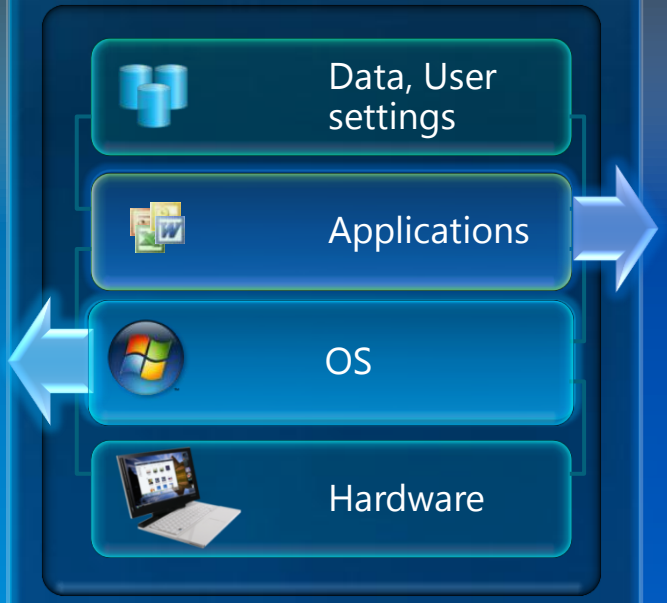


Desktop vs. Application Virtualization

Microsoft® Enterprise Desktop Virtualization

\+ Microsoft® Virtual PC

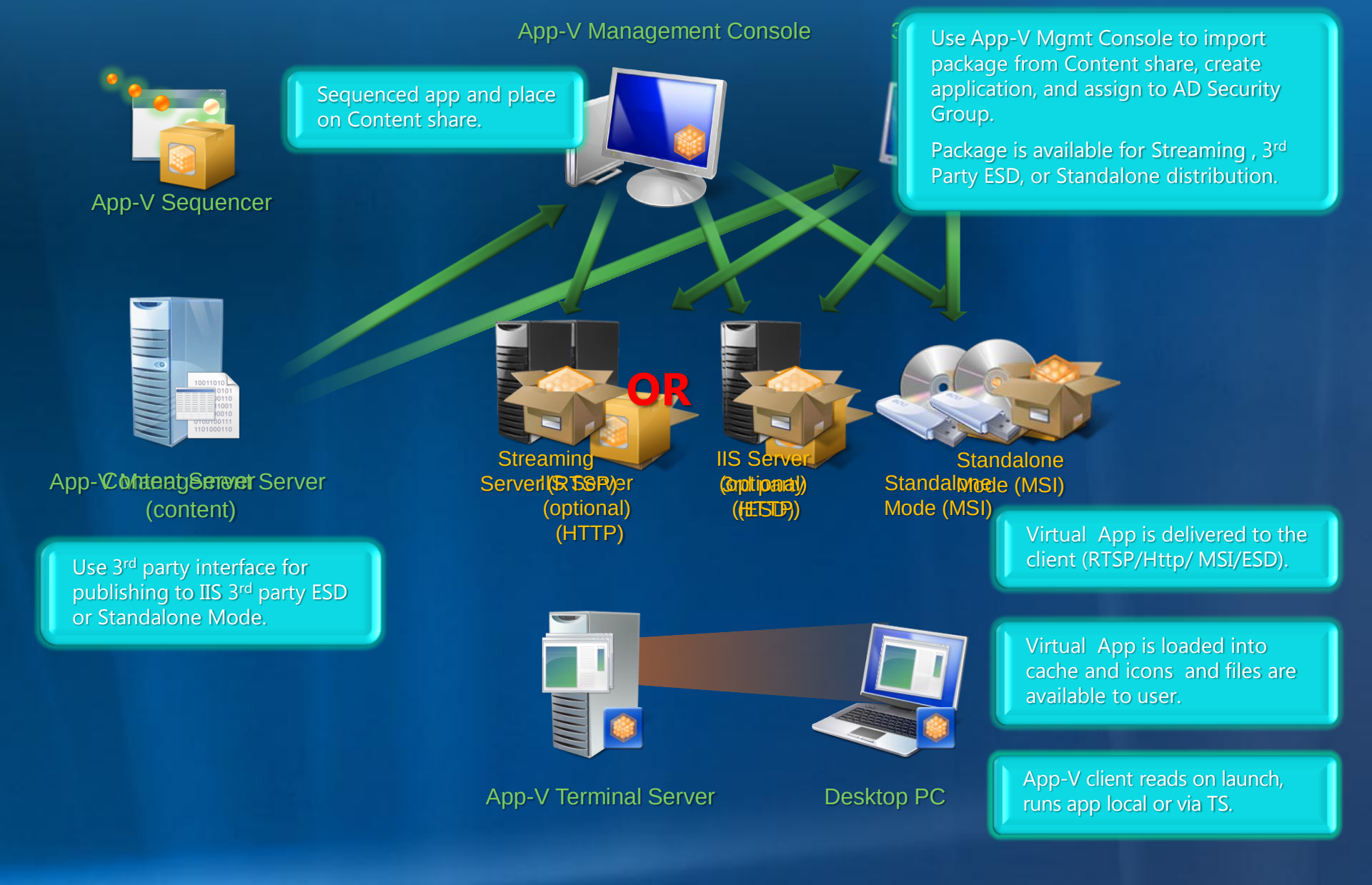
- **What it does**
  - Creates a package with a full OS
- **What it is good for**
  - Resolve incompatibility between applications and a new OS
  - Run two environments on a single PC (e.g. corporate and personal)



Microsoft® Application Virtualization

- **What it does**
  - Creates a package of a single application
  - Eliminates software install
- **What it is good for**
  - Resolve conflicts between applications
  - Simplify application delivery and testing

App-V Infrastructure – How It Works



Application Virtualization Made Easy.

No user learning curve. Click to launch any virtual application anywhere.

- Stream Once. Launch local and work completely offline.
- No waiting for complete application install or update. No reboots. No application conflicts
- Preserve user settings online and offline.
- Automatic application and icon refresh if removed.

Simplify your next Windows rollout

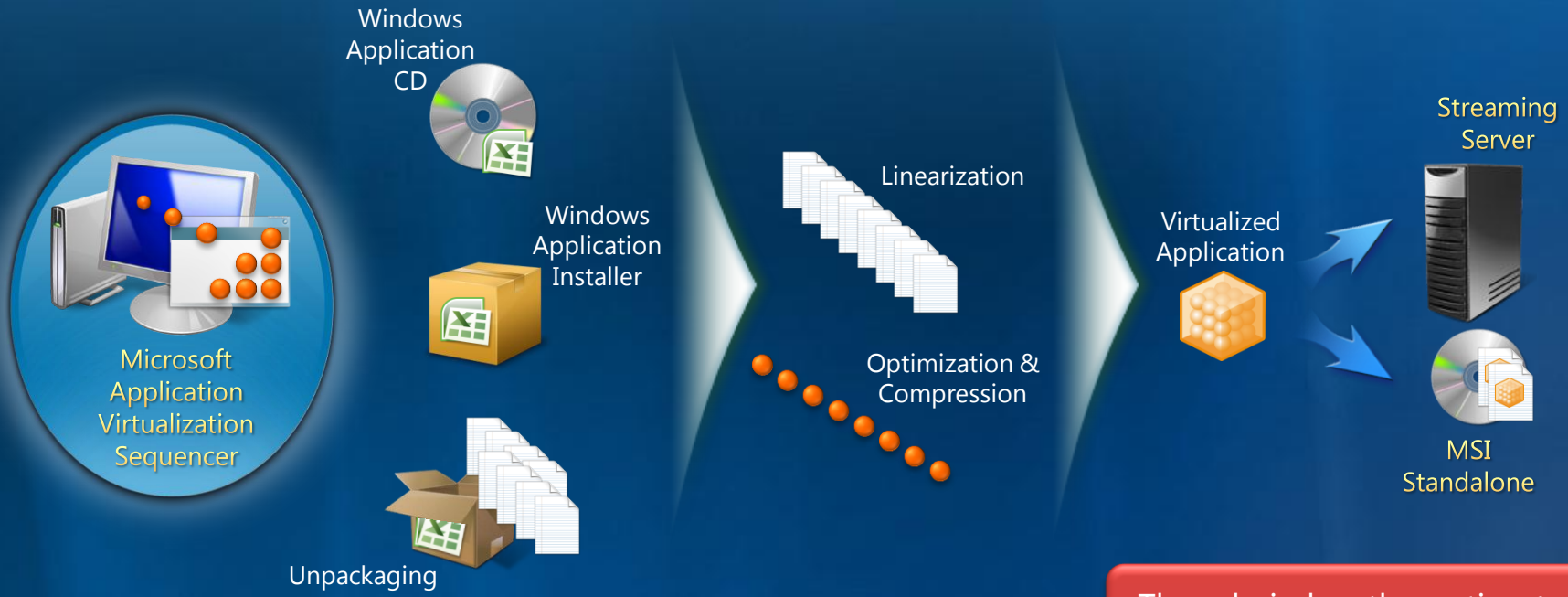
- Isolate and decouple applications from Windows to reduce conflicts.
- Reduce the Windows footprint by never installing applications.
- Reduce Windows deployment time by delivering applications virtually.
- Manage Windows and Applications independently but use the same toolset.

Easily prepare Virtual Applications & Dependencies for Deployment

- Single sequencing wizard with powerful interface for customization.
- Simple MSI creation for quick deployment with existing software distribution systems.
- Simple application dependency creation. No editing or renaming.
- Easily view applications and their dependencies.
- Virtual applications supported on Windows 7.

Microsoft Application Virtualization

Application Sequencing – The gateway to Microsoft Application Virtualization



Rapidly packages applications through active watch technology including execution dependencies.

The Sequencer produces the virtual application package containing the application and its dependencies.

The admin has the option to stream the virtual application or create an MSI wrapper for Standalone Mode delivery

Dynamic Application Interaction

Dynamic Suite Composition (DSC)

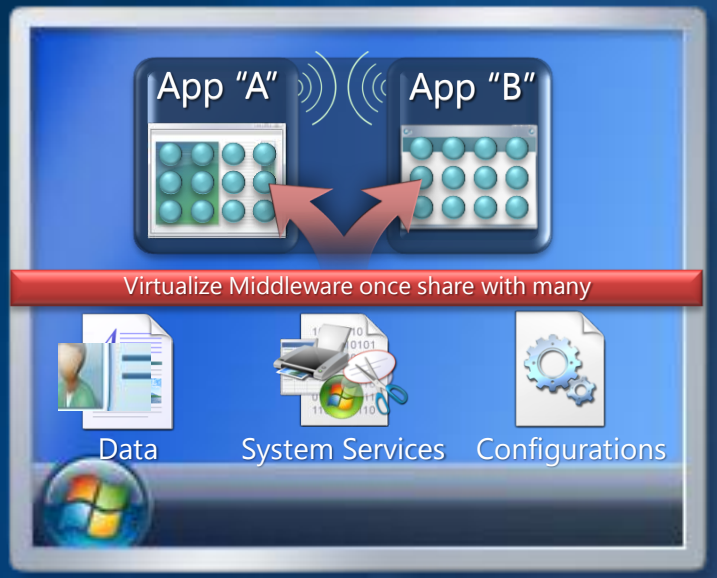
Virtual Environment

- Single application with no dependencies still exist
- Application known to not conflict may be configured to share the same virtual environment
- Mandatory/Optional dependency configuration options
- Virtual applications can share common dependencies

Flexible Package Management

- Administrator controls & configures the virtual application separately
- Create a "one to one" scenario for single applications that are dependant on each other
- Create a "many to one" scenario where middleware and plug ins components can be reused
- Reduces the potential package size

Application Sharing Using DSC



Flexible Management Built In

Flexible Deployment Options for All Business Needs

- Server or no Server, YOU DECIDE.
- Secure streaming, standard streaming or no streaming, YOU DECIDE.
- In the box infrastructure, integrates into System Center, or use your existing software distribution product, YOU DECIDE.
- Desktop Virtualization or Terminal Services integration, YOU DECIDE.

Readily Accessible Applications for Users, Manageable for IT

- Complete online, offline and over the internet application usage metering.
- Regular, automated polling for new applications or updates. No login or manual synchronization required.
- Roaming supported. Application & user preferences travel with your users.
- Customize offline behavior and metering to prevent non-compliant usage.
- Localized support in 24 languages, ready for global businesses.
- Troubleshoot using standard Windows methods (event log, mgmt pack).

Flexible Management Built In

Microsoft® Application Virtualization

Virtual Application Management in the Box

- Assign virtual applications to end users using Active Directory and stream to users.
- Update virtual applications without repackaging, disconnecting users or rebooting.
- Retire virtual applications quickly by removing assignment, no uninstall required.
- Single update process for client and infrastructure components via Microsoft Update, no application changes required.
- Virtual application license and usage metering included.

Microsoft® System Center

Virtual and Physical Application Management

- Centralized infrastructure provides single delivery and management workflow for physical and virtual applications
- Deploy virtual application by targeting users or machines.
- Automated staging & replication of applications to the enterprise, no scripting.
- Inventory virtual & physical applications. Determine to who & where they are deployed.
- Integrate virtual applications with System Center to streamline your Windows operating system upgrade and deployment process.

*Gartner notes that by including Application Virtualization in MDOP, Microsoft has helped position ConfigMgr '07 as the tool to manage App-V packages.**

Microsoft Application Virtualization Deployment Options

Package, Deploy, Manage. Conflict free applications with manageability as the cornerstone to successful service delivery.

Enabling Key Scenarios

- Reduce application conflicts
- Reduce application compatibility testing
- Remove application related reboots
- Dynamic application streaming
- Always accessible applications

Integrate App-V into existing environments and processes

Standalone Mode

- Standalone execution of virtual applications
- No server infrastructure required
- Interoperable with SMS/ SCCM & 3rd party ESD

Microsoft System Center Configuration Manager 2007 R2

Lightweight Infrastructure

- Single Management Console
- Single Software distribution workflow
- No additional infrastructure required
- Integrate virtual applications with automated OS deployment
- Full status and reporting of virtual applications
- No SQL Server required
- Inventory and updating of virtual applications
- Allows streaming capability to be added to SMS/SCCM & 3rd party ESD
- User or Machine targeting
- Scalable to 100' s of thousands of devices

Proven. Real Business. Real Benefits.

Mature and Proven Technology

- 27M+ licenses of MDOP sold containing App-V.
- Microsoft App-V 4.6 is the 4th Microsoft release of the product; ready to deploy at scale.
- 12yrs combined experience in the application virtualization and PC lifecycle management.
- Over 80 App-V specific case studies from Microsoft customers around the world.

Save Time and Money. Deploy Applications Virtually

- Eliminate application conflicts, reduce time and money.
- Deliver applications to users more quickly.
- Reuse existing infrastructure and extend ROI.
- Consolidate Servers using App-V for Terminal Services.
- Virtualize your infrastructure using App-V and Microsoft Virtualization technologies.

Partners Ready to Take You From Proof of Concept to Production

- Industry Partners build on the App-V platform to extend value.
- Industry Partners available to deploy App-V to the enterprise.
- App-V file format published to Microsoft Open Source Promise to further enable the ecosystem

Customers Saving Now With Application Virtualization

80+ customer case studies show:

App-V is the desktop TCO hero

Virtualizing applications brings immediate cost saving across your enterprise desktops.

- Cut deployment time from 3 months to 3 days
- Reduced PC images from 20 to 3
- Saved $1M+ in deployment and support-related costs

- Reduced packaging time by more than 50 percent
- Realize 40 percent cost savings

- Business continuity downtime reduced to minutes

Microsoft Application Virtualization Offerings

Multiple solutions to meet your business challenges

App-V for Desktops

- Virtual applications run on the user machine
- Consolidate & standardize images
- Build business continuity for applications
- Applications can be taken offline

Microsoft® Desktop Optimization Pack for Software Assurance

*Microsoft Application Virtualization CAL for Desktops is available through MDOP for Software Assurance only.

App-V for Remote Desktop Services (RDS)

- Virtual applications run on the RDS Server
- Enable Server Consolidation
- Mitigate Roaming Profile Issues
- Transform RDS into a dynamic system

Microsoft® Application Virtualization for Remote Desktop Services

*Microsoft Application Virtualization CAL for Terminal Services is now included as part of the RDS CAL

App-V Hosting for Desktops

- Available through Service Provider License Agreement
- Allows organization to host virtual applications on behalf of their customers
- Can be used for 3rd party or LOB application delivery

Microsoft® Application Virtualization Hosting for Desktops

*Microsoft Application Virtualization for Service Providers is available and sold separately from MDOP

California State University Case Study

Streamlining application packaging and management while improving desktop security

The Challenge

- Time consuming Deployments and Updates
- Difficult Desktop Security
- No support for multiple application versions on the desktop

The Results

- Simplifies and reduces application deployment from several days to just hours
- Cuts upgrade time for key applications by hundreds of hours
- Improves desktop security by minimizing the need for local administrator access for applications
- Enables multiple application versions to run on the same computer, easing IT support for training labs, migrations and software developer requirements
- Enhances disaster recovery for applications

"We were spending valuable time dealing with the challenges inherent in managing so many applications and users. We sorely needed a more innovative way to do this in order to concentrate our efforts on other value-add services. Microsoft's unique virtualization solution eliminates application management complexities and helps us provide even better IT service to our constituency."

- Laura Guillory
Director of User Services,
California State University
Chancellor's Office

"Application virtualization is critical. It will enable us to have a simplified model where we can give users a vanilla computer and instantly deliver their applications to the new machine."

UCF

"We eliminated deployment complexities and accelerated the entire process from packaging … to delivery. We're much more flexible and responsive to user needs."

Casey Hill, IT Infrastructure Manager,
University of Central Florida

Microsoft® Desktop Optimization Pack for Software Assurance

University speeds application delivery and improves stability by using virtualization

Customer Business Challenge

- University of Central Florida wanted an easier, faster way to package and deliver applications to its computing labs and IT staff
- It needed to ensure that applications would run reliably once deployed

Solution

- Virtualized applications and streamlined delivery using Microsoft® Application Virtualization
- Plans to take advantage of 64-bit capability, with upgrade to Windows® 7 operating system

Customer Results/Benefits

- Speed application deployment by 75%
- Enhanced reliability and responsiveness, reduced downtime
- Can run multiple application versions simultaneously
- Improved application tracking, cut licenses

Resources

Website for Microsoft Desktop Optimization Pack for Software Assurance
http://www.windowsvista.com/optimizeddesktop

Microsoft Application Virtualization Home Page
http://www.microsoft.com/systemcenter/appv/default.mspx

Microsoft Application Virtualization TechCenter
http://technet.microsoft.com/en-us/appvirtualization/default.aspx

Microsoft Application Virtualization Blog
http://blogs.technet.com/softgrid/default.aspx

Microsoft Application Virtualization Case Studies
http://www.microsoft.com/casestudies/search.aspx?ProTaxID=3369

IDC Webcast: Improving Desktop Management with Microsoft Desktop Optimization Pack
http://www.microsoft.com/events/series/desktopoptimization.aspx?tab=webcasts&id=all

Gartner: Quantifying the Value of Microsoft's Desktop Optimization Pack
http://mediaproducts.gartner.com/reprints/microsoft/vol4/article6/article6.html

Microsoft®

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