# Application Virtualization

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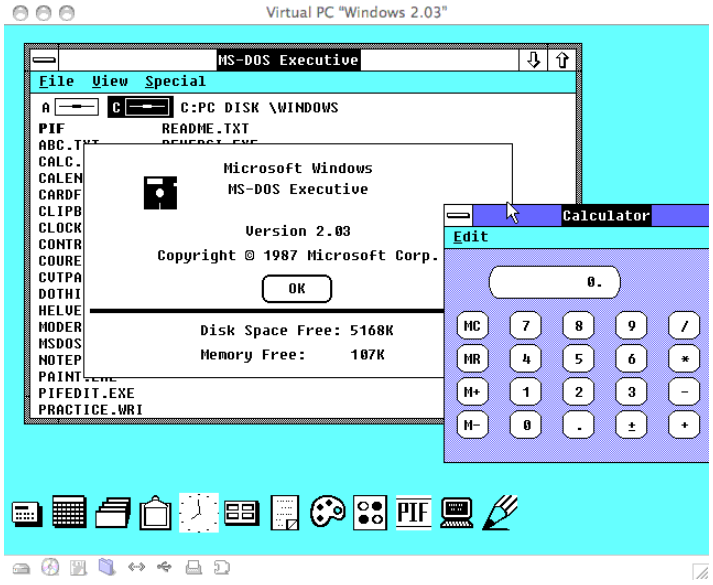
# Agenda

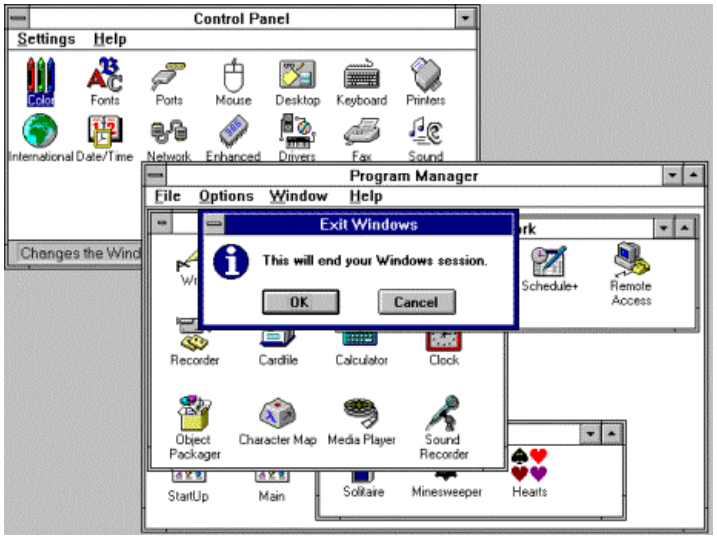
- History
  - What Happened?
  - Challenges
  - Application Deployment Today
- Application Virtualization
- Demo Video

# In the beginning.. (well, close to it)

# Enhancements or Complexity?



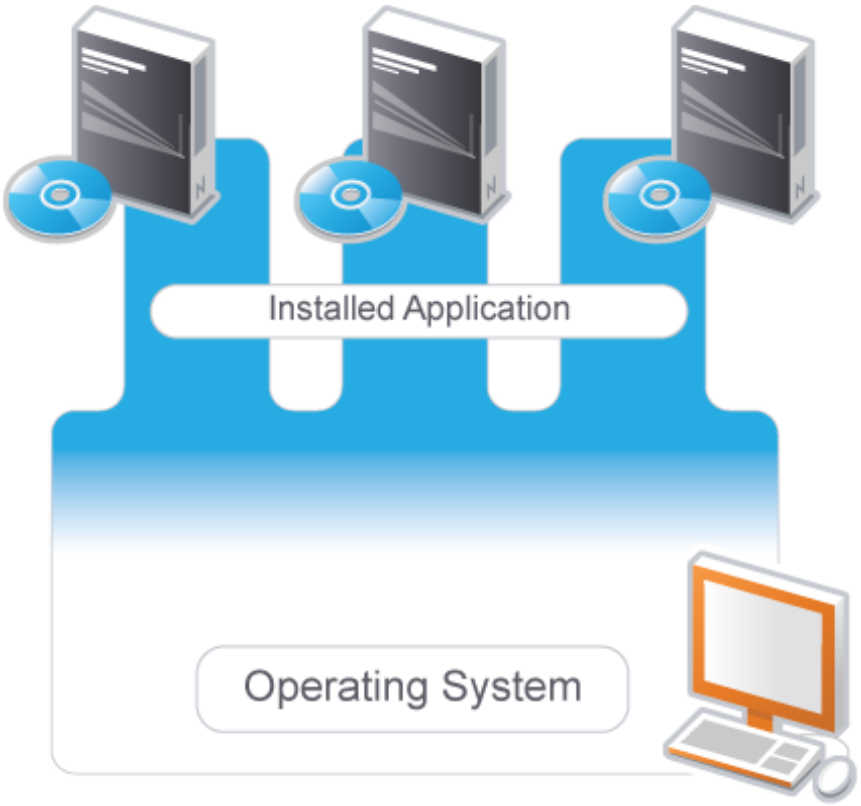


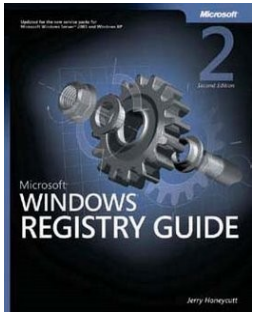



# So what happened?

- INI files
- Shared DLLs
- Centralized Registry
- Common Object Model
- Evolving Hardware

(16-bit, 32-bit, 64-bit)




# Application Deployment

- setup.exe
- MSI packaging
- Terminal Server/Citrix
- Web applications
- Application Streaming / Virtualization

# Challenges

- Repackaging time
- Regression testing
- Network bandwidth
- Installation time
- User downtime
- Environment and technology complexity

# Today's Desktop Applications

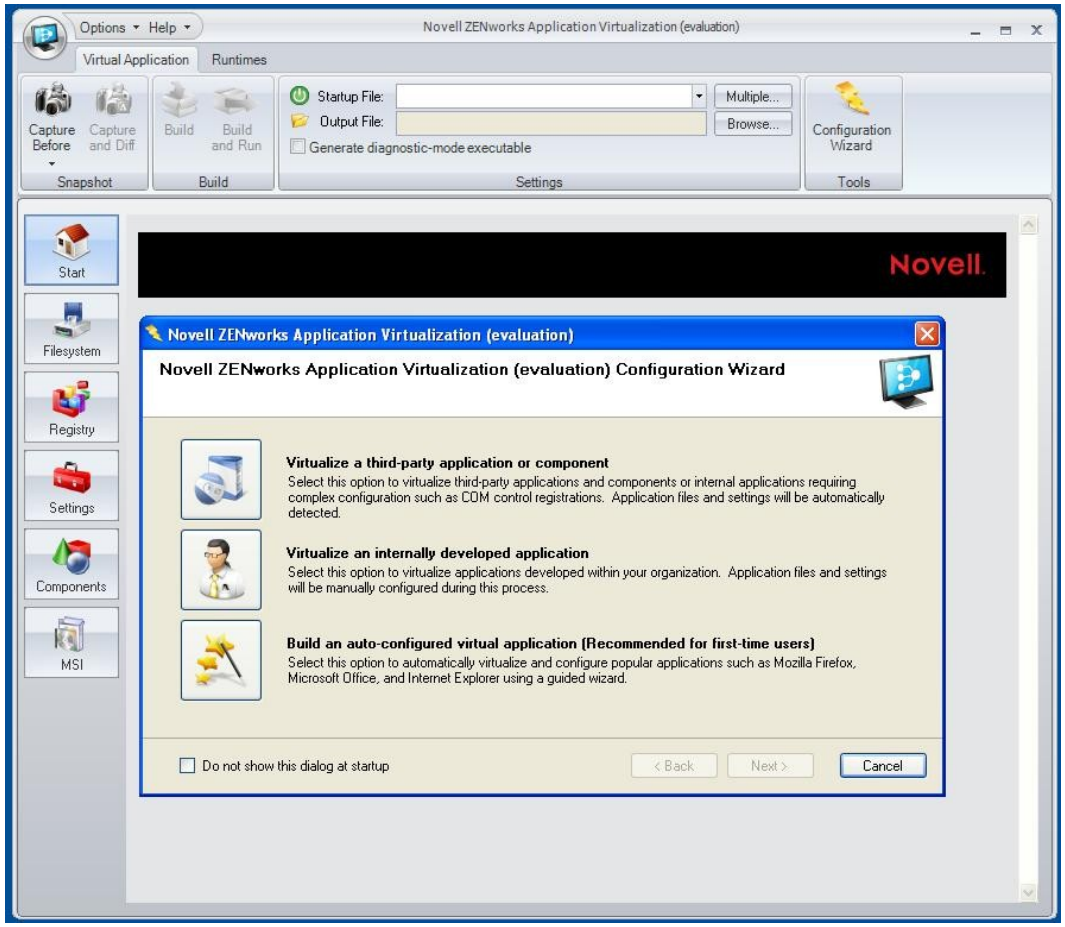
- Failed application installations
- Too many images to maintain & patch
- Application incompatibilities
- Software & registry conflicts
- Contingency planning & execution
- Security is top priority
- Testing is expensive and time consuming

# Application Virtualization

# Application Virtualization


Applications run isolated from host system. Nothing is installed. Applications do not change the OS, registry settings or .dll's.

# ZENworks Application Virtualization




Convert applications to a single, isolated file that runs instantly without a change to your standard operating environment.

# Why use application virtualization?

- Simplify application deployment
  - Copy the EXE to the device and its ready to go
  - No UAC prompts since no install ever happens
  - Upgrades are as easy as providing a new EXE
- Eliminate application conflicts
  - Since each application can be completely isolated from others you can eliminate “DLL-hell”
- Solve application compatibility issues
  - Run multiple versions of an application simultaneously
  - Run legacy applications on newer OS's (IE 6 SP1 on Vista)

# Why use application virtualization?

- Portability
  - Virtualized applications and their sandbox can be stored on removable devices
  - Virtualized applications can be executed on restricted (kiosk) type devices
- Easily deploy .NET and Java applications
  - No need to install .NET or Java on the machine, just add it to the virtual package
- Security
  - Since the application can be isolated from the real registry and file system no need to worry about applications damaging the machine
  - User does not have to be administrator to execute the app

# A Better Way to Run Applications

- No application, .dll or registry conflicts
- Self contained including needed runtime components
- Applications run instantly
- 100% removal of software
- No additional client software
- Portable application

# ZENworks Application Virtualization

- Application executes from a single file, without installation, completely isolated.
- Zero client footprint, no server infrastructure.
- Run applications instantly from anywhere including HD, USB and DVD.
- No end user experience change.
- Custom templates & 70+ certified applications.
- Virtualize commercial and in-house developed applications

# Sample of Certified Applications

- Adobe Acrobat Reader 5, 6, 7, and 8
- Adobe Illustrator CS2 and CS3
- Adobe Photoshop CS2 and CS3 Adobe / Macromedia Dreamweaver 8 and CS3
- Adobe / Macromedia Flash Professional 8 and CS3
- Adobe / Macromedia Freehand MX
- Apache Foundation HTTP Server 2
- Apple iTunes
- Autodesk Maya 7 and 8
- Axialis IconWorkshop 6
- AxoSoft OnTime Client 5
- BusinessObjects Crystal Reports 9 Pro
- Cerulean Studios Trillian 3
- Citrix Program Neighbourhood 9
- Citrix Access Gateway Admin Client
- Corel CorelDraw 12
- Corel Painter IX
- EasyBoot Systems UltraISO Premium 8.6
- FileZilla FileZilla 3
- The GIMP Team GIMP 2
- Google Google Earth
- Google Google Picasa
- Google Google SketchUp
- GreTech GOM Player 2
- Corel Paint Shop Pro 7
- Parametric Technology Mathcad 13 and 14
- MathWorks Matlab
- Microsoft Internet Explorer 6 and 7
- Microsoft Office 97, XP, 2003, and 2007
- Microsoft Visual Basic 6
- Microsoft .NET Framework 1.1, 2.0, 3.0, and 3.5
- Microsoft Remote Desktop Client
- Microsoft Windows Media Player
- Mozilla Firefox 2 and 3
- MySQL MySQL 5
- Nullsoft Winamp 5
- Opera Software Opera 9
- Oracle Oracle 9 Client
- Oracle Oracle Calendar Desktop
- PGP PGP Desktop
- Quark Express 5
- Roxio Creator Plus
- SAP SAP GUI 6
- Siemens Unigraphics NX
- Skype Skype 2
- Softera LDAP Browser 2
- SolidWorks Solidworks 2008
- Sun Microsystems Open Office 2
- SystemTools Hyena 6.7
- Ulead DVD Player 1.1
- VanDyke SecureCRT 5
- WinRAR WinRAR 3.6
- WinZip WinZip 11
- Wolfram Research Mathematica 5
- X-Ways WinHEX 13

# Benefits

Higher Productivity: Reduces downtime & recovery time. Accelerates roll outs. Mobility. Fewer service desk calls.

Lower costs: Reduce testing. Eliminate service desk calls. Greater flexibility & interoperability.

Maintain Security: Protects during changes. Insures business continuity.

# Common Use Cases

New Applications: Test, rollout & rollback easily without install or uninstall.

Applications on a Memory Stick: Completely portable. Leaves no trace on host PC.

Application Compatibility: Applications not fully compatible. IE6 browser based business applications on Vista.

# Return on Investment

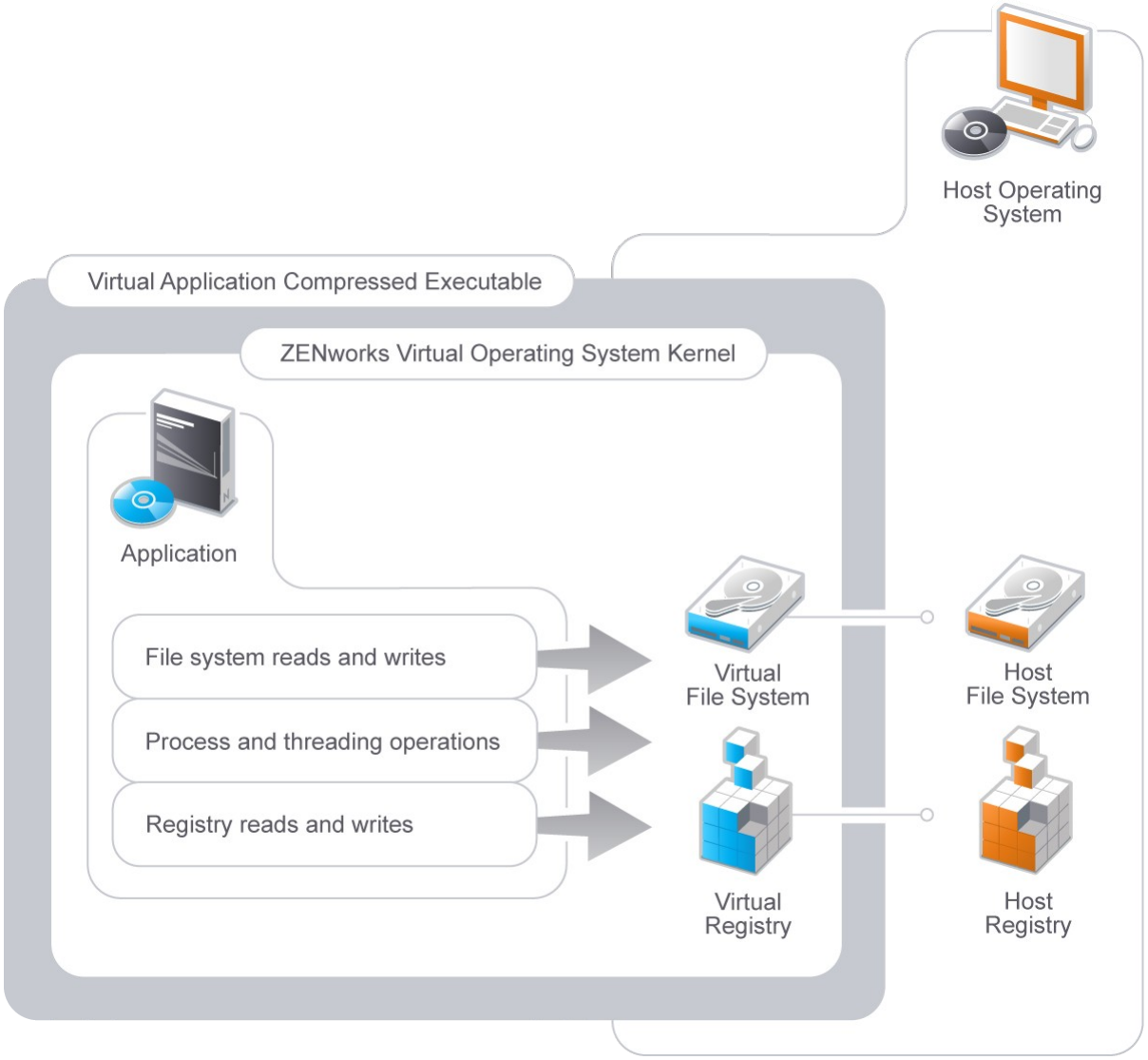
## Gartner Inc.

"Virtualized applications can reduce the cost of testing, packaging and supporting an application by 60%, and they reduced overall TCO by 5% to 7% in our model."

Gartner, Inc. "TCO of Traditional Software Distribution vs. Application Virtualization" by Michael A. Silver et al, April 16, 2008

# Virtualized Applications

- No perceived impact on user productivity
- Applications can run 100% self-contained, including any data and documents created by the user



# Versus Traditional Install

## Application Virtualization

- Zero setup or install
- No privileges required
- Pre-configured
- Side-by-side w/out conflict
- IE 6 runs on Vista
- Light compatibility test

## Traditional Applications

- Installation glitches
- Requires privileges
- Requires configuration
- Conflicts between versions
- IE 6 broken on Vista
- Heavy test matrix

# Versus Machine Virtualization

## Application virtualization

- Near zero performance loss
- Compact size and format
- Dozens of instances running together
- Efficient use or resources
- Single OS license
- No user impact

## Machine virtualization

- Significant performance loss
- Massive VM image
- Very few instances can run at the same time
- Wasted & redundant resources
- Add'l OS licensing
- Potential user impact

# Demo Video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