Introducing the Next Generation of P2V:
VMware Converter 3.0

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Agenda

- Introduction
- History of P2V and Use Cases
  - VMware P2V Assistant
  - VMware VM Importer
- Evolution of P2V
- VMware Converter: New Capabilities
- VMware Converter: Old Favorites
- VMware Converter Use Cases
- Questions
- Further Resources
Introduction

- P2V, or “Physical to Virtual” is the process of migrating an existing physical machine to run as a new virtual machine.
- VMware P2V Assistant takes an existing physical machine and
  > Creates a clone of the physical machine
  > Configures the clone to make it bootable as a VMware virtual machine.
## History of P2V

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Use Cases

- **Microsoft Virtual PC and Virtual Server VM**
- **Symantec Backup Exec System Recovery and Norton Ghost Image**
- **VMware VM Generation 5 virtual hardware**
- **VMware VM Generation 4 virtual hardware**

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**VMware P2V Assistant**

- Consolidate legacy systems
- Test existing systems in a VM environment
- Supplement Disaster Recovery plan

**Physical Machine**

**VMware VM Importer**

- Migrate from Microsoft Virtual PC/Server
- Import Symantec images
- Move VMs across VMware platforms

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**Evolution of P2V**

**VMware P2V Assistant**

**Generation 2**
- Expanded OS support
  - Windows XP
  - Windows 2003
- SMP support
- Improved System Reconfiguration

**VMware VM Importer**

**Import VMware virtual machines and migrate across VMware platforms**
- Workstation 4.x and 5.x
- VMware Player and Server
- GSX Server 3.x
- ESX Server 2.5.x* and 3.x
  *requires VirtualCenter 2.0

**Generation 3**

- One application
- Unified functionality
  - P2V + VM Importer
- New functionality
- Easier to use

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Evolution of P2V: VMware Converter

- Third Generation P2V combines VMware P2V Assistant 2.x and VMware VM Importer 2.x into one unified application for
  - P2V conversion of physical machines running Windows
  - Import of Microsoft virtual machines
  - Migration/conversion of virtual machines across VMware products
Evolution of P2V: VMware Converter

- VMware Converter 3.0 has new capabilities
  - Hot cloning and remote cloning
  - All-in-one Boot CD for cold cloning
  - Concurrent conversions
  - Task management
  - Virtual Machine Guest configuration
Hot Cloning

- Clone a physical machine while it is running
  - Utilizes an agent that is installed
  - Can be local or remote
  - Windows NT 4.0 and 2000 will require a reboot

- Benefits
  - Avoid downtime
  - Better hardware support
  - No boot CD or floppy needed
Remote Hot Cloning

- Connects to physical machine via a network
  - Agent is installed over a network

- Benefits
  - Saves time
  - Avoids having to walk to the physical machine
Local Hot Cloning

- Clones local machine running VMware Converter
  - Select a destination
    - Hosted VM using Windows network share
    - ESX Server VM

- Benefits
  - Alternative to remote hot cloning
All-in-One Boot CD for Cold Cloning

- Use the optional VMware Converter Boot CD and select a remote destination
  - Hosted VM using Windows network share
  - ESX Server VM

- Benefits
  - No need for Helper VM
  - Create VM, not vmdk
**Concurrent Conversions**

- Run concurrent P2V conversions in parallel
  - Concurrent sessions supported by one application instance
  - Concurrent sessions can scale

**Benefits**
- Perform volume migrations
- No need for multiple copies of application
Task Management

- Task-centric UI for centralized management
  - Edit and restart task jobs
  - View history of task jobs
  - View start and start times

- Benefits
  - Audit log
  - Save time when repeating
Virtual Machine Guest Configuration

- Using Microsoft Sysprep, customize the target VM’s Guest identity
  - Computer, owner, and organization name
  - Security ID (SID)
  - Product ID license
  - Network properties
- Install VMware Tools

Benefits
- Save time
- Avoid duplicate machines on the same network when cloning rather than migrating
VMware Converter: Old Favorites

- VMware Converter 3.0 retains popular features from VMware P2V Assistant 2.x and VMware VM Importer 2.x and improves upon them
  - Cold cloning
  - Disk cloning
  - Import
  - Use with third-party imaging and formats
  - Automatic virtual machine creation
  - Supported Operating Systems
Cold Cloning

- **Same**
  - Use Boot CD to avoid installing agent on source physical machine

- **Improved**
  - Windows PE environment for greater hardware support
  - Option to add drivers to Boot CD
  - VMware Converter application on Boot CD – just point to a destination
Disk Cloning

- Same
  - Volume-based cloning allows
    - Option to skip partitions
    - Option to resize partitions

- Improved
  - New block-based cloning (vs. file-based) improves performance
  - New disk-based cloning clones entire disk contents
    - Can clone MS-DOS, Windows 9x and Linux systems*
  - Volume resizing is cleaner – no more blank partitions

* may need to manually configure to boot
Import

- Same
  - Import VMware virtual machines
    - From local virtual machines
    - From network share
    - From VirtualCenter 2.0-managed ESX Server 2.5.x/3.x or ESX Server 3.x
  - Import Microsoft Virtual PC/Server virtual machines
  - Import Symantec images

- Improved
  - Seamless process to import physical machines
Use with Third-Party Imaging and Formats

- Same
  - “Configure” option to convert VMware virtual machines whose disks have been overlaid with a physical machine’s image using a third-party imaging application
  - Import directly from Symantec Recovery image or Microsoft virtual machine format – import includes configure step
  - Linked clone for faster P2V conversion
Automatic Virtual Machine Creation

- Same
  - Virtual machine files created on specified target destination
    - No need to import/export between VMware hosted products and VMware ESX Server
      - All virtual machine files created, not just virtual disk files
  - Simplified wizard-based process

![VMware Converter Import Wizard](image-url)
Supported Operating Systems

- Same
  - Cloning and configure to bootable VMware VM
    - Windows NT 4.0
    - Windows 2000
    - Windows 2003 and XP 32-bit

- Improved
  - Cloning and configure to bootable VMware VM
    - Windows 2003 and XP 64-bit
  - Cloning only
    - MS-DOS, Windows 9x, Linux
VMware Converter Use Cases

From VMware P2V Assistant 2.x and VM Importer 2.x
- Consolidate legacy systems
- Test existing systems in a VM environment
- Supplement Disaster Recovery plan
- Migrate from Microsoft Virtual PC/Server
- Move VMs across VMware platforms

New with VMware Converter 3.0
- Convert physical systems with minimal downtime
- Perform volume, concurrent conversions
- Clone and configure VMs using streamlined processes
- Convert remote systems
Getting Started with VMware Converter

- Licensing
  - Starter Edition
  - Enterprise Edition
    - Cold cloning Boot CD
    - Concurrent tasks
    - Remote hot clone directly to ESX Server, not just hosted products

- Availability

- Requirements
  - Application and optional Boot CD
  - Supported import sources and export destinations
Getting Started with VMware Converter

- VMware P2V Jumpstart service
  - Current Consulting service will be updated to help customers with VMware Converter
    - Leverage the capabilities of VMware Converter quickly
    - Fully realize all capabilities through understanding and employing best practices
    - Leverage deep field experience with P2V
  - Offered by VMware Professional Services and VMware Authorized Consulting (VAC) Partners
Further Resources

- VMware Converter Booth at the Solutions Exchange
  - Demonstrations
  - Q&A

- VMware P2V Assistant Best Practices
  - TAC9886
  - Session presented by Joe Christie and Brian Perry

- VMware P2V Assistant and VM Importer Lab
  - LAB3809
  - Self-paced lab
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