

Desktop Deployment

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Session Overview

- OS Deployment - 2 Methods
- Software Deployment - 2 Package Types

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The Goal

Getting an OS and software on a PC

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Components

- Operating System - Image
- Software - Packages
- Imaging Software - Ghost / True Image

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OS Deployment

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Progression of Deployment

- ~~Image Per Model Per OS Per Task~~
- ~~Image Per Model Per OS~~
- Image Per OS
- No Image + Bootstrap

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Deployment Methods

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Ghost Images

Image Per OS

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Legacy Imaging Process

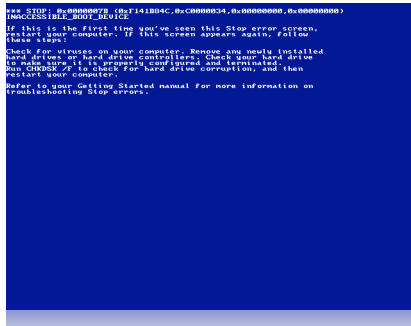
- Grab PC
- Install
- Update C
- Install applications
- Create image
- Distribute image to similar clients

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Problems

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Imaging Problems



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Imaging Problems

- Hardware Abstraction Layer (HAL)
- Differences in hardware
- Domain membership
- Duplicate SIDs

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Solution

Microsoft System Preparation Tool

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Sysprep

- SID generation
- Hardware detection
- Unique computer name
- Domain membership

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Sysprep Limitations

- Mass storage controllers must be the same
- Sysprep does not support different HALs

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Sysprep and Ghost

- Sysprep templates in Ghost
- Running Sysprep manually

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Creating an Image

1. Install Windows XP from CD
2. Update Windows XP
3. Refrain from making customizations!
4. Copy Drivers folder to C:\
5. Run "Create Image" task with Sysprep

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Unattended Install

No Image + Bootstrap

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File Server

Hosts Windows Installation Files

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Windows XP Share

Created by SetupMgr.exe in Deploy.cab
\\fileserv1\Images\Windows XP

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Installation Media

Created by SetupMgr.exe in Deploy.cab

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Special Folders

- i386
 - \$OEM\$
 - \$\$ - C:\Windows
 - \$I - C:\

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WinNT.SIF

Preconfiguring Windows install

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TxtSetup.SIF & DosNet.INF

Editing required for supporting mass storage devices

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CmdLines.TXT

Post-install tasks

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Drivers

- Folders added to \$OEM\$\\$1\Drivers
- Path to drivers added to WinNT.SIF
- This is the reason one image works!

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Ghost Client

- Patch Ghost Client.msi to install properly
- Add Ghost to share (%oem%\\$1\Ghost)
- Configure RunOnceEx to install

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Bart PE Image

Bootstraps Window XP Installation

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Bart PE Goals

1. Bring up necessary hardware
2. Obtain IP address
3. Map network drive
4. Start Windows install

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Unattended Procedure

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Bart PE Procedure

1. PC awaiting task
2. Console initiates imaging task
3. PC is imaged with Bart PE image
4. Bart PE boots up, initializes network driver
5. Bart PE gets IP address via DHCP
6. Bart PE runs custom add-on

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Bart PE Custom Script

- Map file server share as W:
- If failure, wait 10 seconds and retry
- Run winnt32.exe with proper parameters
- Install exits, mapped drive is disconnected
- Reboot PC

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Bart PE Procedure

7. Windows installs as scripted in WinNT.SIF
8. PC restarts
9. PC logs on as Administrator one time
10. Ghost Client installs

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Bart PE Procedure

11. PC restarts
12. Client contacts Console
13. Console tells PC to rename & join domain
14. PC restarts
15. PC installs software based on OU

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Comparison

Attribute	Winner	Reason
Speed	Images	Multicasting
Bandwidth	Images	Multicasting
Maintenance	Unattended	Slipstreaming
Compatibility	Unattended	HAL Adaptation

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The Driver Folder

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Software Deployment

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Packaging Formats

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Ghost AI Packages

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AI Advantages

- Free (with Ghost)
- Package source code easier

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AI Disadvantages

- Repackager tool much slower
- Harder to customize packages
- Uninstaller not intelligent or automatic

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Microsoft Installer

MSI Packages

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MSI Advantages

- More features
- Uninstall more complete
- Safer upgrades
- Repackaging tool higher quality

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MSI Disadvantages

- Easy to use = Expensive tools
- Higher learning curve

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Transforms & Patches

MST's and MSP's

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Vendor Supplied

- Microsoft Office Deployment Kit
- Adobe Acrobat Install Tuner
- Macromedia Flash & Shockwave
- Quicktime (with work)

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Deployment

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AI Package Deployment

Part of Task

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MSI Deployment

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MSI/AI Package Wrapper

AI package launches MSI package

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Group Policy

- Installation Types
 - Assign to PC
 - Publish to User
 - Assign to User
- Uninstalls
- Upgrades

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Imaging Pitfalls

- IGMP/CGMP & Network configuration
- Server stress
- Ghost DB instability
- Package paths
- Multiple restarts & rebooting

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Deploying Boot Partition

- Bootable CD Method
- Classic Method

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Decisions to Make

- Ghost Structures
 - Machine Groups
 - Tasks
 - Templates
- Active Directory
- Computer Names

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Future of Deployment

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Questions?

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