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Windows Imaging and Deployment Software Comparison

July 2011

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Revision History

Rev	Revision History	Date
Edition 1	Initial version of this report.	27 July 2011
Edition 1.1	Updates on images, text and added graphs	1 August 2011
Edition 1.2	Added more detailed system information, and improved images of machines.	3 August 2011
Edition 1.3	Updated SmartDeploy logo.	8 February 2012

Executive Summary

PassMark® Software Pty Ltd was commissioned by Prowess in July 2011 to conduct an independent benchmark test for four different operating system imaging and deployment software solutions.

About PassMark Software

PassMark Software Pty Ltd is a leading authority in software and hardware performance benchmarking and testing. PassMark specializes in the developing of high quality performance benchmarking solutions, as well as providing expert independent IT consultancy services to clients that range from government organizations to major IT heavyweights.

David Wren, managing director at PassMark, was the lead for this test.

Software

Software to be tested was chosen by Prowess. PassMark tested the latest version of the software product that was available at time of testing.

- Prowess SmartDeploy Enterprise, v 1.1.1940
- Symantec Ghost Solution Suite 2.5, includes DeployAnywhere
- Acronis Snap Deploy 3 with Universal Deploy
- Microsoft Deployment Toolkit 2010 Update 1

Performance Metrics

PassMark completed the full deployment process one time for each product including image build, image capture, driver management, image deployment, updating of the image and re-deployment.

The following information was recorded for each product:

Windows Imaging and Deployment Comparison Task List
Task 1: Create image
Time to capture Image
Time to download and/or package drivers
Time to create deployment media/configure server
Image File Size (GB)
Image File Type
Task 2: Deploy image
Time to deploy image to one computer
Time required for additional tasks (during Task 2)
Task 3: Update and deploy image
Time to update image with Adobe Acrobat
Time to recapture updated images
Time required for additional tasks (during Task 3)
Image File Size (GB)
Image File Type
Time to deploy new image to one computer

Methodology

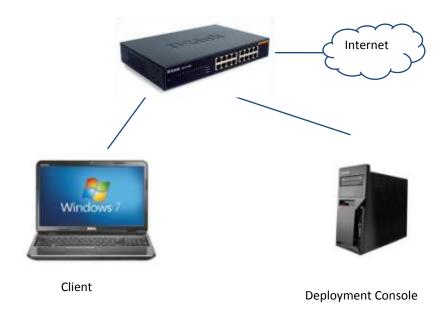The reference Virtual Machine will have the following products installed on it.

- Windows 7 Enterprise 64-bit
- Microsoft Office 2007 Standard Edition
- Microsoft Security Essential

For all test products, maximum compression settings will be used to create the image. Otherwise where possible default settings and the manufacturers documented procedures were used.

All timed tests will be manually timed with a stopwatch unless there is an appropriate and reliable time provided by the software. The time will be recorded in as much detail as possible. Where input is required by the user, the stopwatch will be paused and the input noted in the raw results in parenthesis after the phase description.

For the Image File Size Test, the size on disk will be recorded as the result.

Test Environment

Client

Deployment Console

Client Machine Specification

Model:	Dell Inspiron N5010 Laptop
O/S:	Windows 7 Enterprise 64-bit
CPU:	Intel Core i5-450M @ 2.40GHz
Video Card:	Intel HD Graphics
RAM:	4GB RAM
Main HDD:	500GB Hard Drive 5400 RPM SATA
Network	Integrated 10/100 Ethernet

Deployment Console Specification

Virtual machines will be used for the management consoles of each product.

Model:	Lenovo ThinkCentre A55 Desktop
O/S:	Windows 7 Enterprise 64-bit
CPU:	Intel Core2 Duo E6300 @ 1.86GHz
Video Card:	Intel GMA3000
RAM:	2 GB RAM
Main HDD:	250GB 7200 RPM SATA
Network	Integrated Gigabit Ethernet

Results

Comparison of windows imaging and deployment software are as follows:

	Prowess SmartDeploy Enterprise	Symantec Ghost Solution Suite 2.5 includes DeployAnywhere	Acronis Snap Deploy 3 with Universal Deploy 3	Microsoft Deployment Toolkit
Task 1: Create Image				
Time to capture image (*mm:ss)*	11:48	17:09	32:49	39:54
Time to download and/or package drivers (*mm:ss)*	2:13	10:25	10:25	13:55
Time to create deployment media/configure server (*mm:ss)*	4:15	19:02	2:24	5:42
Image file size	3.81 GB	4.16 GB	4.19 GB	3.66 GB
Image file type	WIM	GHO	TIB	WIM
Task 2: Deploy Image				
Time to deploy image to one computer (*mm:ss)*	18:10	22:47	65:29	25:20
Time and Description for Additional Tasks	n/a	n/a	n/a	60:00[1]
Total Time to Capture (Task 1) and Deploy (Task 2) (*mm:ss)*	36:26	69:23	111:07	144:51
Task 3: Update and Deploy Image(s)				
Time to update image(s) with Adobe Acrobat (*mm:ss)*	3:48	3:48	3:48	3:48
Time to recapture updated images (*mm:ss)*	9:03	18:03	34:21	39:56
Image file size	0.38 GB[2]	4.28 GB	4.44 GB	3.73 GB[2]
Image file type	DWM	GHO	TIB	WIM
Time to deploy new image to one computer (*mm:ss)*	20:10	24:11	66:42	30:56
Total Time to Update Image, Recapture and Deploy (*mm:ss)*	33:01	46:02	104:51	74:40

[1] Time to configure Active Directory Domain Controllers and add users.

[2] Difference of image file size with reference to original WIM file.
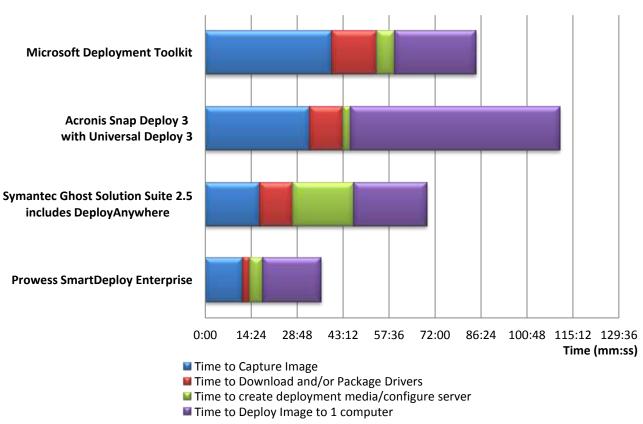

Items to note:

- Before capturing the VM image, Windows automatic updates were disabled to avoid partial install which leads to deployment problems.
- With Acronis Snap Deploy and Symantec Ghost Solution Suite, an additional virtual disk was created and mapped as a secondary drive so that the image created could be stored locally on the client side.
- Tasks excluded from the above results include:
  - Download of the software to be tested from the manufacturer's website.
  - Installation of the tool.
  - Reading of the documentation and watching any available tutorials.
  - Troubleshooting technical problems (in some cases, this amounted to more than one day per product).
  - Trial and error: In some cases, the recommended methods didn't initially work and alternative methods were used.
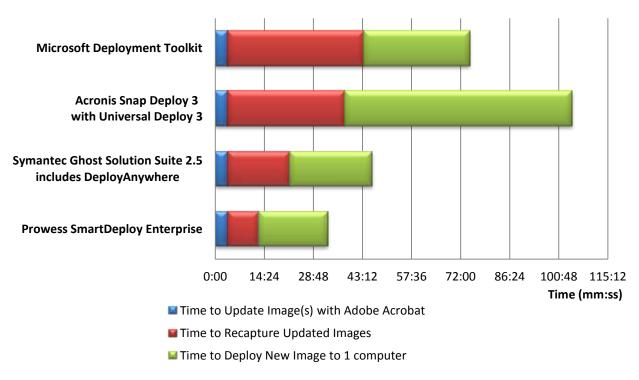
- Each product offered many options in terms of networking, compression, and deployment. PassMark made every attempt to follow the best practices and methods recommended by the manufacturer for each software product tested.
- Not all aspects of the products performance were tested. For example multicasting to multiple PCs was not tested.

Comparison of different imaging and deployment software (New image and deployment)

Time to Capture Image
Time to Download and/or Package Drivers
Time to create deployment media/configure server
Time to Deploy Image to 1 computer

Comparison of different imaging and deployment software
(Update image and deployment)

Legend:
- Time to Update Image(s) with Adobe Acrobat
- Time to Recapture Updated Images
- Time to Deploy New Image to 1 computer

Disclaimer and Disclosure

This report is intended to be a comparison of different Windows Imaging and Deployment Software in the market.

Disclaimer of Liability

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Disclosure

The production of this report was funded by Prowess. The test methodology and environment were specified by Prowess.

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Contact Details

PassMark Software Pty Ltd
Suite 202, Level 2
35 Buckingham St.
Surry Hills, 2010
Sydney, Australia

Phone   + 61 (2) 9690 0444
Fax   + 61 (2) 9690 0445
Web   www.passmark.com