Lessons learned from deploying Windows 10

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Who am I?

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>8 years of experience with Client and Datacenter Management Tools

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Our Approach
W10 Envisioning → Workplace Design
Image & Policy Creation → Platform Delivery
W10 Servicing → User Adoption
Applications
Workshop and/or POC

Explain Windows As A Service

Overview of W10 features and deployment methods

Align W10 edition with Business Requirements

Convince customer not to deploy W10 as W7

Extend to EMS/SPE
Correct segmentation is key

- Task Worker
  - UE-V
- Office Workers
  - CBB
- Mobile Workforce
  - Managed from the cloud
- Digital Natives
  - Permanent Pilot
  - CB/Insider Preview
Keep it Simple

• Review existing policies, don’t overdo it
• Less vendors means lower risk (e.g.: third party disk encryption)
• OU structure can be reviewed. OU’s can be necessary for Windows-As-A-Service
# Introduce security features from the start

<table>
<thead>
<tr>
<th>Deployment Type</th>
<th>Features</th>
<th>Hardware Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard</strong></td>
<td>- BitLocker</td>
<td>- BIOS or UEFI</td>
</tr>
<tr>
<td></td>
<td>- Windows Display Driver Model (WDDM) 1.1</td>
<td>- TPM 1.2</td>
</tr>
<tr>
<td><strong>Enable Windows 10 Features</strong></td>
<td>- BitLocker</td>
<td>- UEFI</td>
</tr>
<tr>
<td></td>
<td>- Windows Display Driver Model (WDDM) 2.0</td>
<td>- TPM 2.0</td>
</tr>
<tr>
<td></td>
<td>- Windows Hello for Business</td>
<td>- Hardware Virtualisation</td>
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<tr>
<td></td>
<td>- Credential Guard</td>
<td>- Biometrics</td>
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<td></td>
<td>- Device Guard</td>
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<tr>
<td></td>
<td>- Secure Boot</td>
<td></td>
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<tr>
<td></td>
<td>- Health Attestation</td>
<td></td>
</tr>
</tbody>
</table>
Do You Want Seamless Cloud Access

• Preconfigured Windows Store for Business
• Work Accounts added automatically
• Sign Single On to Azure, Office 365 portal and apps
• Enterprise State Roaming to the cloud
• Auto enrol in InTune (other vendors in preview)
Recommendations

What do we recommend?

• MDT build 8443
• Reference image on a VM
• Naming conventions include build e.g. 1703
• Make capturing the image optional, consider provisioning packages
• No drivers required
• Every build has its own policies, import new ADMX-files for every build
• Every build has its own language packs, import new language packs for every build
• NET Framework 3.5
Recommendations

• Use a clean image
  • Office CTR is the standard deployment now
  • Windows Updates are cumulative
  • App-V and UE-V agents are now built-in (enable via GPO)

• Use Windows Update for your drivers
  • Initial setup: clean WIM image => get drivers from Windows Update => extract drivers using Export-WindowsDriver (https://www.howtogeek.com/191405/should-you-use-the-hardware-drivers-windows-provides-or-download-your-manufacturers-drivers/)
  • Update drivers: Again, use Windows Update!
  • If you still want to use vendor drivers, find them here: http://www.scconfigmgr.com/2017/05/04/driver-automation-tool-version-3-4-released/

• Use community tools to make your life easier:
We don’t need the Xbox App!

Remove Windows Apps

1. Download script RemoveApps script courteously of Michael Niehaus
2. Determine what apps to remove
3. Find out the name of the app (Get-AppxPackage | Format-List -property name)
4. Add apps you want to remove to RemoveApps.xml
5. Add script to automated process

The Apps Came Back

After an in-place upgrade the apps came back... won’t happen from 1607 onwards (with a few exceptions)
Platform Delivery
Choosing Deployment Scenario

New Device

Existing Device

Device Considerations
- BIOS → UEFI
- Disk layout
- WinPE Offline Operation
- 3rd party disk encryption

Operating System Considerations
- Architecture (x86 → x64)
- Base OS language
- Domain
- Local Admins
- Configuration drift
- Moving from XP or Vista
- Custom base image

Application Considerations
- Bulk app change

Refresh (Wipe & Load)
Re-install the operating system (Custom Image)
Install applications
Migrate user state

In-Place Upgrade
Upgrade key apps as needed post OS update

Bare Metal (Custom Image)
Don’t Discount In-place Upgrades

Why Use In-place Upgrade?

• Preserve applications, drivers, user data and settings
• Upgrade is faster, image is smaller and process more robust
• No ADK dependencies
• Significantly more cost effective
• Easier to roll back (grace period shorter since anniversary update: 10 days instead of 1 month)
  • https://rcpmag.com/articles/2016/08/05/windows-10-update-rollback.aspx
Recommendations

Configuration Manager Version

- **Configuration Manager Current Branch 1702 recommended**
- MDT 8443
- Update of MDT packages and boot images

Environment Updates

- KMS Updates for Windows 10 and Office 2016 license management
- New Group Policy Templates for every build
- WSUS Updates
Extra tips

- BIOS to UEFI
  - Previous versions: 1E tool + vendor tools
- Put ultra VNC in the boot image for easy follow-up and troubleshooting.
- Combine with other maintenance, like enabling Intel AMT
Applications
## Application Portfolio

### Assess

<table>
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<tr>
<th>Managed Applications</th>
<th>Supported Applications</th>
<th>Unsupported Applications</th>
<th>Unwanted Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial or business impact if application does not work</td>
<td>Application has business value</td>
<td>Application superseded by new version or new application</td>
<td>Unlicensed application</td>
</tr>
<tr>
<td>Critical to business operation</td>
<td>Productivity impact if application does not work</td>
<td>Application not introduced in environment by IT</td>
<td>Applications banned by corporate policy</td>
</tr>
</tbody>
</table>
Application Portfolio

Testing

Proactive Testing

Must Test (Managed Applications)
- Dedicated resources to test
- Test plan to confirm operation

Should Test (Supported Applications)
- Test when resources available
- Test as part of pilot group for OS update / upgrade

Reactive Testing

Don’t Test (Unsupported Applications)
- Not included in pilot test group
- Test when service desk call raised
- If it breaks, it may not be fixed

Unwanted Applications
- Applications will not be tested (Remove application from device)
- Use AppLocker / management tool to ensure application cannot be re-installed or used
Upgrade Readiness
Plan upgrades by identifying devices that are ready, and top app/driver compatibility blockers for the rest
(Available now)

Update Compliance
Ensure update and antimalware compliance with timely reports for all your devices (even those on the road)
(Public Preview)

Health Analytics
Reduce support costs by pro-actively identifying and remediating top end-user impacting issues
(Future)
Windows as a service: Servicing Windows

With Windows 10 servicing, consistency and simplicity are paramount

### Quality Updates
- A single cumulative update each month
- Security fixes, reliability fixes, bug fixes, etc.
- Supersedes the previous month’s update
- No new features
- Try them out with Security Update Validation Program (SUVP), other

### Feature Updates
- Targeting twice per year with new capabilities
- Very reliable, with built-in rollback capabilities
- Simple deployment using in-place upgrade, driven by existing tools
- Try them out with Insider Preview
Quality Updates

With Windows 7 and 8, servicing choices added complexity and cost, increased fragmentation, and reduced quality.
Express Updates Illustrated

- **October**: KB1001 (Older deltas), KB1002 (New deltas)
- **November**: KB1002 (Older deltas), KB1003 (New deltas)
- **December**: KB1003 (Older deltas), KB1004 (New deltas)
- **January**: KB1004 (Older deltas), KB1005 (New deltas)
- **February**: KB1005 (Older deltas)

WSUS Server

~100MB ~100MB ~100MB
Windows 10 Feature Updates

Two releases supported in market

Windows 10
July 2015

November Update
November 2015

Anniversary Update
August 2016

Creators Update
April 2017

Software migration + training
Need for continuous learning
1000+ animations
An up-to-date and growing offering

- Monthly updates
- Easy to find the relevant animations
- Created by Office experts
Thanks for the attention!