Upgrading to SharePoint Server 2016
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Agenda

- Upgrade vs. Migration
- SharePoint 2016 Tidbits
- Upgrade Techniques

Are You Upgrading or Migrating?

- It’s All Really Migrating
- To Cloud or Not To Cloud
- Fix Any Sins Of The Past
- Third Party Tools
SharePoint 2016 Exclusivity
Upgrade from 2007 to 2016

- No shortcuts
- Upgrade 2007 (SP2 or later) to 2010
- Upgrade 2010 (RTM or later) to 2013
- Upgrade 2013 (RTM or later) to 2016
- Or buy a 3rd party tool 😊
SharePoint 2016

- Mostly the same as SharePoint 2010 to 2013
- Database attach via PowerShell
  - Attaching via Central Admin does not upgrade the database
- Don’t copy your SharePoint 2013 farm topology
  - Don’t forget MinRole
  - And the new MinRole
  - Don’t use CustomRole (without investigating MinRole first)
- Project Server is built in
SharePoint 2016

- Identify Site Collections in 2010 (14.5) mode
  - Get-SPSite -ContentDatabase <database name> -Limit All | Where-Object { $_.CompatibilityLevel -eq 14 }

- Site Collections are Upgraded on Attach by default
  - -skipsiteupgrade
  - Upgrade-SPSite
  - Upgraded at first browse by Site Admin

- Excel Services is replaced by Excel in Office Online Servers
  - More on that later
SharePoint 2016 Search

- Are you using Cloud Search?
- Affects hardware topology
- Licensing
- Cannot be converted, must be created new
- http://www.toddklindt.com/happycssa
Now on to the SharePoint 2013 (2016) Content
SharePoint 2010, 2013, and 2016

- They cannot exist on the same server
- SharePoint RTM 2010 & 2013 databases can be upgraded
- You definitely need more hardware
  - Different Roles
  - Pound of Flesh
Supported Databases

- All content databases
  - More on Mysites in the next slide

- Service Apps
  - BCS
  - Managed Metadata
  - PerformancePoint
  - Secure store (need to know passphrase)
  - User Profile databases
  - Search administration (no index or property dbs)
MySites and OneDrive for Business

- Should you upgrade them at all?
- Dip your toe into the cloud
  - RTM for 2016, Service Pack 1 for 2013
  - Office 365 licenses
  - Figure out the authentication – my other session

- Not migrated automatically
  - User can do it
  - Use a third party tool 😊
Gather and Document Settings

- Anything Stored in ConfigDB
- Farm Configuration Settings
  - AAMs, Managed Paths, Solutions
- Service Application Settings
- Web Application Settings
  - Recycle Bin, Auth Providers, Policies, File Upload
- IIS
  - Host Headers, Certs, web.config changes
- Customizations
  - Document your farm with PowerShell
  - Upgrade Planning Worksheet
  - SPDocKit
No more preupgradecheck

- Boo!
- Instead from management shell you can use:
  - `Test-SPContentDatabase -name <YourDBName> -webapplication http://YourWebApp`
- Look for fancy switches
- Works the same in 2010, 2013, and 2016
Quick notes

- Add managed paths manually before attaching databases
- Always upgrade database with root site collection first
- Try to use same URLs
- No more Visual Upgrade

- 14 = SharePoint 2010
- 15 = SharePoint 2013
- 16 = SharePoint 2016
Office Online Server

- They are awesome and you need to use them in 2013 and 2016
- Hardware is key – They must be on their own server with nothing else
- Office Web Apps require you to be using Claims authentication to work
- Requires a specific Office License (volume license)
- Office Online Server is required for Excel Services in 2016
Authentication

- Claims is dominant
- Classic is left for the golden oldies station
- Recommended to upgrade to 2016 (or 2013) and then convert to claims
- 2 major changes to the web app
- Start thinking about Azure AD
Create and convert a Classic Web App


Get-SPWebApplication | Select URL, useclaimsauthentication

Convert-SPWebApplication -Identity "http://upgrade.contoso.com" -To Claims - RetainPermissions [-Force]
Features and Solutions

- Good time to look at the App Model, Add-ins, SharePoint Framework
- 2010 and 2013 stuff mostly just works
- Hopefully you were a good boy or girl and did everything as WSPs
- Shane’s old 2010 blog post will help you get all of the WSPs out of 2010. Commands are the same or similar in 2013 to get the stuff in.
Upgrade a database

Test-SPContentDatabase -Name WSS_Content_Upgrade -WebApplication http://upgrade.contoso.com

Mount-SPContentDatabase -Name WSS_Content_Upgrade -WebApplication http://upgrade.contoso.com
Testing...

```
PS C:\Users\sp16\Transcript_SP16_X64\PS C:\PowerShellScripts>

Locations :
Category : MissingWebPart
Error    : True
UpgradeBlocking : False
Message  : WebPart class [e6002ce0-69ee-168a-8f7c-a1d98d51da29] (class [Microsoft.Office.Excel.WebUI.ExcelWebRenderer]) from assembly [Microsoft.Office.Excel, Version=15.0.0.0, Culture=neutral, PublicKeyToken=71e9bce11e9429c]) is referenced 2 times in the database [WSS_Content_Alpha], but is not installed on the current farm. Please install any feature/solution which contains this web part.

Remedy : One or more web parts are referenced in the database [WSS_Content_Alpha], but are not installed on the current farm. Please install any feature or solution which contains these web parts.

Locations :
Category : MissingAssembly
Error    : True
UpgradeBlocking : False
Message  : Assembly [Microsoft.AnalysisServices.SPAddin, Version=11.0.0.0, Culture=neutral, PublicKeyToken=89045ddc8000cc91] is referenced in the database [WSS_Content_Alpha], but is not installed on the current farm. Please install any feature/solution which contains this assembly.

Remedy : One or more assemblies are referenced in the database [WSS_Content_Alpha], but are not installed on the current farm. Please install any feature or solution which contains these assemblies.
```
Upgrading...

Administrator: SharePoint 2016 Management Shell

WARNING: Check c:\uls for upgrade progress
100.00% : SPContentDatabase Name=WSS_Content_Alpha

Id : 815f3527-9fda-456d-bf11-70c70d44e50f
Name : WSS_Content_Alpha
WebApplication : SPWebApplication Name=Migration Web App
Server : SQL16
CurrentSiteCount : 5

PS C:\PowerShellScripts> -
Things that are the same

- The commands we just ran
- One upgrade log file per upgrade
- One upgrade error log file per upgrade
- ..\15\logs (\16\logs)
- Still mount multiple databases at the same time
- Look and feel are upgraded automatically in SharePoint 2016
Upgrade Process

- Make Read-Only
- Detach from old farm
  - Don’t delete
- Backup in SQL
- Restore to new SQL instance
- Fix permissions
- Make Writeable
- Do Service Apps first
- Attach Content Databases
Patching Build to Build

- Many Improvements in 2016
- Smaller Patches
- Feature Packs
- Zero Downtime Patching
  - TechNet video of ZDP
- Keep Up to Date
  - @sp2016builds