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# Migrating to SharePoint 2013

## Business and Technical Perspective

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OTTAWA

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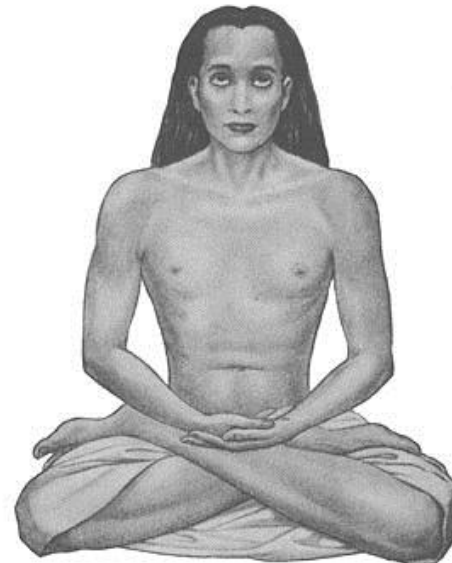


# Who Am I?

- SharePoint / .NET solution architect & speaker
- 18+ years experience building business solutions
- Recent clients House of Commons, Plasco Energy, Justice, NRC, CFPSA
- Specialize in Microsoft technologies

Contact me:

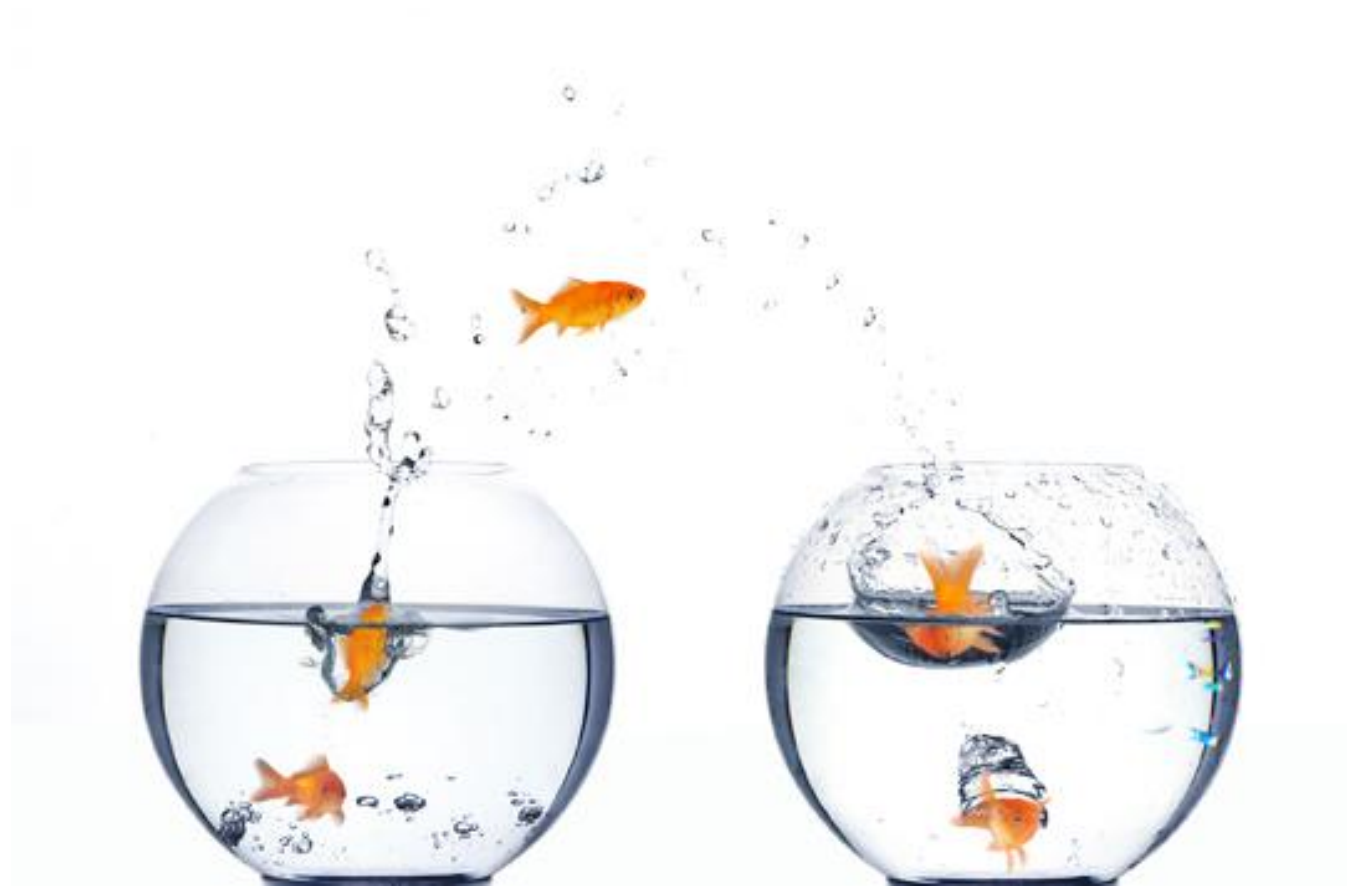
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# Agenda

- Why migrate?
- Business roadmap
- Technical roadmap
- Planning challenges
- Execution challenges
- Q&A



# Why Migrate?

- Business users want new UX and features
- Business / IT want to revamp Information Architecture / navigation
- IT wants to consolidate hardware and software
- IT needs to life cycle the hardware and software



# Plan the Effort

- New UX and features => Site collection upgrade
- Revamp IA => Move / revamp sites
- Consolidate hardware => Merge service / web apps & move root sites
- Life cycle platform => Reinstall farm



# Big Bang Theory / Just Do It

- Skip all the planning, Just Do It – Migrate
- “Lean” approach
- Greatly reduces the prep
- Chance of success according to OOTB configuration
- MVP approved, one at least
- Client approved, one at least



JUST DO IT.





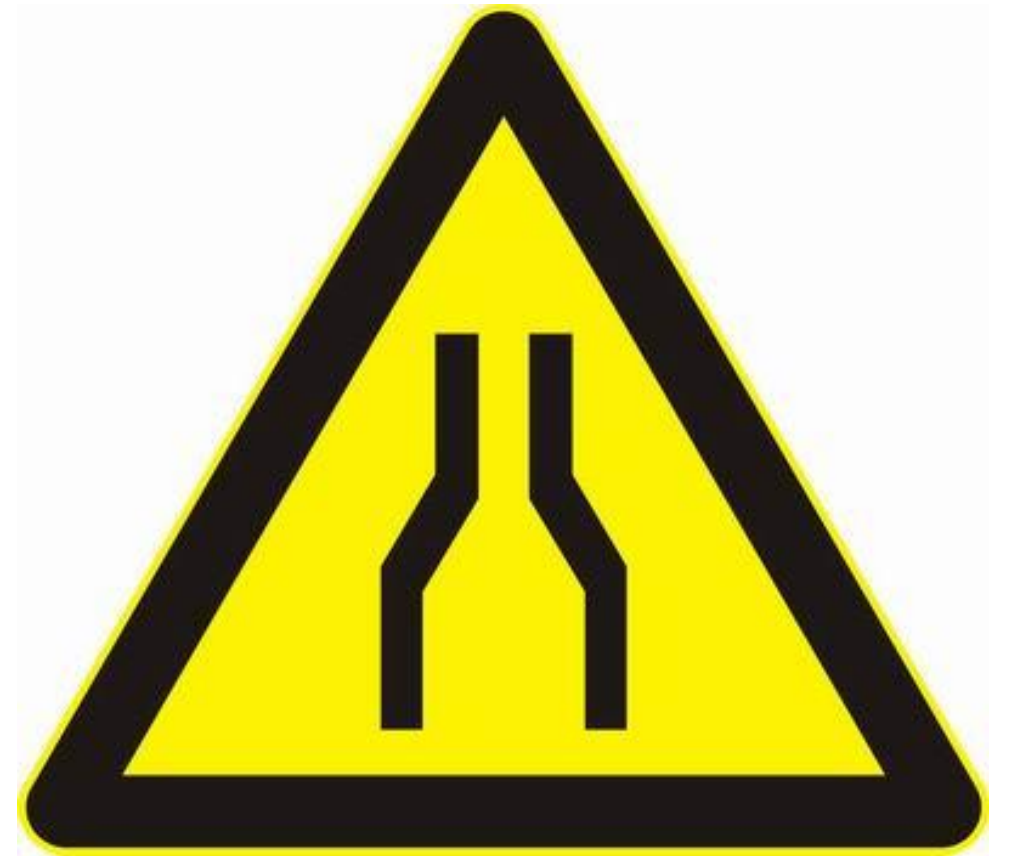
# Business Roadmap

- Establish requirements
  - Eg legacy or upgrade GUI
- Identify high profile / usage sites
- Review [Discontinued Features and Modified Functionality](#)
- Plan to integrate new features into migrated sites
  - Eg metadata navigation, etc



# Business Roadmap

- Revamp governance and Information Architecture
  - Don't perpetuate chaos
- Clean up dormant / dead content and versions
  - Content that poses a risk, eg for Compliance, eDiscovery
- Consolidate and simplify site collections and sites



# Business Roadmap

- Complete Visual Upgrade for legacy 2007 sites beforehand

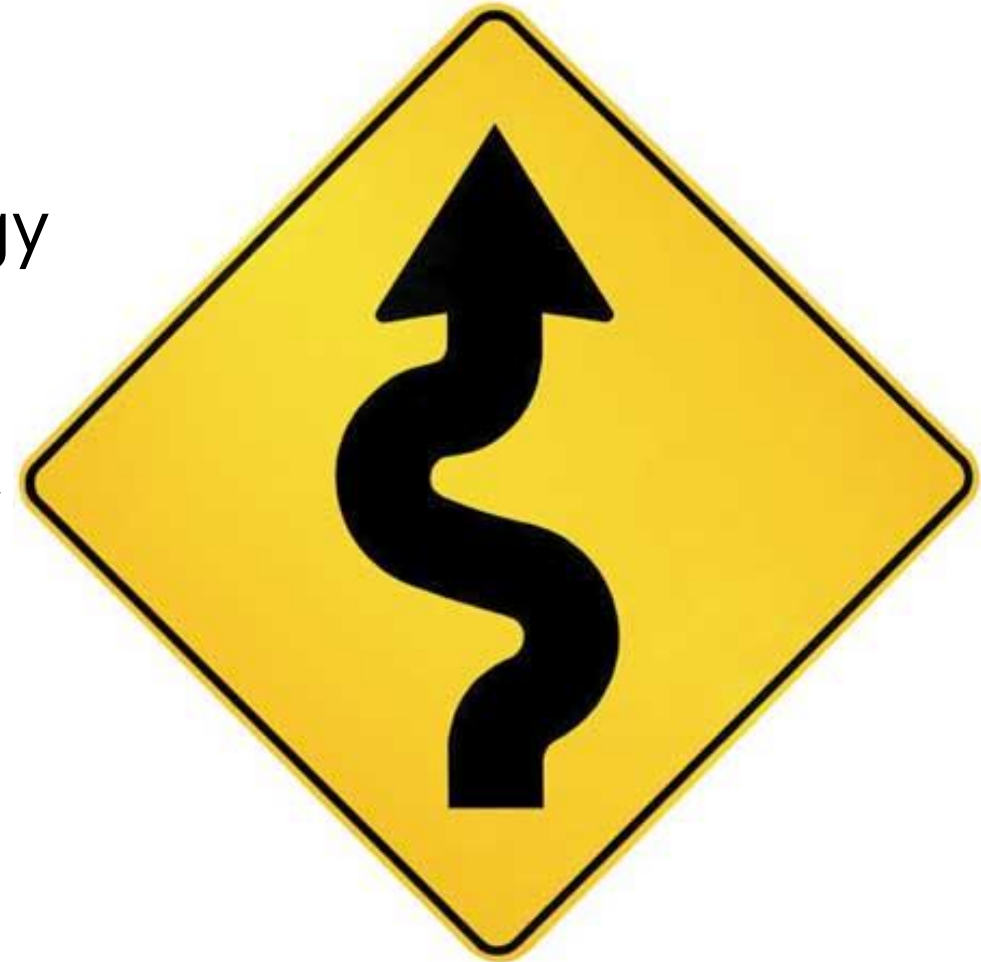
## Post-Migration

- Site owners test migrated sites
- Business / IT fix functional issues
  - Eg alerts



# Technical Roadmap

- Memorize [Upgrade to SharePoint 2013](#) (TechNet)!
- Understand the process and terminology
  - Content Database “upgrade” = attach content database to SP2013 farm which upgrades it
  - Site Collection “upgrade” = apply SP2013 GUI & features within an SP2013 farm
- Choose an approach for each
- Prepare
- Test
- Execute





# Content Migration – Two Approaches

- Native – Database Attach
  - Only route is SP 2010 to SP 2013
  - Authentication mode before or after?
  - Host name site collections before or after?
  - Site col. upgrade self-serve, bulk, or prevent?
- 3<sup>rd</sup> Party
  - Most/all prior versions supported, SP2003/2007/2010
  - Share-Gate, Metalogix, Avepoint, Quest



# Content Migration – Other Scenario

- Prior Versions SP2003/2007
  - Only native-SP route is via SP 2010 first
- Other Sources
  - File shares
  - Other systems
- Information architecture, security design, etc dominate over migration factors



# Site Collection Upgrade – Two Approaches

- Self-serve by site collection owner
- Controlled by farm administrator
  - Extremely important sites
  - Very large sites
  - Highly-customized sites
- Other factors
  - Coordinate with training in SP2013 UX and features



# Migration-Supported Databases

- Any content database
- Business Connectivity (BCS)
- Managed Metadata (MMS)
- PerformancePoint
- Search Administration
  - Not Index or Property DBs
- Secure Store (SS)
  - need to know passphrase
- User Profile (UPS)
  - Profile, Social, Sync



# Technical Prep 1

- Gather environment info, eg # sites, users, dbs & sizing
- Gather settings, eg using [Upgrade Worksheet for SharePoint 2013](#)
- Review [Discontinued Features and Modified Functionality in Microsoft SharePoint 2013](#)
- Review and update/replace custom and 3<sup>rd</sup> party solutions



# Custom & 3<sup>rd</sup> Party Solutions

- Many will work as-is in SP2013 but at CompatibilityLevel 14
  - SOM, page model, webparts, etc very stable SP2010 => SP2013
- Can't find the WSPs files?
  - [Export Solutions from SharePoint 2010](#) – Shane Young
- Must be at CompatibilityLevel 15 after site collection upgrade
- \_layouts folder path changes
  - 14 Hive path \_/layouts/
  - 15 Hive path \_/layouts/15/
- Simplest to create new solution SP2013 solution

# Technical Prep 2

- Review health analyzer reports on source SP2010 farm
- Technical clean up
  - Orphaned sites/data
  - Large lists
  - Large ACLs
  - Unused templates, features and Web Parts
  - DB errors

# Technical Prep 4

- Find orphaned objects in content database

- `Get-SPContentDatabase | ForEach-Object {`
- `Write-Host $_.Name $_.Repair($false)`
- `}`

- Determine web app authentication mode

- `Get-SPWebApplication | Select DisplayName, Url, UseClaimsAuthentication`

- Deploy / enable dependencies

- Farm features and solutions
- Service application databases, eg Managed Metadata, etc



# Web App Authentication Mode

- Migrate classic mode as is, then convert to claims
- Requires creating target web application with PowerShell or custom solution
  - `New-SPWebApplication -Name "Upgrade" -ApplicationPool "SharePoint App Pool" -AuthenticationMethod NTLM -Port 80 -URL http://server`
  - `Get-SPWebApplication | Select URL, UseClaimsAuthentication`
  - `Convert-SPWebApplication -Identity "http://server" -To Claims -RetainPermissions`
- April 2014 CU causes problems; Fixed in [June 2014 CU](#)

# Technical Prep 5

- Ensure Workflow Auto Cleanup timer job is in same state on source and target SharePoint farms
- Ensure no documents are checked out
- Ensure no workflows are running
- Backup source databases and restore to target SP2013 farm
- Check content database against web application
  - `Test-SPContentDatabase -Name <DB_Name> -WebApplication <http://webapp>`
  - Cmdlet available on SP2010 and SP2013
  - Cmdlet works whether database is attached to farm or not

# Test-SPContentDatabase Sample Output

```
Category      : MissingFeature
Error         : True
UpgradeBlocking : False
Message       : Database [WSS_Content_Edrms_ls_sv] has reference(s) to a missing feature: Id = [1500c971-8b68-4e1e-bbaa-d02f0437f1e6], Name =
                [SoftwareCraft Base Content Type], Description = [SoftwareCraft Content Type from which all others inherit], Install Location =
                [SoftwareCraft.Edrms.SP.ContentTypes Base Content Type].
Remedy        : The feature with Id 1500c971-8b68-4e1e-bbaa-d02f0437f1e6 is referenced in the database [WSS_Content_Edrms_ls_sv], but is not installed on
the
                current farm. The missing feature may cause upgrade to fail. Please install any solution which contains the feature and restart upgrade if
                necessary.
Locations     :

Category      : MissingSetupFile
Error         : True
UpgradeBlocking : False
Message       : File [Features\SoftwareCraft.Edrms.SP Libraries\Management Library Template - STP\ManagementLibrary.stp] is referenced [1] times in the
                database [WSS_Content_Edrms_ls_sv], but is not installed on the current farm. Please install any feature/solution which contains this
                file.
Remedy        : One or more setup files are referenced in the database [WSS_Content_Edrms_ls_sv], but are not installed on the current farm. Please
                install any feature or solution which contains these files.
Locations     :

Category      : MissingAssembly
Error         : True
UpgradeBlocking : False
Message       : Assembly [SoftwareCraft.Edrms, Version=1.0.0.0, Culture=neutral, PublicKeyToken=f9168920a5ac39e9] is referenced in the database
                [WSS_Content_Edrms_ls_sv], 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_Edrms_ls_sv], but are not installed on the current farm. Please install
                any feature or solution which contains these assemblies.
Locations     :
```

# Migrate Content, Finally!

- Attach content database to farm
  - `Mount-SPContentDatabase -Name <DB_Name> -WebApplication <http://webapp>`
- Recall, does not upgrade GUI and features
- For that perform site collection upgrade



# Verify

- View Upgrade Status page in Central Admin
- View upgrade and error log files in 15\LOGS
  - Upgrade-YYYYMMDD-HHMMSS-SSS.log
  - Upgrade-YYYYMMDD-HHMMSS-SSS-error.log
- View Manage Databases Upgrade Status page in Central Admin
  - Get-SPContentDatabase | Format-Table Name, NeedsUpgradeIncludeChildren

# Upgrade Status In Central Admin

## Upgrade Status ⓘ

Upgrade sessions

Status	Server	Start	Last Updated	Errors	Warnings
Failed	C4968397007	2014-11-22 7:41:08 AM	2014-11-22 7:43:08 AM	8	10
Succeeded	C4968397007	2014-06-17 9:18:37 AM	2014-06-17 9:26:30 AM	0	0
Succeeded	C4968397007	2014-04-06 6:16:41 AM	2014-04-06 6:32:11 AM	0	1

Selected upgrade session details

Status	Failed
Server	C4968397007
Start	2014-11-22 7:41:08 AM
Last Updated	2014-11-22 7:43:08 AM
Errors	8
Warnings	10
Starting object	SPContentDatabase Name=WSS_Content_Edrms_Is_sv
Current object	
Current action	
Step within the action	0
Total steps in this action	0
Elapsed Time	00:02:00
Percentage completed	100.00%
Process Name	powershell_ise
Thread Id	9832
Process Id	9260
Command Line	C:\Windows\system32\WindowsPowerShell\v1.0\PowerShell_ISE.exe
Log File	C:\Program Files\Common Files\Microsoft Shared\Web Server Extensions\15\LOGS\Upgrade-20141122-074108-882.log
Remedy	Look for possible causes for upgrade issues by searching [ERROR] and [WARNING] strings in the upgrade log file. Refer to " <a href="http://go.microsoft.com/fwlink/?LinkId=259653">http://go.microsoft.com/fwlink/?LinkId=259653</a> " for more information about how to recover from upgrade failures.

# Manage Databases Upgrade Status in CA

## Manage Databases Upgrade Status ⓘ

SQL Instance	Database	Type	Status
C4968397007	<a href="#">SharePoint_AdminContent_ed691e98-d42f-406e-bcbb-bdfc4416ed2a</a>	Content Database	Database is in compatibility range and upgrade is recommended
C4968397007	<a href="#">WSS_Content</a>	Content Database	Database is in compatibility range and upgrade is recommended
C4968397007	<a href="#">WSS_Content_32bd89911f524cb390e205f929b44ae6</a>	Content Database	No action required
C4968397007	<a href="#">WSS_Content_8080</a>	Content Database	Database is in compatibility range and upgrade is recommended
C4968397007	<a href="#">WSS_Content_Edrms_Is_sv</a>	Content Database	No action required
C4968397007	<a href="#">WSS_Content_f3e223ecc9e64dd0ae49526b03a98e94</a>	Content Database	No action required
C4968397007	<a href="#">WSS_Content_ISB_DW</a>	Content Database	Database is in compatibility range and upgrade is recommended

# Hints

- Create managed paths before attaching databases
- Migrate content database with root site collection first
- Preserve IA / site collection URLs to avoid breaking internal links and alerts
- Use staging area to revamp IA or move to HNSC



# Upgrade Site Collections

- Site collection health check applies these rules:

Rule name	Check Action	Rule ID
Conflicting Content Types	Conflicts between existing content types and content types that are created when you upgrade the site to SharePoint 2013. A conflict occurs when both content types have the same name.	befe203b-a8c0-48c2-b5f0-27c10f9e1622
Customized Files	Files that were customized (or unghosted) in the site collection or subsites. When run in repair mode, it can reset the page to the default (reghost the file).	cd839bod-9707-4950-8fac-f306cb920f6c
Missing Galleries	Any default galleries and reports that are missing from the site collection or subsites.	ee967197-ccbe-4c00-88e4-e6fab81145e1
Missing Parent Content Types	Missing parent content types. Either delete the orphaned content type or associate the orphaned content type with a different parent content type	aga6769f-7289-4b9f-ae7f-5db4b997d284
Missing Site Templates	Site template that the site is based on is available and reports if any elements are missing.	5258ccf5-e7d6-4df7-b8ae-12fcc0513ebd
Unsupported Language Pack References	Language packs that are used by the site collection exist and are referenced correctly by the site collection.	99c946f7-5751-417c-89d3-b9c8bb2d1f66
Unsupported MUI References	Multi-user interface elements that are used by the site collection exist and are referenced correctly by the site collection.	6dao6aab-c539-4eod-b111-b1da4408859a

# Links

- [Upgrade to SharePoint 2013](#) (TechNet)
- [Discontinued features and modified functionality in Microsoft SharePoint 2013](#) (Office)
- [Checklist for database-attach upgrade \(SharePoint 2013\)](#) (TechNet)
- [Export Solutions from SharePoint 2010 Farm](#) (Shane Young)

# Links - Host Name Site Collections

- [What Every SharePoint Admin Needs to Know About Host Named Site Collections](#) (Kirk Evans)
- [Host Named Site Collections \(HNSC\) for SharePoint 2010 Architects](#) (Mark Arend)
- [SharePoint Host Named Site Collection Creator](#) (CodePlex)



# Questions?

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