AvePoint Client Services

ACME Migration Assessment Report

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For ACME Internal Distribution Only

Contents

Executive Summary

The following summary is an abstract of the assessment findings that are presented in greater detail throughout subsequent sections of this document. The ACME SharePoint Migration Assessment report, in conjunction with the Detailed Power Bi reports, developed exclusively for ACME, present detail findings, observations and recommendations for the upcoming migration of ACME team sites from the legacy SharePoint 2010 environment to the Office 365 ACME tenant. This assessment report is not meant to be an instructional guide for the migration team to follow. Rather, the opinions and recommendations outlined by AvePoint provide ACME with a detailed analysis of existing SharePoint environment, the underlying data and content structure and key migration recommendations.

This report is organized across the following areas:

1. Executive Summary – summary of key findings and observations
2. Program Background and approach – summary of program background, current SharePoint environment and key business and architecture principals that have influenced migration recommendations.
3. Migration Findings and Recommendations – detailed assessment findings, migration architecture impacts and scorecards for key areas of the platform.
4. Migration Architecture – recommendations for migration infrastructure architecture.

Key findings and observations

- Scale – At first glance, the migration project appears to be extensive based on the information that was collected during early stages of the discovery workstream. Indeed, this is expected to be a complicated project that will require careful planning, choreographed communication with business users and departments, oversight and a robust factory migration approach to handle the sheer volume of legacy team sites. The findings from the discovery report indicate that current team sites represent more than 8 TB of content spread across 3,881 site collections and 14,186 sites. After carefully reviewing the structure of the sites, usage patterns and other characteristics, AvePoint has identified many areas that can streamline the migration project. Examples include pruning criteria to exclude, deprioritize or abandon sites (*that are no longer active or have reached their usefulness,*) introducing date filter criteria to migrate relevant content and the deprecation of legacy customizations that, over time have been deployed onto the source SharePoint environment and which no longer serve a purpose. Finding such patterns has yielded approximately 4,000 sites as likely candidates to be excluded from the migration workstream. This number is likely to grow (*albeit at a smaller rate*) as the ACME governance team continues to collect survey results from individual site owners.
- Customizations – Early insights suggest that SP2010 is a highly customized environment. There is no doubt that many customizations have been deployed across legacy site collections.

With key principals established for adhering to Office 365 capabilities and the agreement to sunset legacy customizations that are no longer compatible with Office 365, AvePoint recommends that the migration project focus exclusively on the migration of content. Any legacy customizations will either be abandoned or mapped (through DocAve plan profiles) to existing Office 365 capabilities. On rare exceptions, customizations that are required to be preserved (*e.g. semaphore*) should be segregated into the Custom Application farm and treated on a case by case basis outside of the factory model. This decision greatly affects the complexity, costs and risks for this project. With a different opinion on the role that legacy customizations factor in the migration project, the complexity and risk factors for this project have been lowered across most of the areas.

- Nintex – While Nintex is a form of a customization, this area of the platform deserves a separate summary. Working with Nintex, AvePoint has identified the discreet set of Custom Actions (51) that are in use by approximately 963 distinct Nintex workflows. While final information is not yet ready that identifies patterns of actions to workflows (e.g. how many workflows use Action # XYZ, etc.), AvePoint will be prepared to support the migration of the majority of Nintex Actions identified in the Nintex KnowYourWorkflow report, provided that said Custom Actions are mapped to corresponding Nintex Office 365 Custom Actions. AvePoint is pleased to announce that today more than 35 of aforementioned Custom Actions are already supported from SP2013 to Office 365. A similar upgrade will be ready to support the migration of SP2010 Nintex Workflows to Office 365.
- Migration fidelity – Key migration decisions have been reached in the following areas:
    - No changes necessary to content classification e.g. metadata, columns, content types. This content will be preserved and migrated in it's current state.
    - Security permission will be preserved in a like for like manner.
    - Disabled/Inactive user accounts cleanup will remap inactive users to a predefined service account
    - We do not expect to see excessive use of versions throughout lists and libraries. Notwithstanding, prior to the start of the migration, a more comprehensive discovery should be executed to focus exclusively on this parameter. On rare occasions, some customers choose to limit the migration of versions provided that governance controls are already established. If necessary, standard rules can be designed to limit the migration of version history.
    - Content reorganization is not a factor. The vast majority of sites are organized as site collections. This is a key breakthrough and has significantly influenced the team's opinion on the plan complexity.
- Network bandwidth – Different architecture decisions have been considered by AvePoint and are listed in the Migration Architecture section of this report. In conjunction with Office 365 throttling restrictions, an incremental risk affecting migration speed is ACME's existing internet bandwidth and it's ability to handle additional bandwidth demands (*on network infrastructure*.) We understand that ACME is currently working with Microsoft to roll out a new dedicated

network pipeline to Microsoft Azure. AvePoint will work with ACME to fine tune the right balance of migration speed to bandwidth restrictions by leveraging a globally distributed migration engineering workforce to accommodate different regional time zones.

- Throughput and coordination - Notwithstanding the steps that can be taken to streamline and prioritize the migration of legacy collaboration sites, it is important to stress that this is still a large project (*from a plan volume, throughput and coordination perspective*). While premature to discuss the specific duration which is typically established after a Pilot, AvePoint expects to work closely with the ACME governance team to fine tune our Migration factory model for the migration and transition of sites and users to the new Office 365 environment.
- Overall Risk – Is rated Moderate as a byproduct of two key variables: The migration of legacy Nintex workflows and the High Volume of Sites and Content that must be migrated with existing network and throttling constraints. These risks are not unique to AvePoint. Apart from other companies, AvePoint is in a favorable position to handle large scale engagements, similar to the aforementioned characteristics. As a product company with line of sight access to product engineers and technical architects, the migration team has access to immediate issue analysis and remediation from the team that designed and developed the DocAve platform. To scale and support migration projects, AvePoint is also in a position to spin up multiple teams across different time zones that will be responsible for organizing, designing, executing and validating migration plans.

Background and Approach

Project Background

In 2016, ACME contacted AvePoint to discuss the upcoming SharePoint 2010 team migration project. During preliminary conversations (*between the two parties,*) ACME described challenges with the previous (*350 GB*) partner site migration project. The issues for the partner site migration revolved around the complexities of an on premise to Office 365 migration, product support challenges with current migration tool, and lack of proper insight and planning on how to execute a successful migration to Office 365.

Due to the larger scale of the team site migration project AvePoint was requested to conduct a migration assessment that provides the required insights and migration design to execute a successful migration for a project of this scale. AvePoint's objective for outputs of the migration assessment are to provide ACME with the required information and guidance to ensure the team site migration does not face the same partner site migration challenges, as well as complete the project on time and on budget.

Current Environment

ACME has 6 separate on-premises SharePoint 2010 farms organized across the following key business processes:

- Application Services Farm
- Team Sites Farm
- Custom Application Farm
- Publishing Portal (Individual Team Sites)
- Main Intranet
- External Environment Farm

Additionally, 3rd party tools reside within an isolated environment (2 server architecture: non-SharePoint servers). The Team Site Farm, which is the subject of this assessment report is predominantly used for collaboration sites and storage of critical/non-critical business documents.

Project Approach

As defined in the Statement of Work that governs this engagement, AvePoint executed the following preparatory, onsite and offsite activities which have collectively contributed to this ACME Assessment report:

- Installation, configuration and execution of AvePoint Data Discovery tool

- Development of key reporting analytics across key platform areas (e.g. PowerBi reports),
- Workshop led sessions to review, document and establish project architecture and business transformation principals,
- Development of assessment report, key findings and recommendations.

Key Principals

This section presents key architecture, business and migration principals that have influenced the recommendations and key findings:

1. Establish a migration process that will minimize disruption to business users
2. Adhere to Office 365 technical capabilities and out of the box functionalities
3. Remap customizations to standard Office 365 out of the box capabilities. Any customizations that do not have corresponding parity in Office 365 should be treated outside the scope of the upcoming migration project and may require legacy sites to be migrated into a Non Office 365 environment (*e.g. Custom Application Farm*)
4. Migrate in a like for like manner preserving
    a. Permissions
    b. Content classification and metadata
    c. Version controls
    d. Site hierarchy structure
    e. User mapping
    f. Inactive user account remediation
5. Select the right architecture that will permit the migration team to conduct migration activities while business users continue to operate in their legacy environments until final cutover activities.
6. Supplement information contained in "Site Density" report with ongoing work done by ACME Project team members to identify sites that are no longer relevant and can be excluded from the migration (*e.g. blogs, test sites, abandoned sites, etc.*)
7. Execute changes to legacy information architecture that are incompatible with office 365 threshold policies (e.g. list item threshold, URL Character Limit, blocked file extensions, etc.)

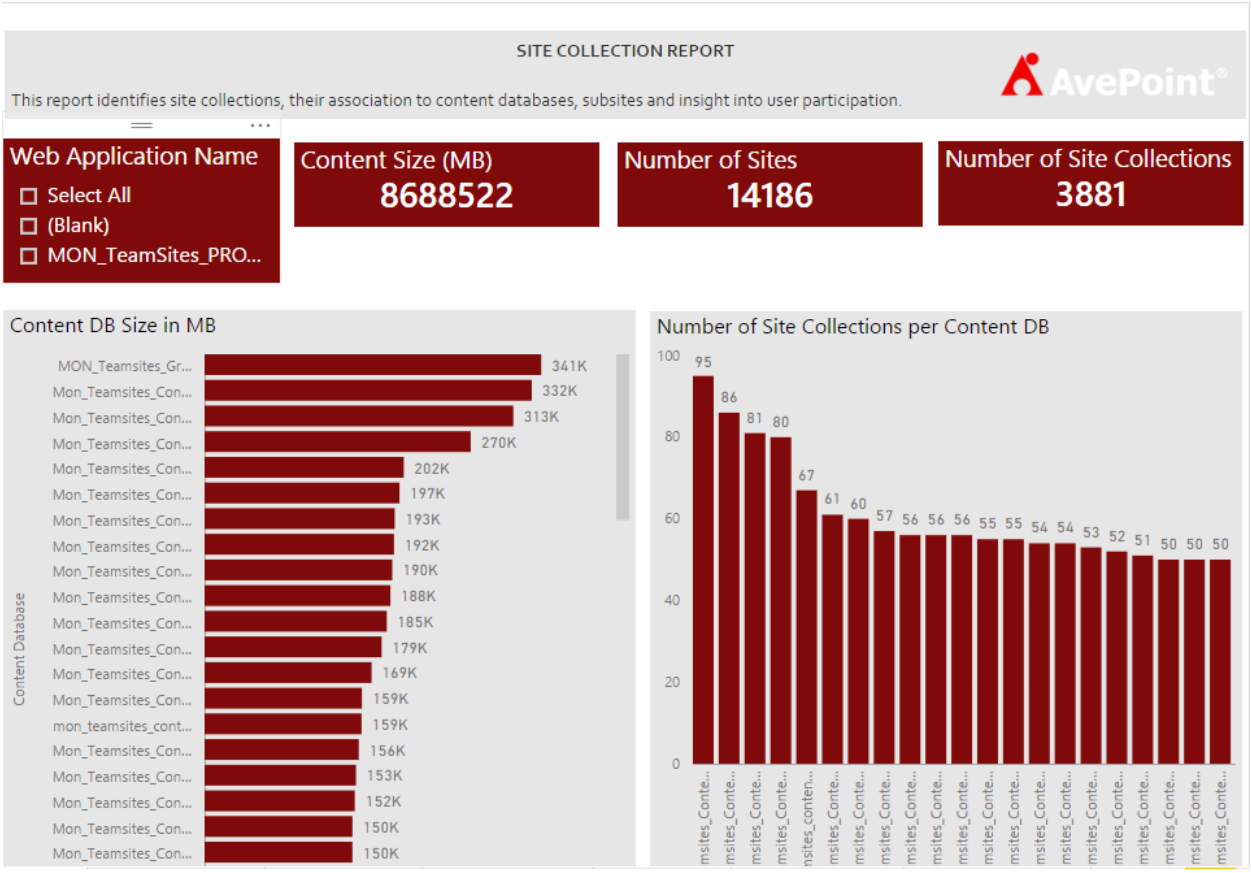
Migration Findings Recommendations

Discovery Process

The discovery report was installed and executed during the week of March 16, 2016 against the SharePoint 2010 Team Site farm. The outputs of the discovery reports were used to construct the Power Bi reports. Prior to migration work commencing, another instance of this report is recommended to document any material changes in the environment since date of original scan.

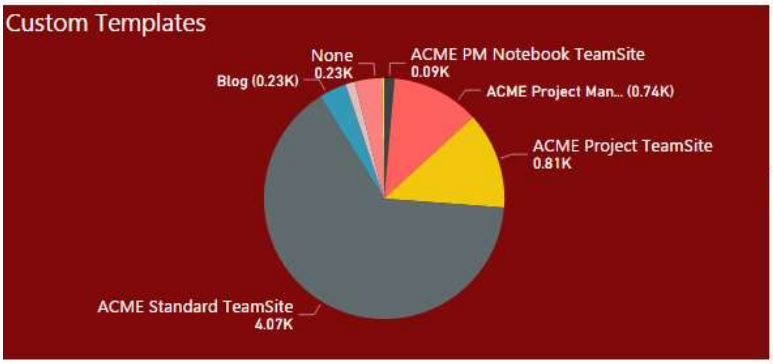
Discovery Highlights

The following abstract information (in static format) is presented below. Interactive reports can be accessed through the PowerBi report provided as an addendum. Supporting information provided for each category is presented in further detail in the Migration Findings and Recommendation sections.



SITE TEMPLATE REPORT

This report identifies sites that have custom site templates. Last modified date can also be selected to filter out potential sites that have been abandoned to prioritize further investigation.



Customizations
- Select All
- (Blank)
- False
- True

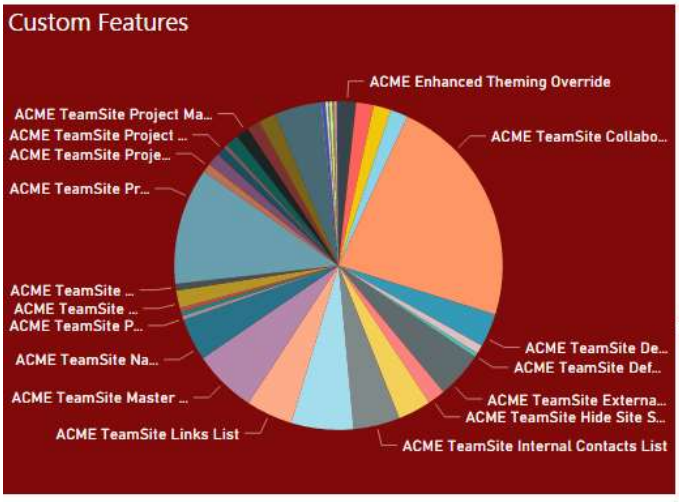
Number of Templates
16

Last Modified
- Select All
- 2016
- 2015
- 2014

Template Title	Site Collection URL	Site URL
Wiki Site	http://teamsites.ACME.com/private/CanadaIT	http://teamsites.ACME.com/private/Can
	http://teamsites.ACME.com/private/CAPProject	http://teamsites.ACME.com/private/CAP
	http://teamsites.ACME.com/private/Comex	http://teamsites.ACME.com/private/Con
	http://teamsites.ACME.com/private/GIS	http://teamsites.ACME.com/private/GIS,
		http://teamsites.ACME.com/private/GIS,
		http://teamsites.ACME.com/private/GIS,
	http://teamsites.ACME.com/private/HR-IT-Chng-Req	http://teamsites.ACME.com/private/HR-
	http://teamsites.ACME.com/private/HRT	http://teamsites.ACME.com/private/HRT
	http://teamsites.ACME.com/private/MCAS	http://teamsites.ACME.com/private/MC
	http://teamsites.ACME.com/private/MuscatineWCM	http://teamsites.ACME.com/private/Mus
	http://teamsites.ACME.com/private/RALIndia	http://teamsites.ACME.com/private/RAL
	http://teamsites.ACME.com/private/RecurringContracts	http://teamsites.ACME.com/private/Rec
	http://teamsites.ACME.com/private/SAPProject	http://teamsites.ACME.com/private/SAP

SITE TEMPLATE REPORT

This report identifies sites that have custom site features.

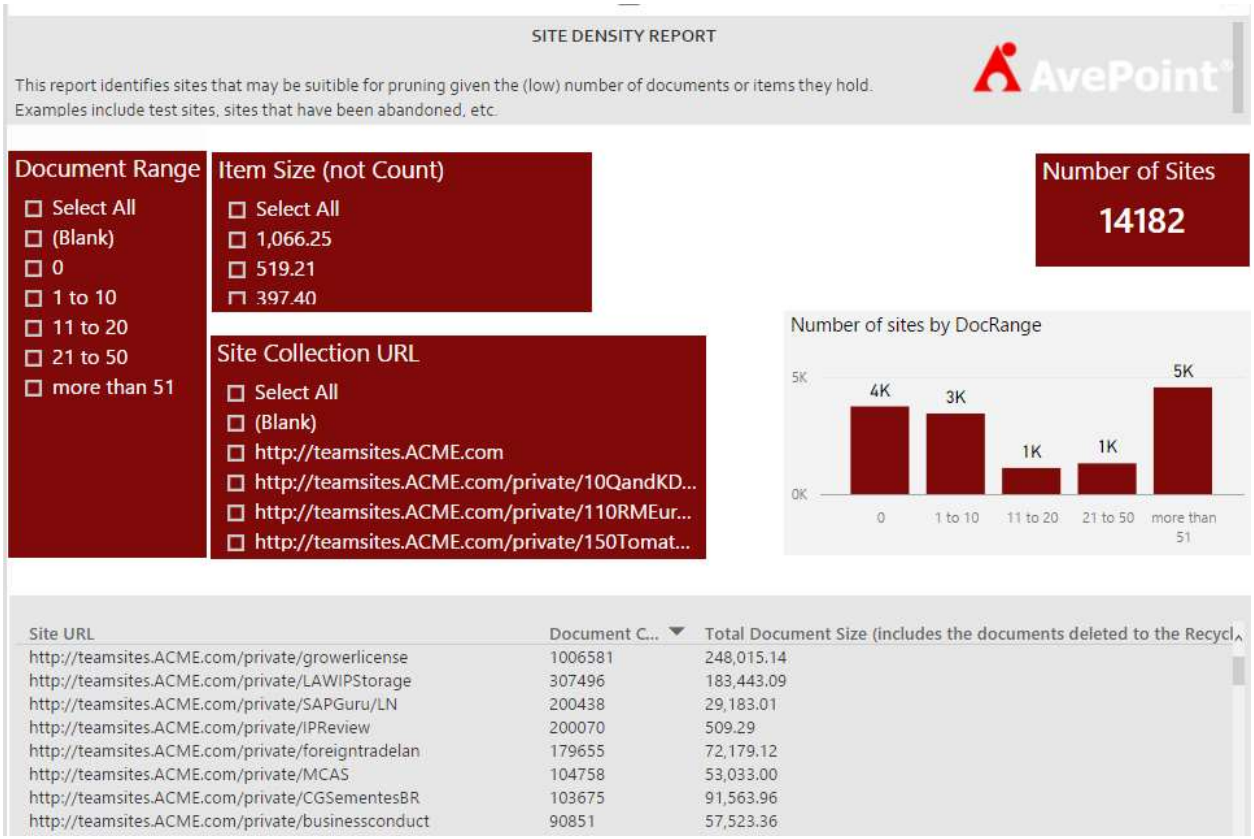


Solution Name
- Select All
- (Blank)
-
- 6da57d3f-8976-4f23-9f59-219...
- global_digitallibrary_webparts...
- nintexforms2010.wsp
- nintexworkflow2010.wsp
- nintexworkflow2010enterprise...
- semaphoresp2010.wsp

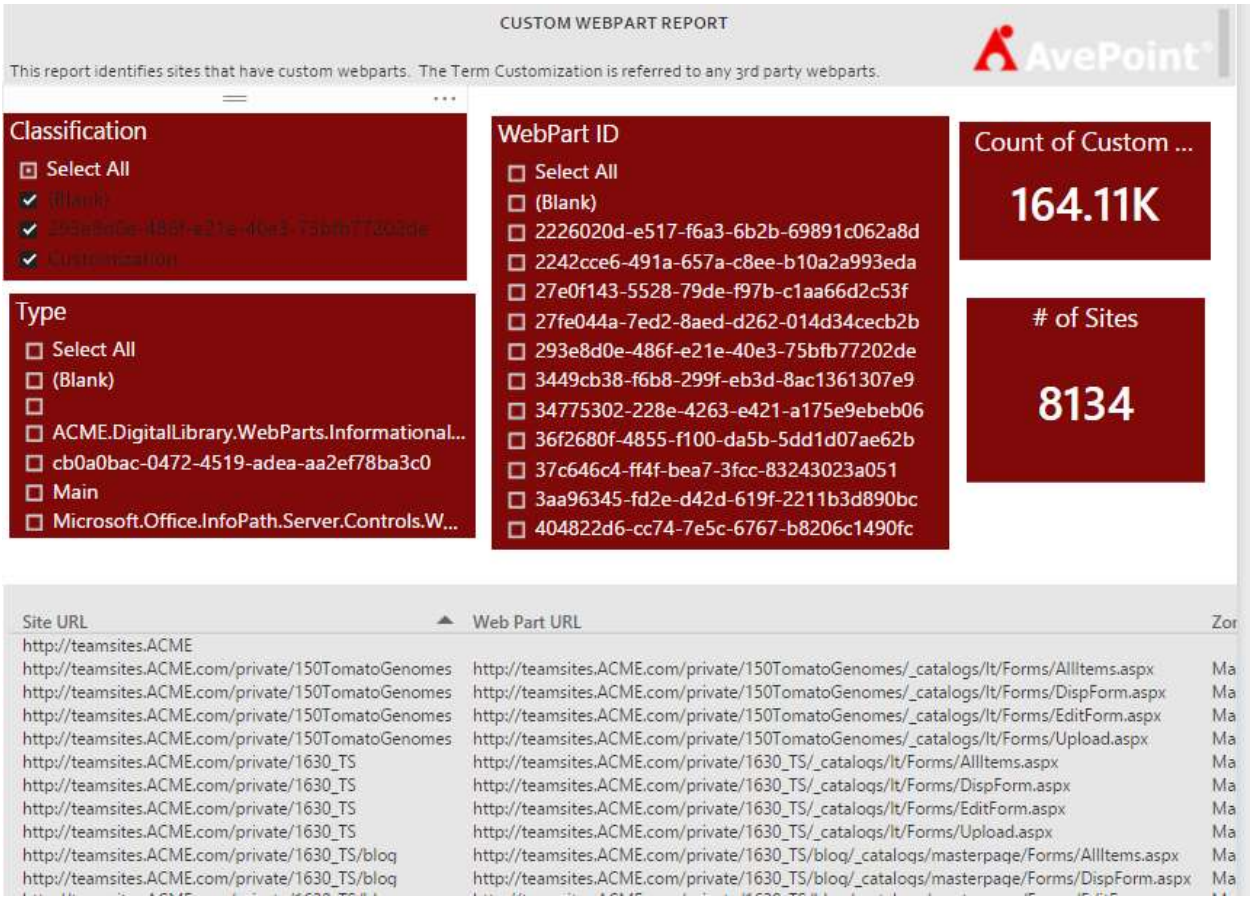
# of Cust Features
74

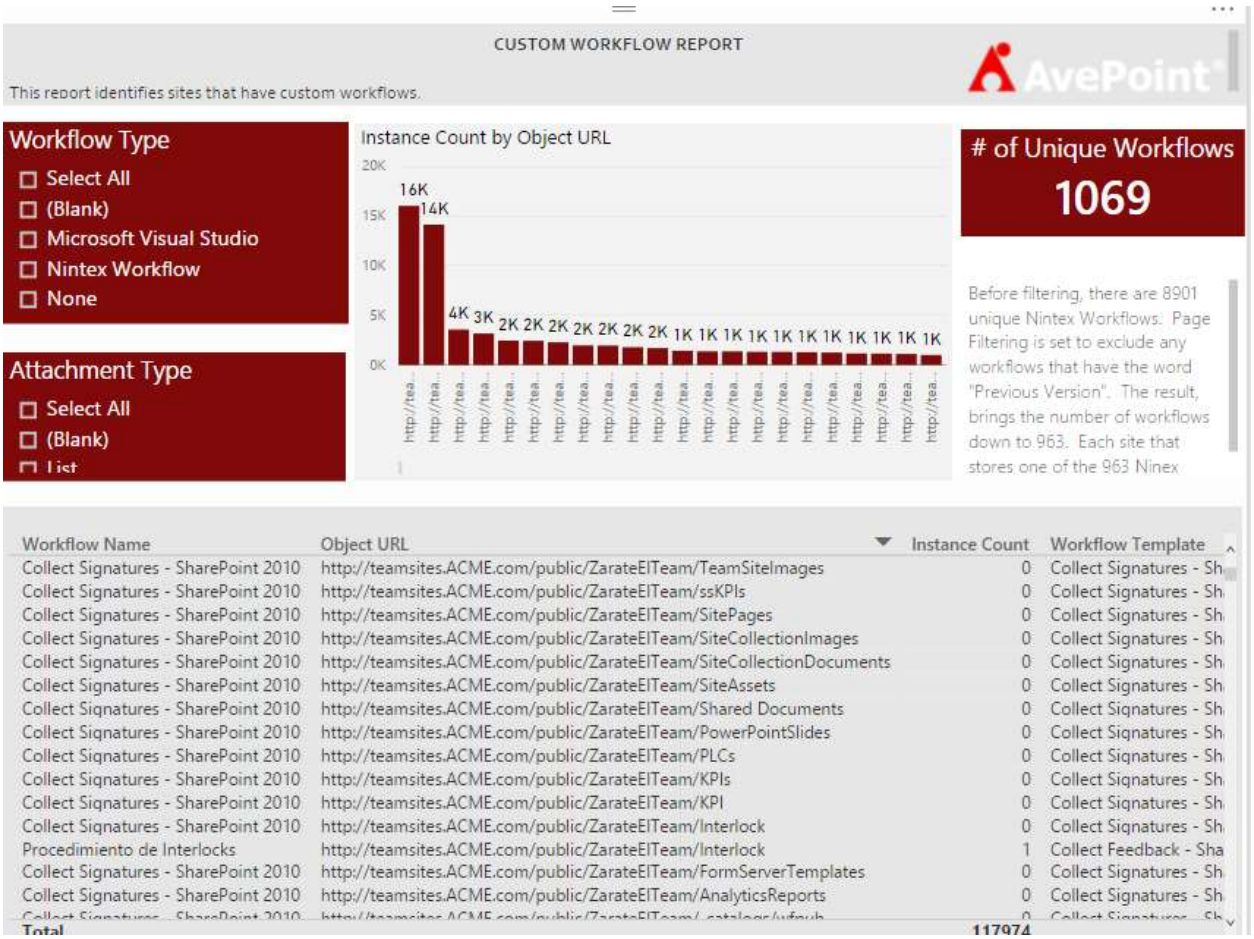
Feature Status
- Select All
- (Blank)
- 6da57d3f-8976-4f23-9f59-21...
- Started

Feature Name	Object URL
	http://teamsites.ACME.com/private/CArequest/2014 Asgrow
	http://teamsites.ACME.com/private/CArequest/2015 Asgrow
	http://teamsites.ACME.com/private/CArequest/2016 Asgrow
	http://teamsites.ACME.com/private/HiringOnboarding/Felda
	http://teamsites.ACME.com/private/MonVegEMEA_TD_PM_MK/TTP LCH
	http://teamsites.ACME.com/private/Procurement/Global Procurement/ST/Agriculture Equipment Sym...



Site URL	Document C...	Total Document Size (includes the documents deleted to the Recycl
http://teamsites.ACME.com/private/growerlicense	1006581	248,015.14
http://teamsites.ACME.com/private/LAWIPStorage	307496	183,443.09
http://teamsites.ACME.com/private/SAPGuru/LN	200438	29,183.01
http://teamsites.ACME.com/private/IPReview	200070	509.29
http://teamsites.ACME.com/private/foreigntradelan	179655	72,179.12
http://teamsites.ACME.com/private/MCAS	104758	53,033.00
http://teamsites.ACME.com/private/CGSementesBR	103675	91,563.96
http://teamsites.ACME.com/private/businessconduct	90851	57,523.36


CUSTOM WEBPART REPORT
This report identifies sites that have custom webparts. The Term Customization is referred to any 3rd party webparts.
AvePoint
Classification
Select All
(Blank)
Customization
Type
Select All
(Blank)
ACME.DigitalLibrary.WebParts.Informational...
cb0a0bac-0472-4519-adea-aa2ef78ba3c0
Main
Microsoft.Office.InfoPath.Server.Controls.W...
WebPart ID
Select All
(Blank)
2226020d-e517-f6a3-6b2b-69891c062a8d
2242cce6-491a-657a-c8ee-b10a2a993eda
27e0f143-5528-79de-f97b-c1aa66d2c53f
27fe044a-7ed2-8aed-d262-014d34cecb2b
293e8d0e-486f-e21e-40e3-75bfb77202de
3449cb38-f6b8-299f-eb3d-8ac1361307e9
34775302-228e-4263-e421-a175e9ebeb06
36f2680f-4855-f100-da5b-5dd1d07ae62b
37c646c4-ff4f-bea7-3fcc-83243023a051
3aa96345-fd2e-d42d-619f-2211b3d890bc
404822d6-cc74-7e5c-6767-b8206c1490fc
Count of Custom ...
164.11K
# of Sites
8134
Site URL
Web Part URL
Zor
http://teamsites.ACME
http://teamsites.ACME.com/private/150TomatoGenomes http://teamsites.ACME.com/private/150TomatoGenomes/_catalogs/lt/Forms/AllItems.aspx Ma
http://teamsites.ACME.com/private/150TomatoGenomes http://teamsites.ACME.com/private/150TomatoGenomes/_catalogs/lt/Forms/DispForm.aspx Ma
http://teamsites.ACME.com/private/150TomatoGenomes http://teamsites.ACME.com/private/150TomatoGenomes/_catalogs/lt/Forms/EditForm.aspx Ma
http://teamsites.ACME.com/private/150TomatoGenomes http://teamsites.ACME.com/private/150TomatoGenomes/_catalogs/lt/Forms/Upload.aspx Ma
http://teamsites.ACME.com/private/1630_TS http://teamsites.ACME.com/private/1630_TS/_catalogs/lt/Forms/AllItems.aspx Ma
http://teamsites.ACME.com/private/1630_TS http://teamsites.ACME.com/private/1630_TS/_catalogs/lt/Forms/DispForm.aspx Ma
http://teamsites.ACME.com/private/1630_TS http://teamsites.ACME.com/private/1630_TS/_catalogs/lt/Forms/EditForm.aspx Ma
http://teamsites.ACME.com/private/1630_TS http://teamsites.ACME.com/private/1630_TS/_catalogs/lt/Forms/Upload.aspx Ma
http://teamsites.ACME.com/private/1630_TS/bloq http://teamsites.ACME.com/private/1630_TS/bloq/_catalogs/masterpage/Forms/AllItems.aspx Ma
http://teamsites.ACME.com/private/1630_TS/bloq http://teamsites.ACME.com/private/1630_TS/bloq/_catalogs/masterpage/Forms/DispForm.aspx Ma



Top 10 Largest Site Collections

Site Collection URL	Size (GBs)
http://teamsites.ACME.com/private/growerlicense	288.75 GB
http://teamsites.ACME.com/public/TFS	230.86 GB
http://teamsites.ACME.com/private/LAWIPStorage	200.74 GB
http://teamsites.ACME.com/private/RegMX	185.80 GB
http://teamsites.ACME.com/private/Salesforce	134.27 GB
http://teamsites.ACME.com/public/fiscalBr	131.25 GB

Site Collection URL	Size (GBs)
http://teamsites.ACME.com/public/Seed-Enhancement	107.72 GB
http://teamsites.ACME.com/private/tps	103.91 GB
http://teamsites.ACME.com/private/CGSementesBR	94.83 GB
http://teamsites.ACME.com/private/GIS	88.57 GB

Top 10 Site Collections with Most Subsites

Site Collection URL	# Subsites	Size (GBs)
http://teamsites.ACME.com/public/GISPMOPortal	1106	32.94 GB
http://teamsites.ACME.com/private/gispublic	340	46.42 GB
http://teamsites.ACME.com/public/USCIT	126	65.80 GB
http://teamsites.ACME.com/private/tps	105	103.91 GB
http://teamsites.ACME.com/private/brzitpmo	90	59.88 GB
http://teamsites.ACME.com/private/IT-EMEA	88	29.96 GB
http://teamsites.ACME.com/private/GIS	85	88.57 GB
http://teamsites.ACME.com/private/CornBreedGlobal	79	51.00 GB
http://teamsites.ACME.com/private/RegMX	62	185.80 GB
http://teamsites.ACME.com/public/IndiaIT	61	12.67 GB

Top 10 Site Collections with Most Users

Site Collection URL	# Users
http://teamsites.ACME.com	49,812
http://teamsites.ACME.com/public/LearningConnect	26,864

Site Collection URL	# Users
http://teamsites.ACME.com/public/plateau	23,359
http://teamsites.ACME.com/private/gispublic	16,595
http://teamsites.ACME.com/public/Rewards	16,299
http://teamsites.ACME.com/public/PeopleManager	16,243
http://teamsites.ACME.com/public/GESH	12,954
http://teamsites.ACME.com/public/USCIT	12,013
http://teamsites.ACME.com/public/Stewardship	11,142
http://teamsites.ACME.com/public/stlbb	10,083

Top 5 Site Collections with Lists

Site Collection URL	# Lists
http://teamsites.ACME.com/private/wacoteamsite	137
http://teamsites.ACME.com/private/Illiopolis	158
http://teamsites.ACME.com/private/MonVegBreeding	266
http://teamsites.ACME.com/private/Procurement/Operations/centerofexcellence	179
http://teamsites.ACME.com/private/WatermanResearch	117

Migration Recommendations

How to read this section

After reviewing raw data, participating in workshop sessions with ACME and adjusting the baseline set forth by the Statement of Work, the migration recommendations have been organized across 7 key sub sections:

- Site Content and Information Architecture
- Site Templates

- SharePoint Solutions
- Custom Features
- Workflows: SharePoint
- Workflows: Nintex
- Custom WebParts
- Alerts

Each section is prefaced with a brief definition (*e.g. what is a Custom Feature*) for readers who may be unfamiliar with SharePoint. The Assessment findings subsection summarize raw data and findings. The Migration Architecture Impact and Recommendation subsection provides specific recommendations. Finally, the Scorecard section provides the reader with a balanced scorecard across three dimensions: Complexity, Duration and Effort.

Site Content and Information Architecture

Definition

Information Architecture describes the organization of content across the Intranet environment, the density and governance controls that affect Information Life Cycle Management policies.

Assessment findings

- A formal governance policy has not yet been instituted which limits the team's ability to benefit from cataloguing sites that have outlived their purpose and are either subject to deletion policies or archival. Without formal content governance controls in place, ACME is relying on manual governance checks to create an inventory of sites that have outlined their relevancy and purpose. This information, once presented identify sites that can be excluded from the migration project.
- The discovery report identified 3841 site collections and 14186 sites that currently consume approximately 8.6 TB of content.
- Our findings indicate that a sizable number of sites can be excluded from the migration project. Examples include:
    - Site Density – sites that appear to have been created and abandoned or do not hold material content
        - 3748 out of 14182 (or 26% of) sites have no documents
        - 3442 out of 14182 (or 24% of) sites have 1-10 documents
    - Blogs – there are approximately 1517 sites that are blog sites which are intended to be excluded from the migration project. It is likely that some or all of the blogs are part of the analysis listed above.
    - Wikis - there are approximately 1453 sites that are wiki sites which are intended to be excluded from the migration project. It is likely that some or all of the blogs are part of the analysis listed above.

    - Test sites - less certain, and not included in this report are an additional 346 sites that have the word Test in the URL. The net size is 23,436 MB. However, this is less certain, since some sites may be incorrectly titled and are NON test sites such as /private/aeas/aeasTEST/OpEx.
- Apart from a set of Site Collection outliers, the majority of site collections have only 1 site.
- AvePoint recommends that additional filters be considered to limit the migration of content that exceeds a predefined age parameter (*e.g. do not migrate anything older than X years, etc.*). Provided that site auditing has been configured with SharePoint 2010, filtering can be established at an object level or a site level (*e.g. no access within the last X years*)
- For lists/libraries that exceed Microsoft recommended thresholds (for views, etc.), migration plans will be designed to spill items into secondary lists. An exact number will be determined at a later date.

Migration Architecture Impact and Recommendations

- All legacy sites will adhere to the "team" Office 365 managed path.
- Apart from the GISPMOPortal site collection which has 827 subsites, we do not see the need to reorganize, promote or demote subsites. Given the density of the GISPMOPortal site collection, additional review is necessary to determine which sites are still active.
- Given the time and effort incurred to create the plans and ensure that Office 365 provisions individual shell containers (*e.g. Site Collections*), the project will benefit from a more efficient migration process if pruning criteria are enabled based on the following recommendations:
    - Exclude all sites that have the word "blog", "wiki" in the site URL (net savings of approximately 2.985 GB
    - Exclude all sites that were marked "Inactive" by the ACME governance team
    - Exclude all sites that have no lists, libraries or pages.
    - Deprioritize and investigate through the ACME governance team all sites that have the word Test in the site URL
    - Consider adding a filter criteria to exclude all objects that are older than X years (*to be defined at a later date by ACME*)
    - Provided that governance controls have been established for version management, and after running additional discovery reports to find number of objects that exceed X versions, consider adding a filter criteria to limit version history to last X versions.
- Understanding that ACME's desire to establish the right balance of throughput and early wins, AvePoint recommends prioritizing sites based on object count in a descending order.
- Review and adjust blocked file types and file size limits before starting the migration project.

Scorecard

Complexity	Duration	Effort

Low	High	High

Site Templates

Definition

SharePoint site templates are pre-built definitions designed around a particular business need. SharePoint users can create their own site template based on a site that has been previously provisioned and customized in SharePoint. Most users are familiar with default site templates, like Team Site, Blog site, and Group Work Site as the most common SharePoint site templates. Site templates can also include predefined lists, libraries and settings, including prebuild pages with webparts anchored to WebPart zones.

Assessment findings

The discovery report identified 14 site templates, of which 4 were marked as custom and 10 reported as native SharePoint 2010 site templates.

- ACME Standard Team Site template
- ACME Project Team Site template
- ACME Project Management Team Site template
- ACME PM NoteBook Team Site
- Team Site
- Blog
- Document Workspace
- Access Services Site ACCSRV#0
- Enterprise Wiki ENTERWIKI#0
- FAST Search Center SRCHCENTERFAST#0
- Basic Search Center SRCHCENTERLITE#0
- Blank Site STS#1
- Wiki Site WIKI#0
- Global Digital Library

Migration Architecture Impact and Recommendations

As outlined in the Key Principals section, AvePoint in conjunction with ACME have agreed that all in use site templates will be mapped to corresponding Office 365 available templates. The need for custom site templates, while an option, is not yet a requirement that has been registered for this project. This information will ensure that the new collaboration environment adheres to common governance policies for site templates. The following mapping information is provided:

- ACME Standard Team Site Template "MTS.Sts#0" mapped to STS#0 (Team Site)

- ACME Standard Team Site Template "MTS.Sts#1" mapped to STS#0 (Team Site)
- ACME Project Team Site Template "MTS.Sts#4" mapped to PROJECTSITE#0 (Project Site)
- ACME Project Management Team Site Template "MTS.Sts#2" mapped to PROJECTSITE#0 OR ACCSRV#5 (Depending on usage-Project Site OR Projects Web Database)
- ACME PM NoteBook Team Site "MTS.Sts#3" mapped to STS#1 (Blank Site)
- Default Team Site mapped to STS#0
- Default Blog mapped to BLOG#0
- Default Document Workplace mapped to STS#0
- Access Services Site ACCSRV#0 – DEPREACTED – no site currently using this site template
- Enterprise Wiki ENTERWIKI#0 – DEPREACTED – no site currently using this site template
- FAST Search Center SRCHCENTERFAST#0 – DEPREACTED – no site currently using this site template
- Basic Search Center SRCHCENTERLITE#0 – DEPREACTED – no site currently using this site template
- Blank Site STS#1 – DEPREACTED – no site currently using this site template
- Wiki Site WIKI#0 – DEPREACTED – no site currently using this site template

It is important to note that in conjunction with site templates, any webparts that were associated with legacy custom ACME site templates and which are not Office 365 compatible may not be migrated.

Scorecard

Complexity	Duration	Effort
Low	NA	Low

SharePoint Solutions

Definition

A SharePoint Solution *is a single compressed Windows* Solution *Package (.wsp) file containing all the necessary resources and is a deployable and reusable file that contains a set of features, site definitions, and assemblies that apply to SharePoint sites. Once a package is deployed to the server that's running SharePoint, the SharePoint administrator can install it and activate its features.*

Assessment finding

The Discovery report identified 14 solutions. All solutions are globally deployed (farm level) into ACME's Team Sites farm. 9 Solutions are also deployed at the Web Application level. Finally, 6 solutions support Nintex [1]workflow functionality.

Solution Name	Deployed Location
global_digitallibrary_webparts_2013-09-17_a.wsp	Global and Web Application level Deployed to: • http://teamsites.ACME.com
ACME.common.utilities.extensions_2012-06-19_a.wsp	Global and Web Application level Deployed to: http://teamsites.ACME.com
ACME.common.utilities_2012-06-19_a.wsp	Global and Web Application level Deployed to: http://teamsites.ACME.com
nintexforms2010.wsp	Global
nintexforms2010core.wsp	Global
nintexlivecore.wsp	Global
nintexworkflow2010.wsp	Global and Web Application level Deployed to: http://teamsites.ACME.com/ http://stlwspitfprd01:8000/
nintexworkflow2010core.wsp	Global
nintexworkflow2010enterprisefeatures.wsp	Global and Web Application level Deployed to: http://teamsites.ACME.com/

[1] 6 of the 14 solutions are part of Nintex workflow solutions which will be excluded during the migration. Nintex provides new offerings that have been re-designed as native cloud solutions and they fit into Office 365 using the SharePoint cloud app model.

Solution Name	Deployed Location
	http://stlwspitfprd01:8000/
semaphoresp2010.wsp	Global and Web Application level Deployed to: http://teamsites.ACME.com
teamsite_admincode_2012-06-19_a.wsp	Global and Web Application level Deployed to: http://teamsites.ACME.com
teamsite_fqlwebparts_2012-06-19_a.wsp	Global and Web Application level Deployed to: http://teamsites.ACME.com
teamsite_framework_20140211_a.wsp	Global and Web Application level Deployed to: http://teamsites.ACME.com
teamsite_sitedefinition_2012-09-06_a.wsp	Global

Migration Architecture Impact and Recommendations

As outlined in the Key Principals section, AvePoint in conjunction with ACME have agreed that unless specific business requirements dictate the need to preserve the functionality of solutions, Migration will exclude legacy custom solutions.

Solution Name	Recommendation
global_digitallibrary_webparts_2013-09-17_a.wsp	Deprecate
ACME.common.utilities.extensions_2012-06-19_a.wsp	TBD based on additional analysis to be performed by ACME. Should the business functionality be required, a custom solution will need to be developed and deployed as part of the site provisioning process which will precede each migration plan.
ACME.common.utilities_2012-06-19_a.wsp	TBD based on additional analysis to be performed by ACME. Should the business functionality be required, a custom solution will need to be developed and deployed as part of the site provisioning process which will precede each migration plan.
nintexforms2010.wsp	Deprecate, Will be replaced with Nintex Office 365 solution.

Solution Name	Recommendation
nintexforms2010core.wsp	Deprecate, Will be replaced with Nintex Office 365 solution.
nintexlivecore.wsp	Deprecate, Will be replaced with Nintex Office 365 solution.
nintexworkflow2010.wsp	Deprecate, Will be replaced with Nintex Office 365 solution.
nintexworkflow2010core.wsp	Deprecate, Will be replaced with Nintex Office 365 solution.
nintexworkflow2010enterprisefeatures.wsp	Deprecate, Will be replaced with Nintex Office 365 solution.
semaphoresp2010.wsp	The discovery report indicates 23 site collections that have this solution deployed. Two[2] options are provided: 1. Deprecate functionality, move to Office 365 – possibility that functionality may/will be jeopardized 2. Preserve functionality, move to Custom Application Farm http://teamsites.ACME.com/public/DMIT http://teamsites.ACME.com/private/YS-POC-Phase-1 http://teamsites.ACME.com/private/YieldandStress http://teamsites.ACME.com/private/YieldABT http://teamsites.ACME.com/private/VectorStrategy http://teamsites.ACME.com/private/SYI-G1988 http://teamsites.ACME.com/private/SoyYieldPhase1 http://teamsites.ACME.com/private/Sapphire http://teamsites.ACME.com/private/RTPAGH http://teamsites.ACME.com/private/RegionalSecurity http://teamsites.ACME.com/private/PPET/CompBio http://teamsites.ACME.com/private/PPET http://teamsites.ACME.com/private/MxPInfo http://teamsites.ACME.com/private/EvogeneYandS http://teamsites.ACME.com/private/DiscovScreening http://teamsites.ACME.com/private/CottonWaterUse http://teamsites.ACME.com/private/CornWUEhistoric

[2] A third option was considered but rejected, after learning that this solution is not owned by ACME and a redesign/rebuild will not be feasible: *Preserve functionality and move to Office 365 - Based on additional analysis to be performed by ACME, should business functionality be required, a custom solution (compatible with Office 365) will need to be developed and deployed as part of the site provisioning process which will precede each migration plan.*

Solution Name	Recommendation
	http://teamsites.ACME.com/private/CornNitrogenPI http://teamsites.ACME.com/private/CornIY-PhaseII http://teamsites.ACME.com/private/BBWG http://teamsites.ACME.com/private/BASF http://teamsites.ACME.com/private/alfalfatech http://teamsites.ACME.com/
teamsite_admincode_2012-06-19_a.wsp	Deprecate
teamsite_fqlwebparts_2012-06-19_a.wsp	Deprecate
teamsite_framework_20140211_a.wsp	Deprecate
teamsite_sitedefinition_2012-09-06_a.wsp	Deprecate

Scorecard

Complexity	Duration	Effort
Non Factor[3]	Non Factor	Non Factor

Custom Features

Definition

SharePoint Custom Features are part of a solution package framework that enable system administrators and power users to activate or deactivate specific functionalities and underlying content/structure. Site Collection administrators can transform the template or definition of a site by toggling a particular Feature on or off in the system settings user interface.

Assessment findings

The Discovery report identified 70 custom features that were deployed and activated across the team site farm. Standard features that were enabled directly by users and which are considered native SharePoint 2010 features are not included in the AvePoint Discovery report.

[3] Assumption: None of the solutions will need to be migrated.

Feature Name	Solution Name
Fast Search With FQL	teamsite_fqlwebparts_2012-06-19_a.wsp
ACME Team Site Default Features Stapler	teamsite_framework_20140211_a.wsp
ACME Team Navigation Override	teamsite_framework_20140211_a.wsp
ACME Team Site Remove Restricted Webparts	teamsite_framework_20140211_a.wsp
ACME Team Site Hide Site Settings Links	teamsite_framework_20140211_a.wsp
ACME Team Site Basic Team Site Web Parts	teamsite_framework_20140211_a.wsp
ACME Enhanced Theming Override	teamsite_framework_20140211_a.wsp
ACME Team Site Portal Connection	teamsite_framework_20140211_a.wsp
ACME Team Site Links List	teamsite_framework_20140211_a.wsp
ACME Team Site Master Page	teamsite_framework_20140211_a.wsp
ACME Team Site Shared Documents	teamsite_framework_20140211_a.wsp
ACME Team Site Internal Contacts List	teamsite_framework_20140211_a.wsp
ACME Team Site Navigation	teamsite_framework_20140211_a.wsp
ACME Team Site External Contacts List	teamsite_framework_20140211_a.wsp
ACME Team Site Home Page Web Parts	teamsite_framework_20140211_a.wsp
ACME Team Site Default List Instances	teamsite_framework_20140211_a.wsp
ACME Team Site Limit Site Templates	teamsite_framework_20140211_a.wsp
ACME Team Site Portal Provisioning Handler	teamsite_framework_20140211_a.wsp
ACME Team Site Collaboration	teamsite_framework_20140211_a.wsp
ACME Team Site Project Management Status Reports List	teamsite_framework_20140211_a.wsp
ACME Team Site Project Management Tasks List	teamsite_framework_20140211_a.wsp
ACME Team Site Project Management Issues List	teamsite_framework_20140211_a.wsp

Feature Name	Solution Name
ACME Team Site Project Management Navigation	teamsite_framework_20140211_a.wsp
ACME Team Site Project Management Risks List	teamsite_framework_20140211_a.wsp
ACME Team Site Project Management Home Page Web Parts	teamsite_framework_20140211_a.wsp
ACME Team Site Default Project Management List Instances	teamsite_framework_20140211_a.wsp
ACME Team Site Project Management Collaboration	teamsite_framework_20140211_a.wsp
ACME Team Site Project Management Notebook Home Page Web Parts	teamsite_framework_20140211_a.wsp
ACME Team Site Default Project Management Notebook List Instances	teamsite_framework_20140211_a.wsp
ACME Team Site PM Notebook Calendar	teamsite_framework_20140211_a.wsp
ACME Team Site PM Notebook Collaboration	teamsite_framework_20140211_a.wsp
ACME Team Site PM Notebook Navigation	teamsite_framework_20140211_a.wsp
ACME Team Site PM Notebook Custom Project Schedule Report	teamsite_framework_20140211_a.wsp
ACME Team Site Search SubSite Creation	teamsite_framework_20140211_a.wsp
ACME Team Site Site Request List	teamsite_framework_20140211_a.wsp
ACME Team Site Administration	teamsite_framework_20140211_a.wsp
ACME Team Site Site Deletion List	teamsite_framework_20140211_a.wsp
ACME Team Site Site Creation	teamsite_framework_20140211_a.wsp
ACME Team Site Site Usage Confirmation List	teamsite_framework_20140211_a.wsp
Nintex Forms	nintexforms2010.wsp
Nintex Forms Prerequisites Feature	nintexforms2010.wsp

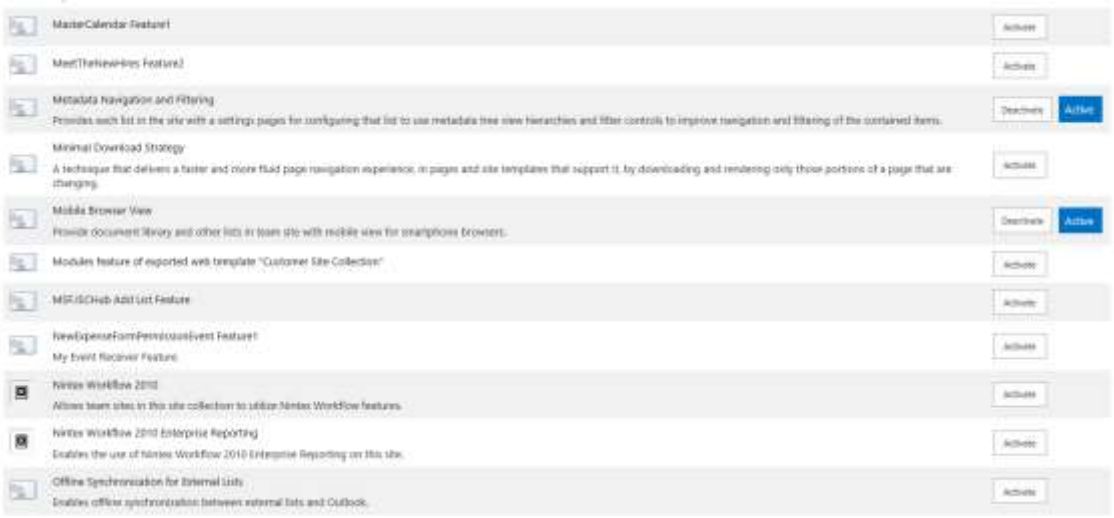
Feature Name	Solution Name
Nintex Forms for SharePoint List Forms	nintexforms2010.wsp
Nintex Forms for Nintex Workflow	nintexforms2010.wsp
Nintex Live Forms	nintexforms2010.wsp
Smartlogic Semaphore Classification	semaphoresp2010.wsp
Smartlogic Semaphore Search Webparts	semaphoresp2010.wsp
Smartlogic Semaphore Integration	semaphoresp2010.wsp
Smartlogic Semaphore Column Defaults	semaphoresp2010.wsp
Smartlogic Semaphore Context Search Upgrade	semaphoresp2010.wsp
MTS.UnusedSiteList	teamsite_admincode_2012-06-19_a.wsp
MTS.AllowCustomSiteTemplates	teamsite_admincode_2012-06-19_a.wsp
MTS.Enable PM Notebook Site Template	teamsite_admincode_2012-06-19_a.wsp
ACME Digital Library Information Links Feature Stapler	global_digitallibrary_webparts_2013-09-17_a.wsp
ACME Library Links Web Part	global_digitallibrary_webparts_2013-09-17_a.wsp
Nintex Workflow 2010 InfoPath Forms	nintexworkflow2010.wsp
Nintex Workflow 2010 Web Parts	nintexworkflow2010.wsp
Nintex Workflow 2010	nintexworkflow2010.wsp
Nintex Workflow Content Type Upgrade	nintexworkflow2010.wsp
Nintex Workflow - Nintex Live Catalog	nintexworkflow2010.wsp
Nintex Workflow 2010 Reporting Web Parts	nintexworkflow2010enterprisefeatures.wsp
Nintex Workflow 2010 Enterprise Reporting	nintexworkflow2010enterprisefeatures.wsp
Web Template feature of exported web template BCT	UNKNOWN

Feature Name	Solution Name
Web Template feature of exported web template Nancy	UNKNOWN
Web Template feature of exported web template Business Reporting and Analytics	UNKNOWN
Web Template feature of exported web template Blank Site	UNKNOWN
Web Template feature of exported web template Workload Planning Tool	UNKNOWN
Web Template feature of exported web template Breeding UAV	UNKNOWN
Web Template feature of exported web template DeploymentRequest	UNKNOWN
Web Template feature of exported web template Global Infrastructure Fun Team	UNKNOWN
Web Template feature of exported web template Phase I	UNKNOWN

Migration Architecture Impact and Recommendations

Understanding that features can either be deployed through Solutions or are considered native to SharePoint, the migration architecture impact and recommendations for Custom features, hinges on SharePoint Solution Migration architecture impact and recommendations. Accordingly, the migration process does not expect to migrate and activate (*legacy*) custom features in the Office 365 environment. With this recommendation in place, the migration process does need to take into account (*legacy*) standard features that were enabled in the source environment (*after a site was originally provisioned with standard features enabled*) and ensure that corresponding features in Office 365 are enabled before any migration can commence.

The following image, illustrates this scenario. The site collection was created using a standard SharePoint team site template. After the site was provisioned an administrator activated a standard SP2013 feature "Metadata Navigation and Filtering". This feature is not automatically set to "active" when a new SharePoint team site is provisions and will need to be activated BEFORE any migration can commence.



Given the high volume of site collections that are expected to be migrated, this process cannot be performed manually and must be automated through PowerShell scripts. A custom PowerShell script will need to be designed to identify standard features that were activated (*by system administrators*) in the source environment, and after a site collection is provisioned as part of the migration process, a custom action will need to trigger the activation of corresponding features in Office 365. Only after this step is complete, can migration activities commence.

Scorecard

Complexity	Duration	Effort
Medium	Low	Low

Workflows: SharePoint

Definition

SharePoint workflows are pre-programmed business process applications that streamline and automate a wide variety of business processes. SharePoint 2010 workflows are available and are part of the baseline deployment and installation of SharePoint.

Assessment Findings

The Discovery report identified 1087 distinct instances of built-in SharePoint workflows that were created by users from standard SharePoint 2007 or 2010 workflow templates. The instances were designed from the standard SharePoint workflow templates as listed below:

- Approval
- Approval - SharePoint 2010

- Aprobaciï¿½n
- Collect Feedback
- Collect Feedback - SharePoint 2010
- Collect Signatures
- Collect Signatures - SharePoint 2010
- Disposition Approval
- Recopilar comentarios
- Recopilar firmas
- Three-state

13 SharePoint Designer Workflow and 1 Visual Studio Workflow were also identified but confirmed by ACME as non-compliant and not subject to the scope of the migration effort.

Migration Architecture and Recommendations

The migration process will migrate legacy SharePoint 2010 workflows, corresponding workflow definition, instance and history lists. Supporting features, unless pre-activated through the standard Office 365 site templates will need to be activated before commencing migration activities.

Scorecard

Complexity	Duration	Effort
Low	High	Medium

Workflows: Nintex workflows

Definition

Nintex Workflow for SharePoint provides enhancements to the out-of-the-box capabilities to automate core business processes. These enhancements include but are not limited to scheduling and time workflows to create repeatable processes, delegation of workflow tasks, deliver workflow notifications using email, and instant messenger, as well as annotate and print process diagrams.

Assessment findings

The Discovery report identified 963 unique Nintex workflows. In conjunction with the KnowYourWorkflow script provided by Nintex, AvePoint further identified custom actions that are used throughout registered Nintex workflows. While this information is useful, at present a mapping between custom actions, the workflow instance and the site that has a corresponding Nintex Workflow is not available.

Activity ID	Action Name	Total Executions	Total Workflow Instances	Number Of Workflows Used In
2	Pause until...	4	4	1
3	Request approval	454	231	18
4	Set a condition	28222	8222	139
5	End workflow	2332	2332	24
6	Filter	52	46	12
8	Math operation	12310	590	17
9	Run parallel actions	1943	1157	39
10	Set variable	9778	2216	43
40	Send notification	16021	9649	196
41	Log in history list	1682	393	19
58	Build string	2058	748	22
59	Calculate date	1713	281	12
60	Regular expression	9327	575	18
61	Pause for...	23	21	6
66	Change state	701	314	16
82	Create item	3318	1128	42
108	Switch	252	112	6
110	Convert value	2914	334	5
113	Loop	29	29	2
114	For each	12140	902	29
115	Run if	18750	12036	58

Activity ID	Action Name	Total Executions	Total Workflow Instances	Number Of Workflows Used In
116	State machine	114	114	16
142	Delete item	382	62	3
145	Update item	6485	1369	41
146	Copy item	42	42	6
147	Check in item	11	2	2
176	Start workflow	317	289	9
23	Set approval status	79	50	4
48	Request review	11	10	7
51	Action set	5051	752	39
53	Call web service	168	140	12
62	Set item permissions	152	151	4
69	Task reminder	132	46	2
86	Query list	4877	2512	46
87	Collection operation	23270	462	12
89	Request data	194	98	6
97	Query user profile	1612	1011	38
101	Commit pending changes	270	67	6
105	Assign to-do task	416	261	8
107	Assign Flexi task	3134	2333	64
140	Wait for item update	2973	2897	14
143	Set field value	4752	2359	49

Activity ID	Action Name	Total Executions	Total Workflow Instances	Number Of Workflows Used In
158	Store data	31	14	4
1000029		252	4	1
1000030		4	4	1
1000026		27	14	2
1000028		4	1	1
1000035		2796	2796	12
1000038		53	18	1
1000039		8	2	1

Migration Architecture Impact and Recommendations

Of the 50 custom actions identified in the assessment findings section,

- 27 are currently supported with DocAve 6.7
- 16 are pending and can be included in an upcoming release roadmap, pending further feedback and discussions with ACME.
- 7 custom actions that don't have corresponding mapping to Nintex Actions (e.g. 1000026, etc.) do not have support.
- Nintex forms are not supported by DocAve. It is unclear how many Nintex forms have been deployed.

Activity ID	Action Name	DocAve Support State
2	Pause until...	Supported
3	Request approval	Supported
4	Set a condition	Supported
5	End workflow	Supported
6	Filter	Supported

8	Math operation	Supported
9	Run parallel actions	Supported
10	Set variable	Supported
40	Send notification	Supported
41	Log in history list	Supported
58	Build string	Supported
59	Calculate date	Supported
60	Regular expression	Supported
61	Pause for...	Supported
66	Change state	Supported
82	Create item	Supported
108	Switch	Supported
110	Convert value	Supported
113	Loop	Supported
114	For each	Supported
115	Run if	Supported
116	State machine	Supported
142	Delete item	Supported
145	Update item	Supported
146	Copy item	Supported
147	Check in item	Supported
176	Start workflow	Supported
23	Set approval status	Not yet supported

48	Request review	Not yet supported
51	Action set	Not yet supported
53	Call web service	Not yet supported
62	Set item permissions	Not yet supported
69	Task reminder	Not yet supported
86	Query list	Not yet supported
87	Collection operation	Not yet supported
89	Request data	Not yet supported
97	Query user profile	Not yet supported
101	Commit pending changes	Not yet supported
105	Assign to-do task	Not yet supported
107	Assign Flexi task	Not yet supported
140	Wait for item update	Not yet supported
143	Set field value	Not yet supported
158	Store data	Not yet supported
1000029	Unknown	Not Supported
1000030	Unknown	Not Supported
1000026	Unknown	Not Supported
1000028	Unknown	Not Supported
1000035	Unknown	Not Supported
1000038	Unknown	Not Supported
1000039	Unknown	Not Supported

A key unknown is the number of sites or workflows that have corresponding unsupported Nintex Actions. For example, action 107 is listed as a custom action that is used by one or many Nintex

Workflows. Prioritization cannot take place, until the migration team is aware of sites that have workflows with this custom action. Working with Nintex, AvePoint will investigate whether additional discovery tools are available to develop this final set of analytics.

Scorecard

Complexity	Duration	Effort
Medium	High	High

Custom Webparts

Definition

Custom WebParts enable users to directly modify the content, appearance, and behavior of SharePoint site pages by using a browser. The term custom WebPart refers to any WebPart that has been customized or one from a 3rd party solution which is not a standard out of box SharePoint WebPart.

Assessment Findings

The Discovery report identified 31 unique webparts which are organized across different categories

- Nintex: 5 WebParts across 264 sites
- Microsoft Standard Webparts: 25 WebParts across approximately 8000 sites
- ACME: 1 WebPart across 37 site

WebPart Type
Microsoft.Office.InfoPath.Server.Controls.WebUI.BrowserFormWebPart
Microsoft.Office.Server.Search.WebControls.AdvancedSearchBox
Microsoft.Office.Server.Search.WebControls.FederatedResultsWebPart
Microsoft.Office.Server.Search.WebControls.SearchSummaryWebPart
Microsoft.PerformancePoint.Scorecards.WebControls.ScorecardWebPart
Microsoft.ReportingServices.SharePoint.UI.WebParts.ReportViewerWebPart
Microsoft.SharePoint.Portal.WebControls.BusinessDataAssociationWebPart

Microsoft.SharePoint.Portal.WebControls.BusinessDataItemBuilder

Microsoft.SharePoint.Portal.WebControls.BusinessDataListWebPart

Microsoft.SharePoint.Portal.WebControls.ContactFieldControl

Microsoft.SharePoint.Portal.WebControls.PageContextFilterWebPart

Microsoft.SharePoint.Portal.WebControls.QueryStringFilterWebPart

Microsoft.SharePoint.Portal.WebControls.RSSAggregatorWebPart

Microsoft.SharePoint.Portal.WebControls.SiteDocuments

Microsoft.SharePoint.Portal.WebControls.SPSlicerChoicesWebPart

Microsoft.SharePoint.Portal.WebControls.TasksAndToolsWebPart

Microsoft.SharePoint.WebPartPages.ContentEditorWebPart

Microsoft.SharePoint.WebPartPages.ImageWebPart

Microsoft.SharePoint.WebPartPages.ListFormWebPart

Microsoft.SharePoint.WebPartPages.ListViewWebPart

Microsoft.SharePoint.WebPartPages.PageViewerWebPart

Microsoft.SharePoint.WebPartPages.SimpleFormWebPart

Microsoft.SharePoint.WebPartPages.TitleBarWebPart

Microsoft.SharePoint.WebPartPages.UserDocsWebPart

Microsoft.SharePoint.WebPartPages.XmlWebPart

ACME.DigitalLibrary.WebParts.InformationalLinks

Nintex.Workflow.ServerControls.WebParts.GraphViewerWebPart

Nintex.Workflow.ServerControls.WebParts.MyWorkflows

Nintex.Workflow.ServerControls.WebParts.PendingMyApproval

Nintex.Workflow.ServerControls.WebParts.ReportList

Nintex.Workflow.ServerControls.WebParts.ReportView

Migration Architecture Impact and Recommendations

The following recommendations are provided for the migration of webparts:

- Nintex Weparts: will not be migrated
- ACME Digital Library Webparts: will not be migrated
- Microsoft Standard Webparts: The discovery tool reported that all of the Microsoft webparts were modified from their original time stamp. Modification does not necessarily mean that the code was modified or altered; rather some WebPart settings were modified which have been picked up by Discovery and labeled as Unsupported. At present time, AvePoint cannot guarantee which of the webparts will be migrated without the need for human intervention and remediation. During the pilot, AvePoint migration engineers will review unique instances of Microsoft labeled WebParts to complete a comprehensive migration checklist. Any webparts that fail to migrate and preserve their behavior, functionality and settings will be evaluated on a case by case basis.

Scorecard

Complexity	Duration	Effort
Low	Medium	Medium

Alerts

Definition

SharePoint alerts inform users about updates, and are customizable to the degree of amount of information a user would like to receive. Alerts can be established for a list, library, folder, file, or list item. For example, users can set up an alert for a folder in a library, without receiving alerts when changes occur to the rest of the library.

Assessment Findings

The Discovery report identified 29,056 alerts through the Team Site farm. The alerts are dispersed throughout the environment into the following alert types:

Alert Type
SPAlertTemplateType.Announcements

Alert Type
SPAlertTemplateType.Contacts
SPAlertTemplateType.DataConnectionLibrary
SPAlertTemplateType.DiscussionBoard
SPAlertTemplateType.DocumentLibrary
SPAlertTemplateType.Events
SPAlertTemplateType.GenericList
SPAlertTemplateType.Links
SPAlertTemplateType.PictureLibrary
SPAlertTemplateType.Survey
SPAlertTemplateType.Tasks
SPAlertTemplateType.WebPageLibrary
SPAlertTemplateType.XMLForm

Migration Architecture Impact and Recommendations

The migration process is able to migrate legacy SharePoint 2010 alerts. That said, it is worthwhile to reconsider the use of alerts in the context of Office 365. Office 365 Delve and other social capabilities have changed the landscape of how users are notified and keep abreast of important content changes (*through other means and channels.*) Before recreating this capability, the ACME Governance team should review the alerting capabilities in Office 365 and consider the merits of keeping legacy notification processes. Should a decision be made to preserve alerting notification, the recommendation is to migrate all alerts during the last wave of each migration stream. This will ensure users do not pre-maturely receive object oriented alerts during the migration window.

Scorecard

Complexity	Duration	Effort
Low	Low	Low

Migration Configurations

With any type of cross platform migration, the pre-migration tasks, configurations, and planning are paramount to successfully drive the data across with the correct metadata and attributes. Below are sub-sections covering each important topic and AvePoint's recommendation to have these properly configured prior to moving 'any' data.

User Mapping

If the source SharePoint 2010 environment and the destination SharePoint Online environment do not authenticate to the same active directory, user mapping will be required and configured appropriately in order for the content's metadata to come across successfully.

For users that are disabled, and/or no longer part of the organization, the metadata that references individual users will be replaced with the migration service account.

AvePoint's recommendation is to use a User Mapping XML file to map users at the source environment to users at the destination environment and utilize a placeholder account to replace the metadata of users no longer part of SharePoint Online environment.

Size Limits and Space Quotas

During the transfer of content from one 'container' to another, we must ensure the quota sizes are increased as the default quota size will impede the transfer of content once the threshold is reached. One common error AvePoint frequently identifies is when the migration report logs various errors regarding size limits and quotas at the destination.

The proactive approach and recommended strongly by AvePoint is to increase the SharePoint Online quota limits in advance of the production migration to prevent errors and reruns of migration jobs, which can significantly impact and delay the projected migration schedule.

SharePoint Alerts and Migration Emails

AvePoint migrator tool support the migration of Alerts however due to the nature of how alerts are attributed to the SharePoint object, alerts should be migrated at the final step of the migration. Performing alert migrations throughout the course of the migration cycle will trigger emails whenever a SharePoint alerts and SharePoint workflows are migrated. AvePoint recommendation is to not migrate alerts or workflows until after the content has been migrated, including full and incremental migrations.

This strategy will minimize the duration that users will be impacted by emails triggered by the alert and workflow during migration.

Reusable Workflow Templates

There are instances of reusable Workflow Templates in the source SharePoint Environment. We have verified that Microsoft has not provided a SharePoint Online API containing the functionality to migrate these reusable workflow templates, and AvePoint's recommendation would be to deactivate them and remove them from the migration scope.

Global Navigation Bar

The functionality of the Global Navigation Bar should be a key area to test during the migration POC and if a different master page is being used, we must ensure it is incorporated into the SharePoint Master Page to have the global navigation bar migrate successfully from SharePoint 2010 to SharePoint Online.

InfoPath Forms

InfoPath forms should be converted to Nintex during our workshop discussion however AvePoint will support the migration of InfoPath forms to SharePoint Online. During the full migration, these files will be itemized after the initial full migration and addressed on a case-by-case basis. Currently, AvePoint does not support any reports on a list of InfoPath Forms with Code-Behind the InfoPath forms.

Documents and Shared Documents Merged

Documents and Shared Documents are merged when migrating from an On-Premises SharePoint 2010 environment to SharePoint Online.

To support migrating document libraries to SharePoint online the typical behavior is to merge the documents and share documents library. ACME team will need to make the decision at the point when migrating these type of scenarios on whether AvePoint migrator tool should create two separate libraries in the destination or have them merged. (Both options are supported OOB)

The method involves updating an XML file and verifying there is no Document Library at the target URL. Once these steps are complete a migration job can be run to the desired target.

Bandwidth

The migration speed plays a significant factor and through our past migration projects we have seen speeds from 230 MB/hour to 1,930 MB/hour.

There are many factors that affect the performance of migration jobs such as network bandwidth between the source/destination SharePoint environments, Memory/CPU on SharePoint Web

Front-End Servers, possibly any Firewall or software that maybe attempting to scan files being migrated, or even complexity of the data being migrated.

This slow speed adds risk to the migration schedule. It is recommended that ACME make the production environment available for migrations as early as possible.

Other mitigation strategies may be to disable any Anti-Virus software during the running of migration jobs. The migration throughput can also be increased by running more than one concurrent migration jobs. Below is a sample of eight various migration jobs and the bandwidth achieved with those jobs with different conditional loads and bandwidth throttles in our Test environment.

11.73 GB in 15.3 hours = 770 MB/hour

6.63 GB in 20 hours = 330 MB/hour

1.17 GB in 5 hours = 230 MB/hour

13.78 FB in 23 hours = 600 MB/hour

5.05 GB in 3.3 hours = 1,530 MB/hour

4.57 GB in 13.6 hours = 340 MB/hour

4.13 GB in 13.1 hours = 315 MB/hour

9.52 GB in 12.3 hours = 770 MB/hour

List Template Mapping

Similar to the need for site template mappings, if the source environment is using a list template that is not available in the target environment, a list template mapping will be required to migrate the content within those lists. There were a total of 11 list template mappings that were discovered that will need to be properly mapped to SharePoint Online.

These should be mapped to default custom list templates 100 and 104 which will be reviewed during the POC phase:

- 10101 – Document Library
- 10103 – TeamSite Links
- 10105 – External Contacts
- 10105 – Internal Contacts
- 10106 - Calendar
- 101100 – TeamSite Project Issues
- 111100 – TeamSite Project Risks
- 11107 – TeamSite Project Status Reports
- 10107 – TeamSite Project Tasks

- 10206 - Calendar
- 5001 – Nintex Catalog

Migration Plan Development and Organization

Terminology

Migration Cluster – A cluster includes a series of events necessary to select (*site collections*), setup plans, execute (*full, incremental, alerts, etc.*) and perform system and user acceptance criteria for selected site collections from Source to Destination environments. A cluster is expected to include all activities necessary to migrate content and users from legacy to destination.

A migration cluster is likely to include many site collections of certain tier classifications (*e.g. Tier A only*) or include site collections across different tiers. Much like agile methodology, the intent is for the cluster to accomplish all activities necessary for the migration of sites. Number of site collections included in a cluster[4] are dependent on the following key variables: Throughput, Cluster Duration and UAT Testing and final cutover activities.

1. Throughput – project content migration speed (e.g. we can approximate based on the current architecture that we can move 3gb/hour without considering planning, remediation or testing time activities that are incremental).
2. Cluster Duration – number of weeks reserved for the following activities
    a. ***Site collection selection, end user notification should have occurred as a predecessor activity.***
    b. Plan setup – the manual or automated construction and management of individual plans needed to migrate site collections scheduled to be included in this cluster.
    c. Plan (Full migration) execution – the execution, plan monitoring and remediation of DocAve migration activities
    d. AvePoint Testing – the review of log analysis and spot checks on sample site collections.
3. UAT – time reserved for business users and customer PMO team to conduct UAT activities, Incremental migrations to be executed and final switchover for site collections that are complete. For example, it is likely that if there are hundreds of site collections that are included in a cluster which is scheduled to occur within a 3 week window, the UAT time necessary to conduct testing and transition activities may be insufficient.

For example,

- Throughput Projections – 10 gb per day

[4] Multiple clusters can be scheduled and executed sequentially by different migration pods if necessary.

- Cluster Duration Not to Exceed– 1 week (*Available Capacity – 70gb (10*7))*
- Plans per Cluster Not to Exceed – 100
- Plan Size Capacity – Not to exceed 50 GB before splitting
- UAT & Incremental – Not to exceed 2 weeks

Cluster A – Week 1

- Plan 1 - Site Collection X/32mb
- Plan 2 – Site Collection Y/10gb
- Plan 3 – Site Collection Z/20gb
- Plan 4 - Site Collection X1/400mb
- Plan 5 – Site Collection Y1/30gb
- Plan 6 – Site Collection Z1/6gb

- *Available Capacity – 70gb (10*7)*
- Plan Count – 6
- Total Size – 66.332GB

In the aforementioned example, while the team is executing Cluster A, ACME and AvePoint will, in parallel, start the selection process for Cluster B with the expectation that final site collections are identified and queued up to be ready @ the start of week 4.

A final decision on Cluster classification and methodology will be jointly established during the start of the Pilot phase.

Tiers – Site Collections are organized across three discreet Tiers: Tier A, Tier B, Tier C.

- Tier A –SharePoint Online Ready
    - Sites that meet 100% cloud readiness, have zero to minimal customizations and do not violate ACME company policies with respect to compliance policy and sensitive data being surfaced into the cloud.
- Tier B –SharePoint Online potential with modifications
    - Sites within this section may have the ability to eventually move to the SharePoint Online but will require a small amount of modification due to their current configuration.
- Tier C – Moderate to High Customizations
    - Sites categorized in this tier will require a decent amount of new feature/customizations to support SharePoint Online readiness.

Full Migration - This migration plan can be said to be the initial migration including the configurations, profiles, mappings, and the majority of the content scoped within the plan would be migrated to target.

Incremental Migration – This migration plan would be the subsequent plan executed after the full migration. Incremental migrations can be automated and scheduled to run nightly to bring over the delta from initial full migration, or it can be configured to run manually.

Alert Migration - This migration plan is another layer of the migration configuration and will 'only' migrate the alerts that are associated to the contents that 'already' has been migrated to target.

Migration Windows

ACME requested migrations to occur during off hours (*e.g. weekends or holidays*) to limit network bandwidth and user impacts. AvePoint strongly recommends to have additional migration time windows available given the volume of the data that must be migrated and necessary user acceptance testing and remediation activities. Acknowledging the concerns regarding system performance and balancing the need to migrate efficiently, the proposed infrastructure plan is designed to mitigate performance impact to end users during production hours and ensure maximum migration availability streams. By temporarily assigning additional WFE that are excluded from the load balance, the migration system performance will only affect the migration WFEs.

Pending the outcome of the pilot migration performance results, it would be best to plan on running full migration with Site Collections that have a size greater than 10 GBs in the later phases of the migration. Equipped with information found after the pilot migration, AvePoint will be able to determine the performance and upper throughput thresholds to effectively 'batch' migration plans that are best suited to achieve targeted dates.

Migration Strategy

After reviewing discovery reports, it has been determined that the best course is to organize the migration project across 3 week Clusters. This model will allow the team to perform activities outlined in each cluster and prepare for next clusters in parallel. Sites selected in each cluster will be determined by the following known and projected criteria:

1. Site Complexity (Known)
2. Site object count (Known)
3. Site size. Migrating in size order (smallest to largest) will help ensure that Incremental Job sizes remains low, as we will be running incremental for the largest sites for the shortest period of time before the cutover. (Known)
4. Projected throughput formula established at the conclusion of Pilot. (Projected)

Based on the projected throughput criteria, additional teams and hardware may be required to add serialized migration support if a certain project duration criteria is established.

Classification	Count of Sites	Percentage of Sites (est)
Tier A – Site size of 5GB or less, with document count less than 1,000	12,902	92%
Tier B – Site size between 5GB to 10GB, cloud potential with minor modifications and/or with document count greater than 1,000	1,016	7%
Tier C – Site size > 10GB and/or Sites with moderate to high customizations	138	1%
Grand Total		100.00%

Waves will run through this process in parallel to each other. For example, while Wave 1 is migrating, we will be preparing Wave 2 by confirming its schedule and creating plans.

Migration Infrastructure Design

Migration Infrastructure Options

AvePoint has taken into consideration all factors brought to light during the workshops and what has been discovered in our farm wide assessment scan that led to the three options disclosed below.

1. Option 1-Standalone DocAve Manager and Agent(s) Installation - Migrate using AvePoint Migration module for SharePoint 2010 On Premise to SharePoint Online. This option does not require a separate install of the DocAve Manager; however, to not compete with server resources of the DocAve Manager, the preferred option is to have a separate DocAve Manager dedicated to the migration project. (e.g. Updates packs, solution and features via hotfix that will apply to the DA Manager/Agent will not affect the PROD DocAve Manager throughout the course of the migration.)

In addition, 3 dedicated/temporary Front End Web SharePoint 2010 servers are recommended which will be utilized as migration resource streams. DocAve Agents will be installed and configured on the Front End Web Servers to extract the content and migrate to SharePoint Online.

2. Option 2 –Multi-Phase migration. A separate DocAve Manager and Agent servers installed locally to SharePoint 2010 farm. The migrator tool will be configured to migrate from SharePoint 2010 source environment to a STG SharePoint 2013 on premise environment. For this option, the prerequisite is SharePoint 2013 environment will need installed, configured and ready to host temporary SharePoint 2010 content. The purpose of the SharePoint 2013 on-premise environment is to serve as staging of data prior to being introduced into SharePoint Online.

Another key consideration is the ability to transform this option into a hybrid SharePoint model. The core reason being should crucial solutions/features whether they belong to a 3rd party, deprecated and/or no longer supported by SharePoint Online become necessary in order for the business entities of ACME that SharePoint is providing services for to operate with no disruptions; AvePoint recommends a SharePoint 2013 on-premise farm be available for these type of use cases.

The sequence is to migrate from SharePoint 2010 to SharePoint 2013 as the AvePoint team will have enhanced visibility on issues that arise to support the migration of Nintex and custom features. This would also help troubleshoot and allow the migration engineers to remediate migration issues quickly as well as release new feature requested by ACME swiftly.

Once the content has been successfully migrated to SharePoint 2013 platforms, the bridge to SharePoint Online would utilize AvePoint's Content Manager to move SharePoint 2013 to SharePoint Online. The benefit of this method is it allows both ACME and AvePoint team to vet and validate the data integrity, behavior, etc prior to moving to the final SharePoint Online

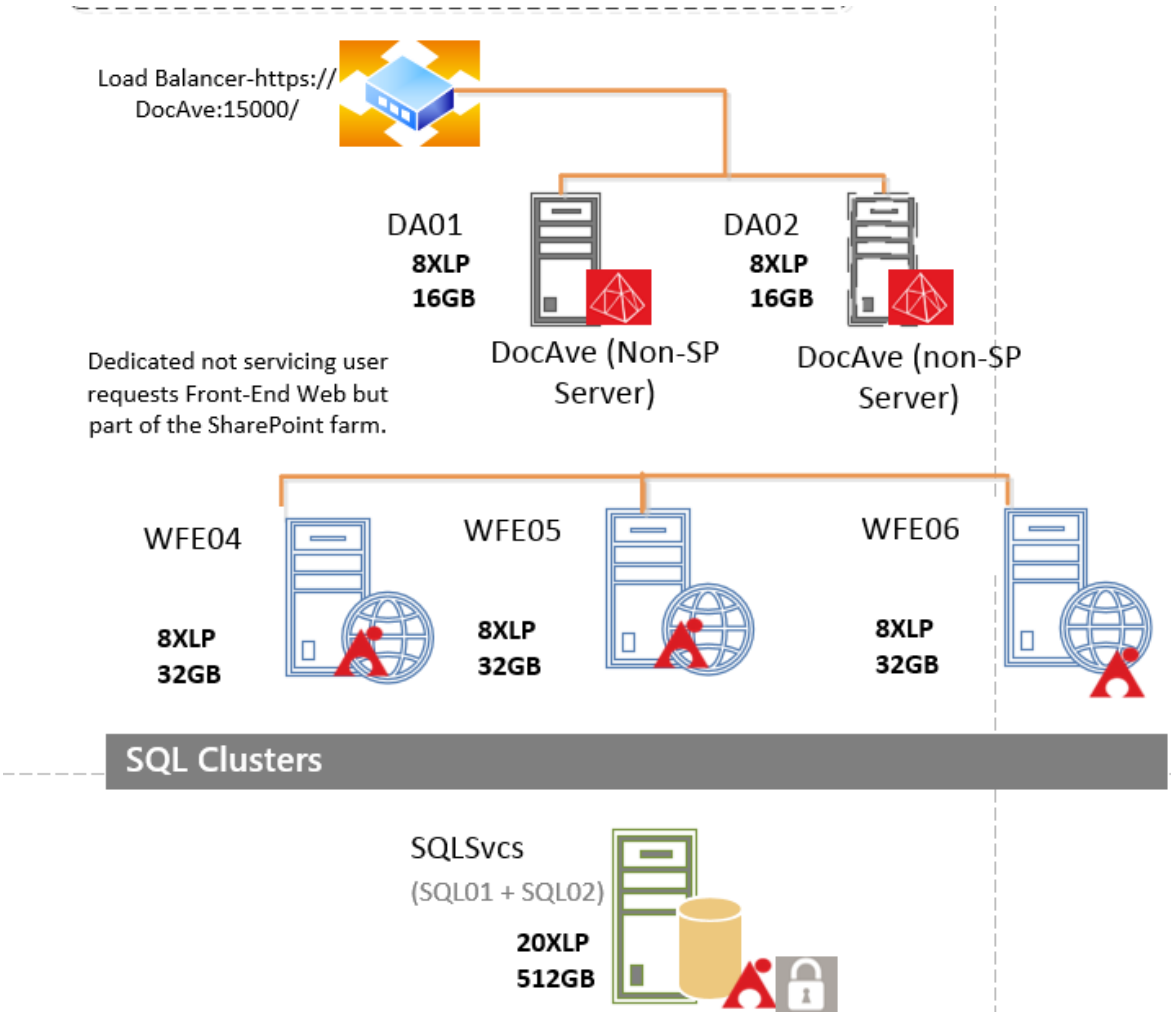
location. This option aligns with Microsoft's cloud strategy and also allows the core business to 'pick and choose' the contents that live within SharePoint Online.

3. Option 3 – Ship to Disk. Offline migration method where if network latency is an issue, this may alleviate some of the network connection issues. The sequence is to copy your files to a drive, then ship your drives to the closest secure datacenter, the data is temporarily staged within Microsoft Azure until it is imported into SharePoint Online and OneDrive for Business. However, this method has been temporarily suspended by Microsoft. (See link here) and the workaround has been deferred to the SharePoint Online API. Also, this method is strictly used to move on-premise SharePoint content such as Document libraries and file share locations into SharePoint Online. This is not a holistic all-encompassing SharePoint migration solution but can be utilized as an option to move 'bulk' contents within a SharePoint 'list' (Document Library) to SharePoint Online to circumvent the network latency issue.

Migration Recommended Approach

AvePoint recommends option 1 as this method would be the most efficient approach with immediate availability to migrate content to SharePoint Online based on our tiered bucket strategy. Content and sites that require zero to minimal logic change can migrate first across to SharePoint Online beginning in the first and second wave. While these migration 'streams' are in progress, AvePoint will be approaching the subsequent waves in a staggered approach by creating a comprehensive migration task pipe backlog to actively test and assess feasibility on the more complex and customized sites. The output of these tasks will be AvePoint's discovery of our findings, and a proposed solution and/or workaround.

The proposed hardware architecture to support SharePoint 2010 on premise migration to Office 365 is provided below.



The architecture will consist of the following:

- 2 X DocAve Manager (Control Service)
- 3 X SharePoint 2010-Front End Web Servers (Dedicated for Migration ONLY)
- 1 X SQL Server (clustered) to store DocAve Migration DB and Control DB)
- Migration Service Account- AvePoint recommends 3 separate service account with the same set of permissions to increase throughput and individual streams of migration into Office 365.

Server physical and network requirements

- DocAve Manager Specifications
    - 8 x 64-bit processor cores
    - 16 GB of memory
    - 100 GB system volume
    - Mirrored (or better) RAID configuration for the physical drives supporting the system volume and RAID 10 configuration for the physical drives supporting all data volumes.
    - Gigabit network connectivity.

    - The 64-bit edition of Windows Server 2012, either Standard or Enterprise edition.
    - Patch-current OS and feature dependencies.
- For DocAve Agent Specifications
    - 8 x 64-bit processor cores
    - 32 GB of memory
    - 100 GB system volume
    - Mirrored (or better) RAID configuration for the physical drives supporting the system volume and RAID 10 configuration for the physical drives supporting all data volumes.
    - Gigabit network connectivity.
    - The 64-bit edition of Windows Server 2012, either Standard or Enterprise edition.
    - Patch-current OS and feature dependencies.
    - AvePoint Agents will NOT be installed on SQL server.

The following chart represents the database specifications for all components of DocAve, Governance Automation and Compliance Guardian.

ServerName	DB Name	Size	Growth	DB Creation	Recovery Model	Log Growth	IOPS (Recommended Min.)
SQL01	DocAve6_ControlDB	100 GB	10	At Install	Full	Minimal	200
SQL01	MigrationDB	200GB	10	At Install	Full	Minimal	200

- Collation ID for all the databases: Latin1_General_CI_AS_KS_WS
- SQL Server Requirements for DocAve Databases

Databases	SQL Server Edition
Control Database	For DocAve 6 SP6: • Microsoft SQL Server 2005 • Microsoft SQL Server 2008 • Microsoft SQL Server 2008 R2 • Microsoft SQL Server 2012 • Microsoft SQL Azure • Microsoft SQL Server 2012 Business Intelligence

	• Microsoft SQL Server 2014 • SQL Server 2014 Business Intelligence *Note: Not all DocAve 6 features are supported on SharePoint instances that use SQL Server Express.