SharePoint's New Swiss Army Knife

The Content Search Web Part (CSWP)

@spmcdonough

Sean P. McDonough
National Office 365 Solution Manager
Cardinal Solutions Group, Inc.

My background

My employer
Sean P. McDonough
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Cardinal Solutions Group, Inc.

My background

• Developing software since mid '90s

• Working with SharePoint since 2004

• Many roles: developer, administrator, product manager, evangelist, and more

• Community focus: free solutions, writing, speaking, and mentoring

My employer

About Cardinal

- Founded in 1996
  Cincinnati, Ohio
- 350+ FTEs
  $50M+ Revenue
- Alexandria, VA
  Cleveland, OH
  Columbus, OH
  Charlotte, NC
  Raleigh, NC
  Tampa, FL
- Mobile
  Portals & Collaboration
  Design & User Experience
  Application Development
- Agile Coaching
  Business Analysis
  Project Management
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  Application Dev
  WEM
  BI
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About This Session

- Introduce the Content Search Web Part (CSWP)
- Discuss how it works and what you need to use it
- Demonstrate common and not-so-common uses
- Investigate configuration and display options
- Identify strengths and weaknesses

* Demos with Q&A throughout!
- the CSWP is extremely versatile
- usable by novices and experts alike
- largely future-proof and cloud-ready
- a viable replacement for custom development in a number of scenarios

Why I'm Talking About the CSWP
Display basic search results
Perform content rollups
Expose content dynamically and interactively
• the CSWP is extremely versatile
• usable by novices and experts alike
• largely future-proof and cloud-ready
• a viable replacement for custom development in a number of scenarios

Why I'm Talking About the CSWP
On-premises SharePoint 2013 Enterprise and
On-premises
SharePoint 2013
Enterprise

and

Office 365 Enterprise E3 & E4 Plans
Office 365 Education A3 & A4 Plans
Office 365 Government G3 & G4 Plans
SharePoint Online Plan 2
the CSWP is extremely versatile
usable by novices and experts alike
largely future-proof and cloud-ready
a viable replacement for custom development in a number of scenarios
I'm not making any assumptions about your development skills

This presentation is largely introductory ...
... with occasional dives into different areas of interest based on your role:

- developers
- designers
- power users
so, without further ado ...
Let's get our feet wet with some basics

• The CSWP is a web part ... obviously?
SharePoint's New Swiss Army Knife

The Content Search Web Part

Demos

- Display Template Styling
  Demonstrates some of the options for styling display templates

- Query Driven Selection
  Demonstrate how querystring parameters can drive content selection

- Content Rollup
  Demonstrates the CSWP's content rollup capabilities

- Simple Search Results
  Demonstrates the use of the CSWP for displaying simple search results
Let's get our feet wet with some basics

- The CSWP is a web part ... obviously?
- The content that it displays comes from a query that is run against the search index
- There are a multitude of levers and dials to control the content selected for display
- The manner in which content is displayed is highly configurable and styled easily
Actually, it's a family of web parts

It's hard to miss this one

But these are CSWPs, too
It's hard to miss this one
But these are CSWPs, too
Consider the Search-Driven Pictures Web Part...
Web Part Gallery

Name *: CBS_Pictures

Title: $Resources:Microsoft.Office.Server.Search,CBS_Pictures_Title,

Description: $Resources:Microsoft.Office.Server.Search,CBS_Pictures_Description;

Group:
- Default Web Parts
- Specify your own value: $Resources:Microsoft.Office

Recommendation Settings:
- Specify your own value:

Please specify site template names separated by "#". Your web part will appear in "Recommended Items" category when a user tries to add a web part to any web part pages within sites using site templates mentioned here. Otherwise, for page level recommendations of web parts, you can include a tag in here and then add that same tag to "Recommended" property on the web part adder control on the page in question.

Created at 5/26/2014 11:51 AM by System Account
Last modified at 5/26/2014 11:51 AM by System Account

Save Cancel
Please specify site template names separated by ";|#". Your web part will appear in "Recommended Items" category when a user tries to add a web part to any web part pages within sites using site templates mentioned here. Otherwise, for page level recommendations of web parts, you can include a tag in here and then add that same tag to "Recommended" property on the web part adder control on the page in question.

Created at 5/26/2014 11:51 AM by System Account
Last modified at 5/26/2014 11:51 AM by System Account

Save  Cancel

View Xml

Commit  Clipboard  Actions

Save  Cancel

Paste  Copy

Delete Item  Export

<>

View XML

Shared With
<?xml version="1.0" encoding="utf-8"?>
<webPart xmlns="http://schemas.microsoft.com/WebPart/v3">
  <metaData/>
  <data/>
  <properties/>
</webPart>
<tf-8"?>

<s.microsoft.com/WebPart/v3">


</s.microsoft.com/WebPart/v3>

</tf-8"?>


Sometimes
<property type="string">None</property>

<minimize type="bool">true</property>
<table>
<thead>
<tr>
<th>Type</th>
<th>Web Part</th>
<th>Edit</th>
<th>Modified</th>
<th>Modified By</th>
<th>Recommendation Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>BlogAdmin.dwp</td>
<td></td>
<td>5/26/2014 11:50 AM</td>
<td>System Account</td>
<td></td>
</tr>
<tr>
<td></td>
<td>BlogArchives.dwp</td>
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<td>5/26/2014 11:50 AM</td>
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<td></td>
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<td></td>
<td>CatalogItemReuse.webpart</td>
<td></td>
<td>5/26/2014 11:51 AM</td>
<td>System Account</td>
<td>Search</td>
</tr>
<tr>
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<td></td>
<td>5/26/2014 11:51 AM</td>
<td>System Account</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td>CBS_Pictures.webpart</td>
<td></td>
<td>5/26/2014 11:51 AM</td>
<td>System Account</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td>CBS_PopularItems.webpart</td>
<td></td>
<td>5/26/2014 11:51 AM</td>
<td>System Account</td>
<td>Default</td>
</tr>
<tr>
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<td>CBS_RecentChanged.webpart</td>
<td></td>
<td>5/26/2014 11:51 AM</td>
<td>System Account</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td>CBS_RecommendedItems.webpart</td>
<td></td>
<td>5/26/2014 11:51 AM</td>
<td>System Account</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td>CBS_Tag.webpart</td>
<td></td>
<td>5/26/2014 11:51 AM</td>
<td>System Account</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td>CBS_Videos.webpart</td>
<td></td>
<td>5/26/2014 11:51 AM</td>
<td>System Account</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td>CBS_WebPages.webpart</td>
<td></td>
<td>5/26/2014 11:51 AM</td>
<td>System Account</td>
<td>Default</td>
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<tr>
<td></td>
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<td></td>
<td>5/26/2014 11:51 AM</td>
<td>System Account</td>
<td>Default</td>
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<tr>
<td></td>
<td>ContentBySearch.webpart</td>
<td></td>
<td>5/26/2014 11:51 AM</td>
<td>System Account</td>
<td>Default</td>
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<tr>
<td></td>
<td>ContentQuery.webpart</td>
<td></td>
<td>5/26/2014 11:51 AM</td>
<td>System Account</td>
<td>Default</td>
</tr>
<tr>
<td></td>
<td>GettingStarted.webpart</td>
<td></td>
<td>5/26/2014 11:50 AM</td>
<td>System Account</td>
<td></td>
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<tr>
<td></td>
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<td>System Account</td>
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<td></td>
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<td></td>
<td>5/26/2014 11:50 AM</td>
<td>System Account</td>
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<tr>
<td></td>
<td>MSImage.dwp</td>
<td></td>
<td>5/26/2014 11:50 AM</td>
<td>System Account</td>
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</tr>
<tr>
<td></td>
<td>MSMembers.dwp</td>
<td></td>
<td>5/26/2014 11:50 AM</td>
<td>System Account</td>
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</table>
Let's get our feet wet with some basics

• The CSWP is a web part ... obviously?

• The content that it displays comes from a query that is run against the search index

• There are a multitude of levers and dials to control the content selected for display

• The manner in which content is displayed is highly configurable and styled easily
Some implications

- If Search can reach the content (in or outside the farm), the CSWP can display it!
- Since Search is FAST, your results will come back fast, too (pardon the pun)
- Results are security trimmed for you
In case you were wondering ...

Yes, the CSWP can display "plain old search results"

So what’s the difference between the CSWP
Yes, the CSWP can display "plain old search results".

So what's the difference between the CSWP and the Search Results Web Part (SRWP)?

- They are actually very similar in terms of capabilities.
Yes, the CSWP can display "plain old search results"

So what's the difference between the CSWP and the Search Results Web Part (SRWP)?

- They are actually very similar in terms of capabilities
- CSWP has a few additional bells and whistles
- Most important: CSWP is end-user configurable
Let's get our feet wet with some basics

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The Query Builder aka, "the greatest thing"
The Query Builder

aka, "the greatest thing since sliced bread"
Let's get our feet wet with some basics

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Display Templates "simplify" the process of modifying look and feel as well as behavior.
Let's get our feet wet with some basics

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Plain old search results were a good start ... but they don't really showcase the CSWP
So, what's a more common use case for the CSWP?

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Plain old search results were a good start ... but they don't really showcase the CSWP

Content rollups
So what exactly do we mean by saying "content rollup?"
So what exactly do we mean by saying "content rollup?"

We're talking about content aggregation.
Consider a lone document library

We can display content using (custom) views

Document Library
If we want to combine two or more libraries, views aren't an option
Within a site collection, we have a couple of options for aggregating and rolling-up content.

If we want to combine two or more libraries, views aren't an option.
Within a site collection, we have a couple of options for aggregating and rolling-up content:

- **CQWP** (Content Query Web Part)
- **CSWP** (Content Search Web Part)

- Aggregate, filter, and display contents from a list/library, site, or site collection via cross-list and cross-site queries.
CSWP
Content Search Web Part
CQWP

Content Query Web Part

- Aggregate, filter, and display contents from a list/library, site, or site collection via cross-list and cross-site queries
Content Query Web Part

- Aggregate, filter, and display contents from a list/library, site, or site collection via cross-list and cross-site queries
- Part of SharePoint prior to current (2013) release
- Supports audiences and audience-based filtering
  - Styling is challenging (you need to know XSLT)
  - Support for dynamic behavior is very limited
  - Queries can generate load and take time
What happens when we have content in other site collections?
As mentioned, we can roll that content up within the site collection using a CQWP ...

What happens when we have content in other site collections?
But what about rolling-up content across more than one site collection?
I believe in presenting a balanced view
I believe in presenting a balanced view
Like anything else, the CSWP has its strengths and weaknesses ...

I believe in presenting a balanced view...
... and it's fair to say that the CSWP has its own "kryptonite"
its own "kryptonite"

Don't panic, though - these are just constraints to be mindful of as you work with the CSWP
We're using Search!

- Fast
- Works beyond the boundaries of our farm
- Works with result sources and query rules we build
- Security trimmed
- Works on-prem and in the cloud
But it goes both ways ...
We're using Search!

- If it hasn't been crawled, it's not available for display
- Major vs. minor versions*
- Content can be hidden and removed from indexes
- The "freshness" issue*
- Enterprise features required!
- If it hasn't been crawled, it's not available for display
- Major vs. minor versions*
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- The "freshness" issue*
- Enterprise features required!
We've covered the CSWP at a relatively high-level
Let's dig a little deeper in two key areas

1. The Query Builder
2. Display Templates

When working with
in two key areas

1. The Query Builder
2. Display Templates

When working with the CSWP, this is where you'll spend most of your time
BUILD YOUR QUERY

BASICS  REFINERS  SORTING  SETTINGS  TEST

Select a query
Choose what content you want to search by selecting a result source

Keyword filter
Query from the search box

Property filter
Select property
Contains
Select value

Query text
path:"http://sp2013-dev:18580" (isDocument:"True" OR contentclass:"STS_ListItem")

SEARCH RESULT PREVIEW

RelevantResults (125)

pcgamer201202-dl
pcgamer201202-dl
pcgamer201202-dl
pcgamer201202-dl
pcgamer201202-dl
pcgamer201202-dl
pcgamer201202-dl
pcgamer201202-dl
pcgamer201202-dl
pcgamer201202-dl
pcgamer201202-dl

Test query

Learn how to build your query
Build Your Query

**SORTING**

Sort results
You can have several levels of sorting for your results based on their managed properties.

Sort by:    Rank

Add sort level

Ranking Model
Choose a way of ranking results.

Dynamic ordering
On top of the ranking model, dynamic ordering allows you to promote or demote items in the search results.

Add dynamic ordering rule

Search Result Preview

- RelevantResults (126)
  - pgamer201202-dl
  - pgamer201203-dl
  - pgamer201204-dl
  - pgamer201205-dl
  - pgamer201206-dl
  - pgamer201207-dl
  - pgamer201208-dl
  - pgamer201209-dl
  - pgamer201210-dl
  - pgamer201211-dl
  - pgamer201212-opt-dl
  - pgamer201213-opt-dl

Learn how to build your query
Build Your Query

Basics  Refiners  Settings  Test

Query text
Queries may give different results based on dynamic page or user-driven values. See the final query text based on the original query template, query rules, and variable values.

path:="http://sp2013-dev-18g80/" IsDocument="True"
OR contentclass="STS_ListItem"

Search Result Preview

- RelevantResults (126)
  - Simple Search Results
  - sp2013-dev-18g80/SimpleSearchResults
  - Content Rollup
  - sp2013-dev-18g80/ContentRollup
  - Display Template Styling
  - sp2013-dev-18g80/DisplayTemplateStyling
  - Query Driven Selection
  - sp2013-dev-18g80/QueryDrivenSelection
  - Tinkering with the CSP
  - sp2013-dev-18g80/Tinker
  - pcgamer201201-di
  - sp2013-dev-18g80/PC Gamer 2012/pcgamer201201-di.pdf
  - Echo
  - sp2013-dev-18g80/BunkerTunes/DispForm.aspx?ID=77
  - The Unicorn Song
  - sp2013-dev-18g80/BunkerTunes/DispForm.aspx?ID=78
  - Mother Nature
  - sp2013-dev-18g80/BunkerTunes/DispForm.aspx?ID=79
  - Closer
  - sp2013-dev-18g80/BunkerTunes/DispForm.aspx?ID=64

OK  Cancel
The Query Builder

#1
#2 Display Templates
Two simple selections that make ALL the difference
Consider this CSWP and the selected display templates
The Control template covers the display of the surrounding region
An Item template controls each result that appears in the Control.

Looking more closely at the template.
Looking more closely at the template and Property Mappings assignments:

- Several control and item templates are available OOTB.
- Property Mappings identify "which" Search property goes "where" for display.
Consider this CSWP and the selected display templates
Display Templates Can Be Edited ...

But first we need to acknowledge
Display Templates Can Be Edited ...

But first we need to acknowledge some important differences.
These two types of individuals tend to see the world very differently.

Display Templates Can Be Edited...

But first we need to acknowledge some important differences.

To play to stereotypes.
Display Templates Can Be Edited ...

But first we need to acknowledge some important differences

To play to stereotypes

Devs

Designers

With SharePoint 2013's
Prior to display templates, you didn't stand a chance if you were a designer

You needed to know XSL, but that all changed...
You needed to know XSL, how to handle ASP.NET tags and markup, and other "non-designer" technical details.
With SharePoint 2013's new Design Manager, designers have a fighting chance.

**Design Manager: Welcome**

1. Welcome
2. Manage Device Channels
3. Upload Design Files
4. Edit Master Pages
5. Edit Display Templates
6. Edit Page Layouts
7. Publish and Apply Design
8. Create Design Package

The Design Manager helps you create your own site design in SharePoint. Learn how SharePoint sites work.

If you aren’t creating your own design, you may instead want to choose from one of the following options:

- Import a complete design package
- Pick a pre-installed look

Otherwise, go ahead to the next step of the Design Manager. Get an overview.

The Design Manager crunches HTML input.
The Design Manager crunches HTML input

... and spits out a converted layout...
... and spits out a converted Javascript display template that is ready for use
Worth mentioning: display templates and related files can be packaged for deployment
Sum-Up:

- The CSWP is your friend
- Usable by novices and experts alike
- Uses Search to serve content quickly
- Available on-prem and in the cloud

Yes, this is a real knife. Look up "Wenger 16999 Swiss Army Knife" on Amazon!
Resources

Search Driven Publishing Features Are Now Available in SharePoint Online

Configure Search Web Parts in SharePoint Server 2013

SharePoint Content Query Web Part vs Content Search Web Part in SharePoint On-Premises vs SharePoint Online Environments
http://nikpatel.net/2014/02/28/content-query-web-part-vs-content-by-search-web-part/
Resources

Using the Content Search Web Part (and Understanding SP2013 Search)

SharePoint Online Service Description

SharePoint 2013 Content Search Web Part vs Search Results (video)
http://www.youtube.com/watch?v=RkhCYZm_Ijo

Query variables in SharePoint Server 2013
Resources

Advanced Paging with SharePoint Content Search Web Part Display Templates
http://sharepointinterface.com/2015/05/03/advanced-paging-with-sharepoint-content-search-web-part-display-templates/
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Blog: http://SharePointInterface.com
About: http://about.me/spmcdonough

Resources