

Playing Outside Your Sandbox

INTERACTING WITH OTHER SYSTEMS USING SHAREPOINT BCS

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Things we are going to cover

- ▶ What is BCS
- ▶ Why is it important
- ▶ Things I can do with it
- ▶ External Content Types
- ▶ External Columns

So what is BCS?

- ▶ BCS stands for Business Connectivity Services.
- ▶ Microsoft defines BCS as:
 - ▶ “Business Connectivity Services is a centralized infrastructure in SharePoint 2013 and Office 2013 that supports integrated data solutions. With Business Connectivity Services, you can use SharePoint 2013 and Office 2013 clients as interfaces into data that doesn't live in SharePoint 2013 itself.”

So what is BCS?

- ▶ So what does this mean?
 - ▶ BCS is a service that SharePoint offers to enable it to connect with other systems and surface the data contained within them.
- ▶ Who can use BCS?
 - ▶ BCS is available in all flavours of SharePoint 2013 but different features are only available in some versions of SharePoint.

Why is BCS important?

- ▶ SharePoint is not meant to be a relational database, but it can surface data from there.
 - ▶ See <http://prairiedeveloper.com/?p=206> for an explanation of why it is a bad idea
- ▶ Can act as an intermediary between users and Line of Business systems
- ▶ Can leverage SharePoint features like Workflows to work with data outside of SharePoint
- ▶ Use BCS and Secure Store service to consolidate access to external data sources into a few accounts instead of a huge number for each user.

So what can you get with *your* version of SharePoint?

- ▶ SharePoint Foundation 2013
 - ▶ External List
 - ▶ Authentication to BCS sources via Secure Store service
 - ▶ That's it... so really not too much but for most that is enough.

So what can you get with *your* version of SharePoint?

- ▶ SharePoint Server 2013
 - ▶ Everything in Foundation plus...
 - ▶ **External List Alerts**
 - ▶ **App Scoped External Content Types**
 - ▶ Business Data Web Parts
 - ▶ **OData Connector**
 - ▶ Profile Pages

So what can you get with *your* version of SharePoint?

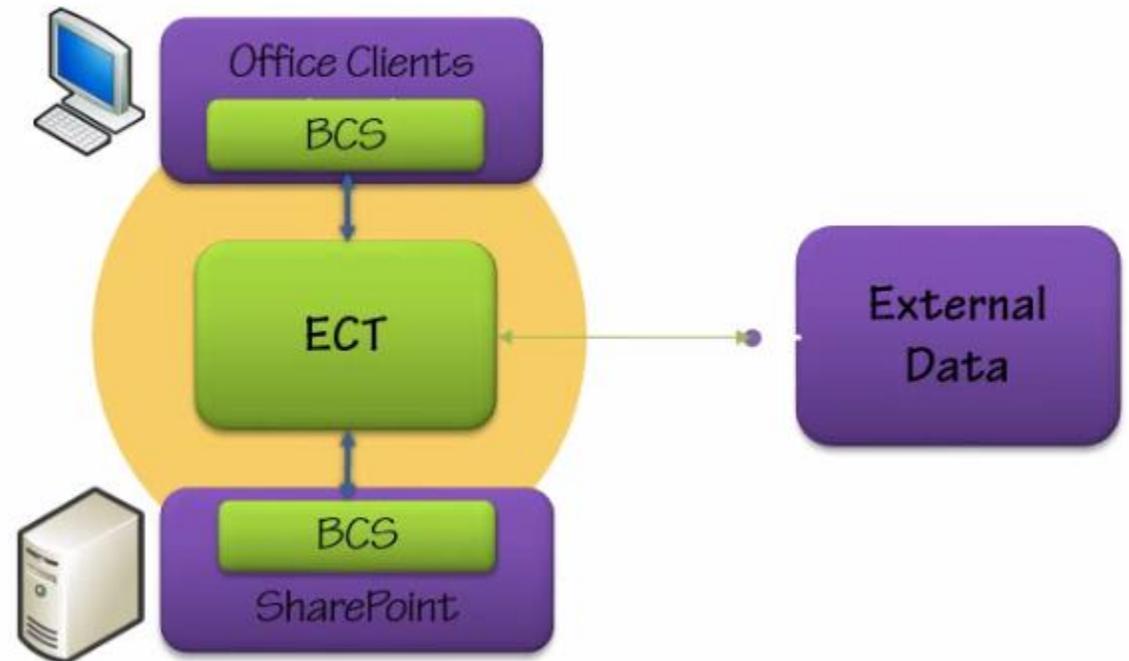
- ▶ SharePoint Server 2013 Enterprise Edition
 - ▶ All of the features from the SharePoint Standard plus...
 - ▶ Rich Client Integration
 - ▶ Tenant-level external data log

So what can I do with it?

- ▶ Can actually use it to extend the life of some client\server apps without a lot of development
- ▶ Provide access for external contact to internal data without making that system externally available
- ▶ Use SharePoint Search to find information within external systems
- ▶ Can extend some other internal systems to gather further information and surface them in everyday apps like Outlook.

External Contact Types

- ▶ The foundation of any BCS solution that can be built
- ▶ An ECT is the connection layer between SharePoint and the external data
- ▶ Maps the data in the external system to an object within SharePoint



External Content Type

- ▶ Most commonly used to surface data in a SharePoint list that can be viewed and manipulated.
- ▶ Basically just an XML file that contains all the information that SharePoint needs.
- ▶ Tells SharePoint what to do when CRUD operations are executed.

External Content Type Authentication

- ▶ When creating ECTs the developer can tell BCS how to map requests from a user (on the SharePoint side) to the credentials to be used in the external system.
- ▶ Passthrough Authentication
 - ▶ Passes the credentials of the user accessing the resource through to the external source
 - ▶ Will not work in NTLM. Need to have Kerberos for Passthrough
 - ▶ Will also not work in a Claims\Kerberos environment
 - ▶ Called **User's Identity** in SharePoint Designer and BCS admin page

External Content Type Authentication

- ▶ RevertToSelf Authentication
 - ▶ Uses BCS application pool's identity to connect.
 - ▶ Is disabled by default
 - ▶ Called **BDC Identity** in Designer and BCS Admin

- ▶ WindowsCredentials
 - ▶ Used for accessing Windows based databases and web services
 - ▶ Integrates with Secure store and forwards a windows credential to external source
 - ▶ Called **Impersonate Windows Identity** in Designer and BCS Admin

External Content Type Authentication

▶ Credentials

- ▶ Similar to WindowsCredentials, but maps to non-windows credentials instead of a windows account using the Secure Store Service
- ▶ Used for connecting to web-services that authenticate without Windows accounts
- ▶ Called **Impersonate Custom Identity** in Designer and BCS Admin

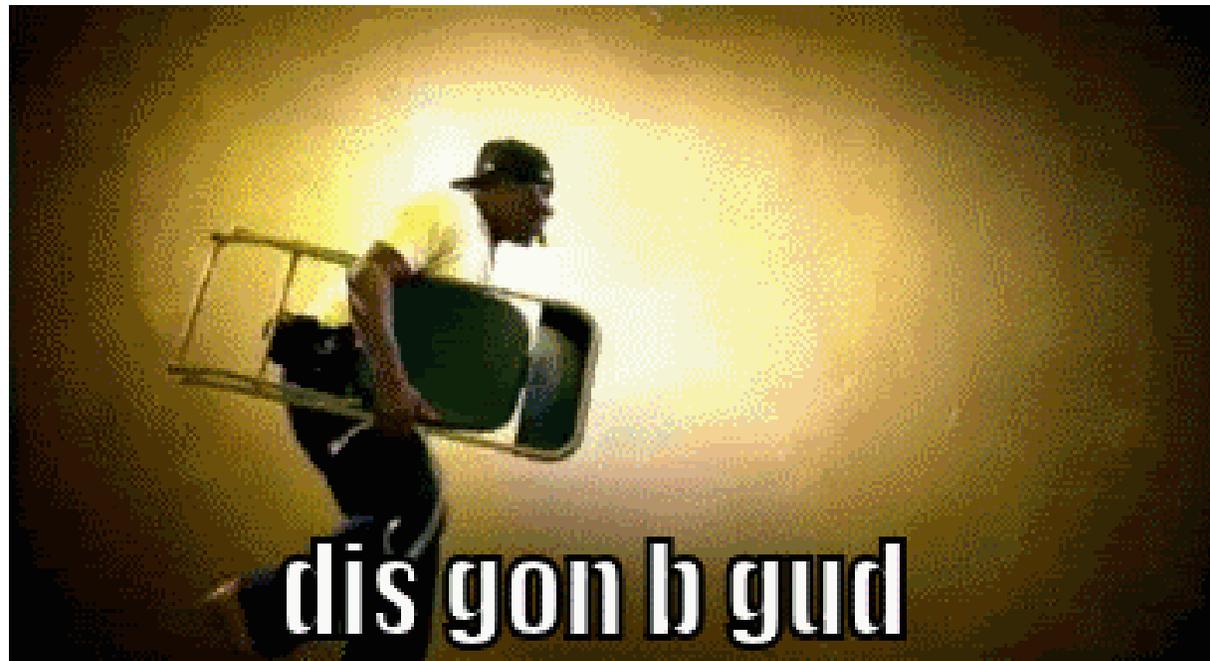
▶ RDBCredentials

- ▶ Basically the same as Credentials (above) but used for connecting to databases without windows authentication.
- ▶ Also called **Impersonate Custom Identity** in Designer and BCS Admin.

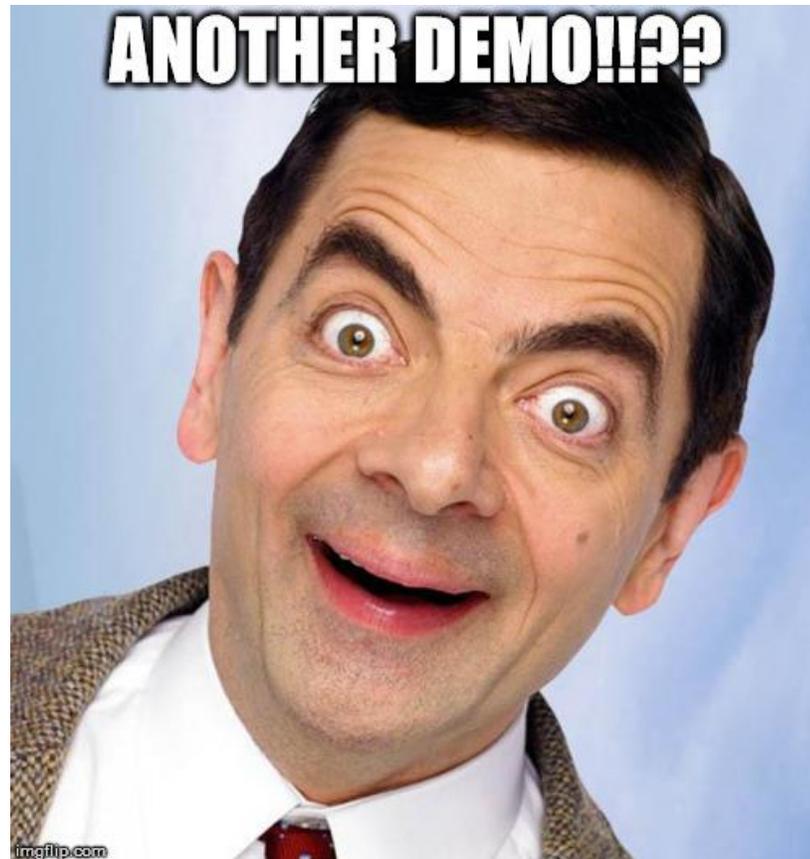
Demo: Setting up BCS Authentication



Demo: Creating an External Content Type



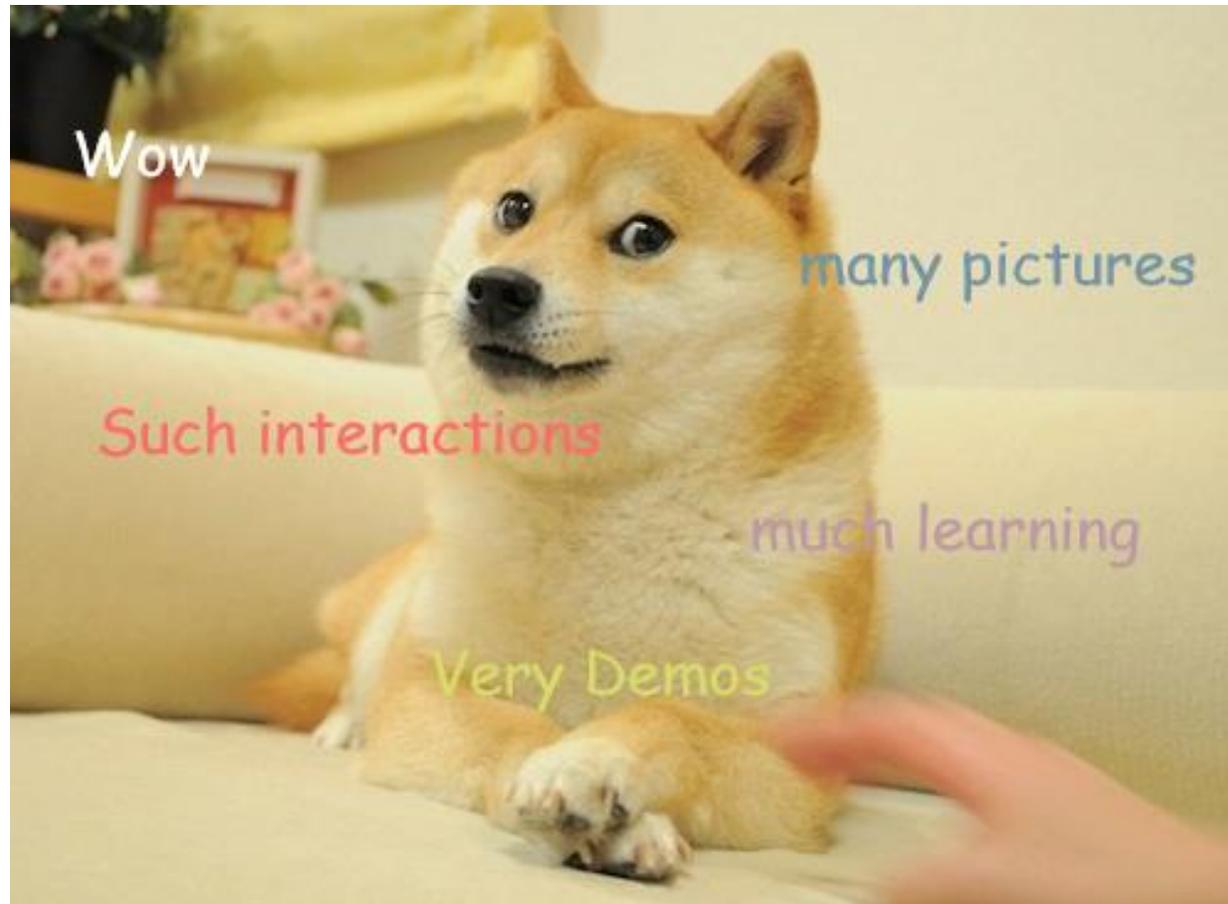
Demo: Creating an External List



External Columns

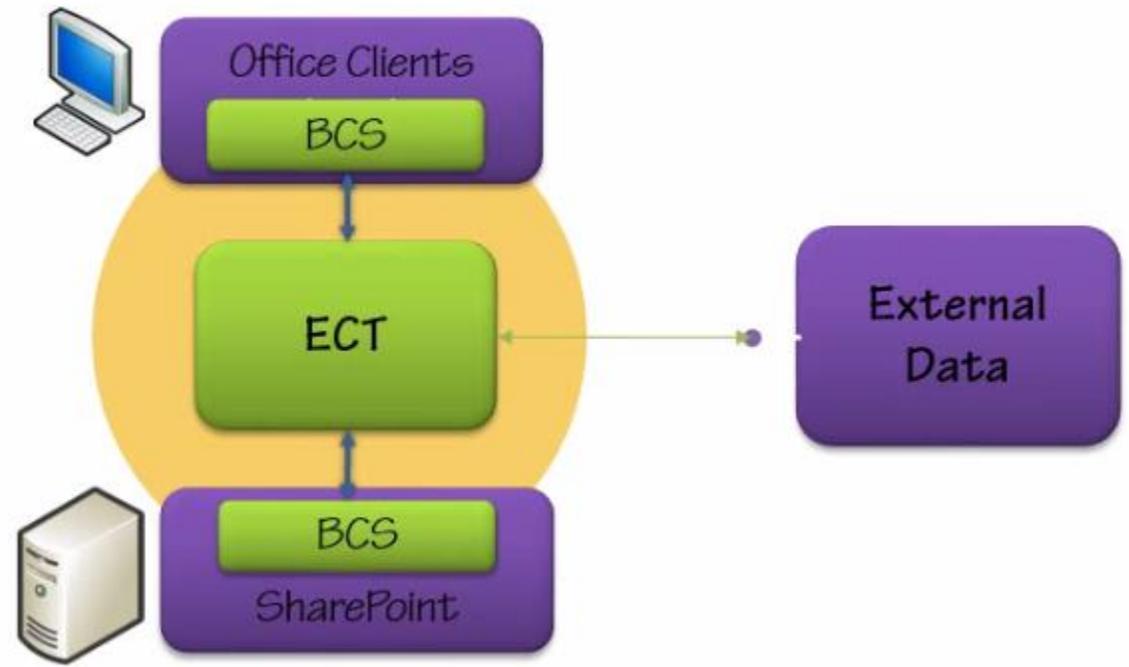
- ▶ Related to External Content Types as they also surface data from an external source
- ▶ Map a single SharePoint column to a single external data column
- ▶ Can't create as a site column
- ▶ Not required to exist in an External List
- ▶ Often used as a data picker in a list.
- ▶ Can map to an already created ECT and a particular field within that ECT.
- ▶ Can create multiple external columns connected to a single ECT (just different columns within that ECT).

Demo: External Columns

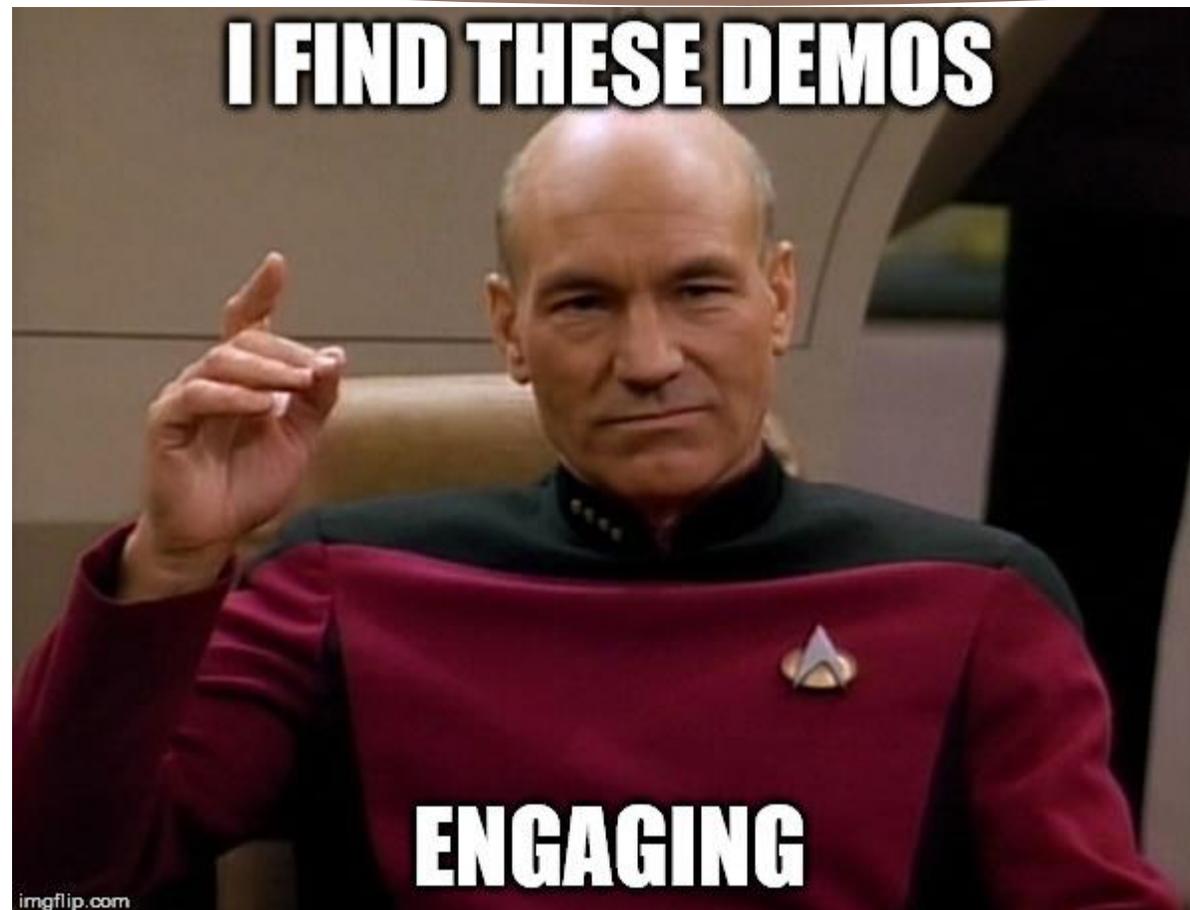


Connecting your Office Apps

- ▶ Using BCS can map to an external content type to surface data
- ▶ Use Quick Parts within Office apps to map data from External Sources to fields in the form.



Demo: Connecting Office Apps to BCS



Question Period

