



# Layer2 Business Data List Connector for SharePoint

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# Who is Layer2?



- As a Microsoft Gold Certified Partner and ISV based in Hamburg (Germany), Layer2 is one of the leading providers of Microsoft SharePoint, Office 365 and Azure apps in Europe with a major focus on Data Integration, Collaborative Knowledge Management, Social Networking and Cloud.
- Layer 2 has also been known as a reliable partner to customers in Central Europe, offering additional consulting and services in the fields of SharePoint, .NET programming and IT infrastructure for more than 20 years.

## Microsoft Partner

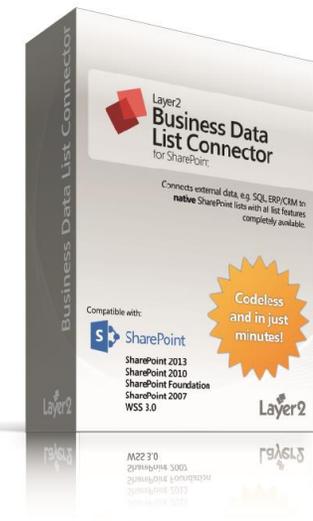
- Gold Application Development
- Gold Collaboration and Content
- Gold Small Business
- Cloud Accelerate
- Silver Volume Licensing
- Silver Midmarket Solution Provider



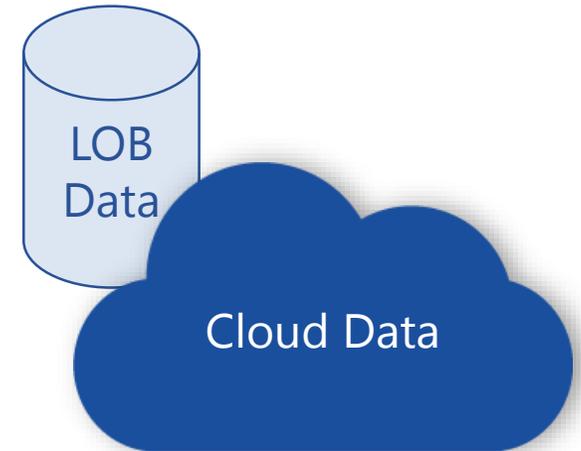
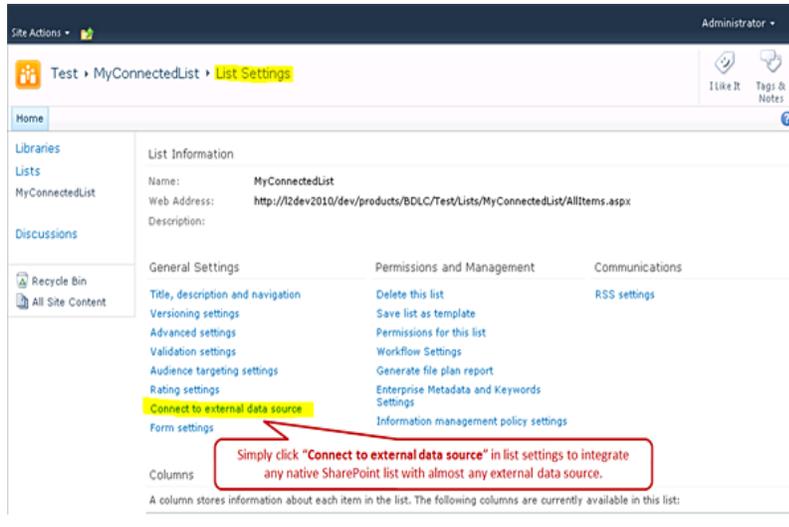
# What is the Business Data List Connector?



- The Layer2 Business Data List Connector for SharePoint (BDLC) connects *native* SharePoint lists (no Web Parts, no BDC / BCS external lists) directly to almost any external data sources, simply in the SharePoint list settings dialog in just minutes, codeless and bi-directional.
- All SharePoint list features are available as usual, e.g. search, metadata, alerts and workflows, to take business actions in SharePoint, when external data records are changed.
- The BDLC simplifies your SharePoint architecture, overcomes limitations and solves many issues that still exists with SharePoint out-of-the-box data integration via BDC and BCS today.
- BDLC requires SharePoint on premises to install. If you are looking for a cloud-based solution for SharePoint Online / Office 365, please try the Layer2 Cloud Connector product with similar features, but different architecture.



# How does the Business Data List Connector work?



\* If supported by data provider, query and access rights.



# What can be connected to SharePoint



- **Databases** with existing ODBC / OLEDB / OData or other .NET based drivers, e.g. SQL Server, SQL Azure, Oracle, IBM DB2, Informix, AS/400, MySQL and many more.
- **Files** like Microsoft Office Excel, Access, XML, CSV or other text files.
- **Applications** like Exchange, Active Directory, SharePoint, etc.
- **ERP / CRM / DMS / CMS systems** like Navision, SAP, MS Dynamics, etc.
- **Cloud-based systems** like Salesforce, SharePoint Online, Office 365, CRM Online, Google, Twitter, Facebook, RSS or other XML-based web requests, etc.



# Business Data List Connector – Why we made it?



- SharePoint out-of-the-box solutions for external data integration such as the Business Data Catalog (BDC, 2007) and Business Connectivity Services (BCS, 2010 / 2013) are not available for all SharePoint editions and they have serious limitations. The BDLC works with all SharePoint on-premise editions and has no limitations compared to native SharePoint lists. You have views, metadata, search, alerts, workflows as usual. No problems with forms or 3<sup>rd</sup> party extensions .
- BDC / BCS are difficult to configure: Tools, XML, customizing or even programming are required. The BDLC is easily configured in the SharePoint list settings. Every admin can do.
- BDC / BCS only displays the external data inside SharePoint UI. That causes not only functional limitations, but also a complicated architecture with real-time user access to all external sources at any page call, performance issues and possibly licensing issues as well. With BDLC users access native SharePoint lists only with high performance and availability.
- SharePoint users are familiar with lists. Lists are the common way to work with data in SharePoint. Most SharePoint features are based on lists, e.g. to take data offline or display at mobile devices.
- BDC / BCS is difficult to upgrade. BDLC lists are very easy to migrate from SharePoint 2007 to 2010 / 2013 – no changes at all.

# BDLC for SharePoint – Installation & Activation



- Simply use the installer provided for new installation or update / upgrade.
- Select your SharePoint version in distribution (2007/2010/2013 directory in ZIP).
- Run “as admin” if required.
- In case of farm installation please install on CA first, SharePoint deploys automatically to the selected web applications WFE & App servers.
- Normally the BDLC feature is automatically activated on SharePoint Site Collection level as a Site Collection feature (not site level, not in CA)
- You can deactivate or uninstall at any time.
- Please install data providers on each server manually.



- Site Collection Administration
  - Search settings
  - Search scopes
  - Search keywords
  - FAST Search keywords
  - FAST Search site promotion and demotion
  - FAST Search user context
  - Recycle bin
  - Site collection features**
  - Site hierarchy
  - Site collection audit settings
  - Audit log reports
  - Portal site connection
  - Site collection policies
  - Content type publishing
  - SharePoint Designer Settings
  - Visual Upgrade
  - Help settings



## SharePoint Business Data List Connector by Layer2

Adds a new list definition to create a Business Data List Connector for integration of external business data.

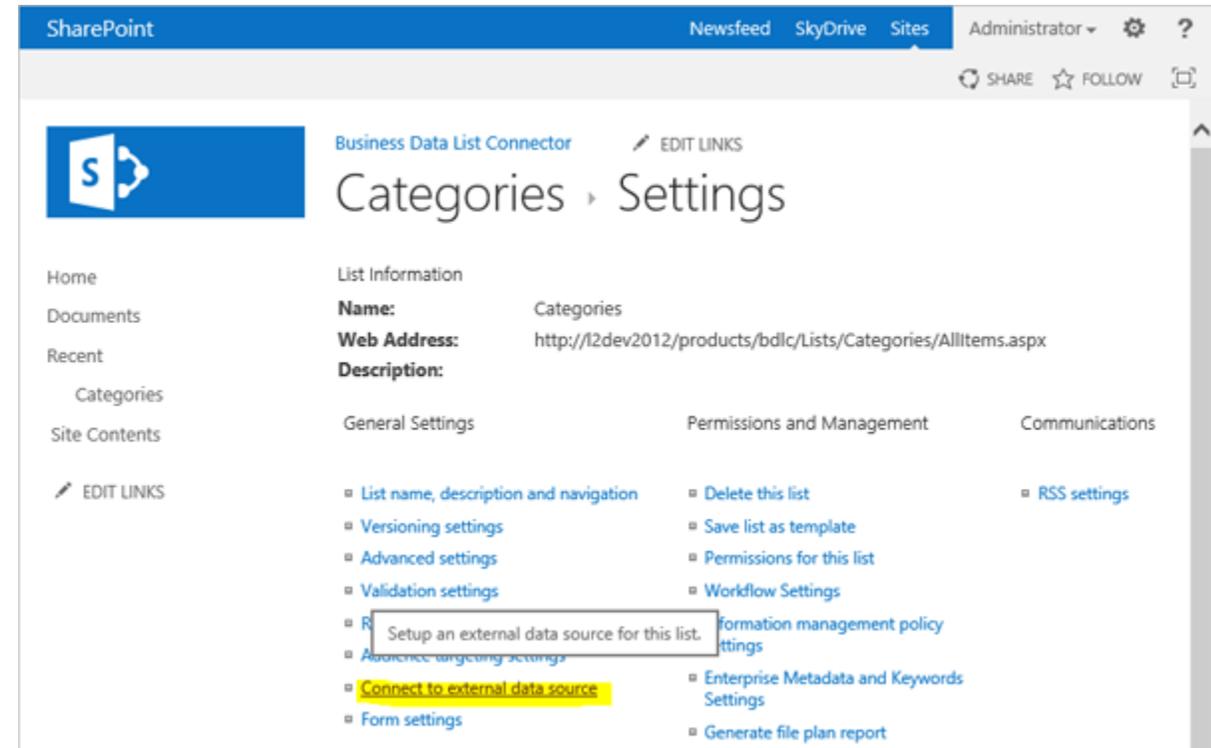
Deactivate

Active

# BDLC for SharePoint – How to Connect a List?



- Create a new list of any type, e.g. contacts or custom, or use an existing list.
- Goto List Settings > General Settings.
- Select „Connect to External Data Source“ to open the “BDLC List Settings Dialog” and configure your data source for the current list.
- Please note: If this entry is not there, the solution is not installed or not activated as a feature of the current site **collection**.



# BDLC for SharePoint – List Settings



- To connect to your external data source:
- Select your “Connection Provider”.
- Enter the „Connection String” and validate it.
- Enter the „Query String” and validate it.
- Enter the primary key(s) - if any.
- Create the list structure or add additional columns with one click on „Add Columns”.
- Check mapping of external fields with SharePoint columns. Modify column types and names.
- Update the data with one click on „Update”.
- Enable background update, if required and set options like schedule interval or email for error notifications.
- Enable write-back, if required to update your data source.
- See below for more detailed information about these steps.

The screenshot shows the 'Business Data List Connector settings: Categories' page. The 'Connection Provider' is set to 'Net Framework Data Provider for SqlServer'. The 'Connection String' is 'Data Source=192.168.1.12; Initial Catalog=sharepoint; User Id=SalesDemo; Password=myPW123'. The 'Select Statement' is 'Select CategoryID, CategoryName as Title, Description from Categories'. The 'Primary Key(s)' is 'CategoryID'. The 'Background Update' settings are: 'Enable Background Update' checked, 'Interval' set to 60 minutes, 'Next Run' set to 5/16/2013 2:00 AM, and 'Last Run' set to 5/16/2013. The 'Write-back' option is also checked. The 'Error Reporting' section has an 'Email Address' field.

# BDLC for SharePoint – Connection Provider



Please select your Connection Provider:

- You'll find a list of all installed providers and drivers **at your server**.
- You have to install your driver, if not present, e.g. Oracle driver to access an Oracle database.
- You can use universal providers, e.g. ODBC, OLEDB, OData etc.
- BDLC out-of-the-box comes with additional providers for RSS, XML, OData, Exchange and SharePoint. See below for a description of these providers.
- Just ask your data source vendor for available providers, take a look at our FAQs or send email to sales@layer2.de.

## Connection Provider

Please select the connection provider to use.

For more information please read the [FAQs](#).

## Connection String

Enter the connection string and validate it.

For more information please read the [FAQs](#).

## Connection Provider

.Net Framework Data Provider for SqlServer

## Connection String

Data Source=192.168.111.2; Initial Catalog=Northwind;User Id=SalesDemo; Password=myPWD

Validate

# BDLC for SharePoint – Connection String



Please enter your Connection String:

- Connection strings are not BDLC specific and available for virtually any external data source.
- To find the connection string for your data source see our FAQs, ask your vendor or take a look at [www.connectionstrings.com](http://www.connectionstrings.com)
- Contact [sales@layer2.de](mailto:sales@layer2.de) for any help.
- See below for Layer2 provider specifications.
- Validate your Connection String.
- Please note that any error message at this point directly comes from the driver / provider selected - mostly not related to the BDLC product.

The screenshot shows a web form for configuring a connection string. It is divided into two main sections: "Connection Provider" and "Connection String".

**Connection Provider:** This section has a label "Connection Provider" and a sub-label "Please select the connection provider to use." Below this is a dropdown menu with the selected option ".Net Framework Data Provider for SqlServer". A link "For more information please read the FAQs." is provided below the dropdown.

**Connection String:** This section has a label "Connection String" and a sub-label "Enter the connection string and validate it." Below this is a text input field containing the string: "Data Source=192.168.111.2; Initial Catalog=Northwind;User Id=SalesDemo; Password=myPWD". A link "For more information please read the FAQs." is provided below the input field.

At the bottom of the form is a "Validate" button.

# BDLC for SharePoint – Select Statement



- The select statement queries your external data set via connection string.
- Select statements or queries are not BDLC specific and available for virtually any external data source, e.g. SQL for databases, Xpath for XML etc.
- To find the select string or query for your data source see our FAQs or ask your vendor.
- Please validate your query. Please note that any error message at this point directly comes from the driver / provider selected - mostly not related to the BDLC product.
- Use the preview feature to get an impression of the data.
- See below for Layer2 provider specifications.
- You can map the fields to existing columns by name using aliases (e.g. select MyField as Title)
- Your select statement should contain a primary key (one or more unique columns) for smooth update and to enable write-back.

## Select Statement

Please enter select statement and validate it.

For more information please read the [FAQs](#).

Press the Preview button to display the first 10 records of your result set.

## Select Statement

Select CategoryID, CategoryName as Title, Description from Categories

Validate

Preview

# BDLC for SharePoint – Primary Key



- In most cases your external data has one or more primary key(s).
- If a primary key is available, then changed data is updated. Otherwise all items are deleted and re-inserted, a possible performance issue.
- The fields must not be native primary keys – but unique in column.
- For more information about possible primary keys / field names please use data preview and check field mappings.
- The primary key is automatically mapped to the Title field if it is not mapped otherwise, e.g. by using "Select myField as Title ...".

Primary Key(s)

Please enter primary key(s) and validate it. If your primary key has multiple fields, please separate with semicolon ";"

Primary Key

# BDLC for SharePoint – Create List Structure



- To create the list structure required to host your external data, please press “Add Columns”.
- The fields of the result set of the given select statement are created automatically as SharePoint columns and mapped **by the *internal SharePoint column names*** (not by visible column titles).
- Please check mapping if unsure.
- You can rename any SharePoint column title manually later on as usual.
- You can modify the column field types if required, e.g. single line text to multi-line.
- You can create or delete column fields as usual in SharePoint if required, e.g. to add custom SharePoint-only data or other attachments.

**SharePoint**

Create the SharePoint list structure, check field mapping and update the data. List column types can be modified as usual.

Add Columns to list structure

Update list data

**Field / Column Mappings**  
Please check the data source field mapping with SharePoint list columns.

Data Source Field Name	Data Source Field Type	SharePoint List Internal Column Name	SharePoint List Column Display Name	SharePoint List Column Type
CategoryID	Int32	CategoryID	CategoryID	Number
CategoryName	String	CategoryName	CategoryName	Single line of text
Description	String	Description	Description	Single line of text
Picture	Byte[]	Picture	Picture	Single line of text
CategoryID	-	Title	Title	Single line of text

# BDLC for SharePoint – First Update



- To update the data in your SharePoint list with your external data first time, please press "Update".
- Please note that the first update can take some time, depending on amount of data and configuration. Take care about information or error messages.
- After first update is finished successfully press update again. No items should be changed now (if the given primary key works as expected). This update should be much faster.
- See below about how further updates can be made on-demand or automatically.

A screenshot of a web interface for configuring a SharePoint list. The interface is titled "SharePoint" and contains the following elements:

- SharePoint**: A heading followed by the instruction: "Create the SharePoint list structure, check field mapping and update the data. List column types can be modified as usual."
- Add Columns to list structure**: A sub-heading with two buttons: "Add Columns" and "Check Mappings".
- Update list data**: A sub-heading with one button: "Update".

The buttons are rectangular with a light gray background and dark text.

# BDLC for SharePoint – Background Update



- You can optionally enable “Background Update” to schedule the SharePoint list updates. Please keep in mind, that data source updates are real-time in any case (if write-back enabled).
- The list updates are done automatically by a timer job, one time per hour by default.
- You can modify this interval. It is limited by the timer job interval (you can adjust in CA, 10 minutes by default). Please note the duration time depends on amount of data, amount of changes, and configuration.
- If primary key(s) are given, updates usually are done very, very fast.

## Background Update

Enables automatic insert, update and delete of SharePoint list items, if external data is changed. By default list data is updated every hour starting next run date / time. If the connection becomes locked for any reasons, please unlock here. The list can be unlocked automatically after the given delay. Please choose the delay until unlock greater than the usual update duration for this list. By default there is no automatic unlock. For more options see [FAQs](#)

## Background Update Settings

Enable Background Update

Interval (min)

Next Run

Last Run:

Last

Duration:

Last

Message:

Locked (Please unlock here if required)

Delay

until

Unlock

(min)

# BDLC for SharePoint – Update on Demand



- You can optionally update the SharePoint list on demand.
- You can use the Action Menu (SharePoint 2007) or the Ribbon (SharePoint 2010 / 2013) to start a list update.
- You can update the list per URL via `<siteurl>/_layouts/layer2/bdlcupdate.aspx?list=<guid>&source=<Url>` where `<siteurl>` is the url of the site that hosts the BDLC list with `<guid>` (required) , `<guid>` is the SharePoint BDLC list guid (required), `<Url>` is the URL to redirect after update (optionally).
- Developers can use the BDLC API to update the list per workflow or program code. See sample code in distribution.

The screenshot shows the SharePoint 2010 ribbon with the 'List Tools' tab selected. The 'Update List Items' button is highlighted in yellow. Below the ribbon, the 'MyBDLC (Northwind)' list is displayed in a table view. The 'Actions' menu is open, showing the 'Update List Items' option highlighted in yellow.

Title	EmployeeID	OrderDate	RequiredDate
10248	5	7/4/1996 12:00 AM	8/1/1996 12:00 AM
10249	6	7/5/1996 12:00 AM	8/16/1996 12:00 AM
10250	4	7/8/1996 12:00 AM	8/5/1996 12:00 AM
10251	3	7/8/1996 12:00 AM	8/5/1996 12:00 AM
10252	4	7/9/1996 12:00 AM	8/6/1996 12:00 AM
10253	3	7/10/1996 12:00 AM	7/24/1996 12:00 AM
10254	5	7/11/1996 12:00 AM	8/8/1996 12:00 AM
10255	9	7/12/1996 12:00 AM	8/9/1996 12:00 AM
10256	3	7/15/1996 12:00 AM	8/12/1996 12:00 AM

# BDLC for SharePoint – Write-Back



- You can optionally write changes made in the SharePoint list back to data source with “write-back” enabled in BDLC settings, including insert, update, delete.
- Changes are fired immediately to data source when they are committed to the SharePoint list.
- Your provider must support write-back (for example you can’t write to a RSS data source because its read-only).
- Your access rights must allow write-back on the external data source (e.g. in a database).
- Your query must be updatable (for example most database table joins are not). A primary key is required at the data source side.
- You can use the SharePoint data sheet list view with write-back enabled without any restrictions.
- Generally full CRUD (Create / Update / Delete) is supported, e.g. for using a SharePoint list as a database front end. Please note that database side calculated primary keys (e.g. ID counter) are not supported. Please use GUIDs on both sides. See FAQs for more detailed information.

## Write-back to Datasource (CRUD)

Enables write-back of data changes made in the SharePoint list to the data source with full CRUD (Create/Update/Delete) - if supported by provider and data source used.

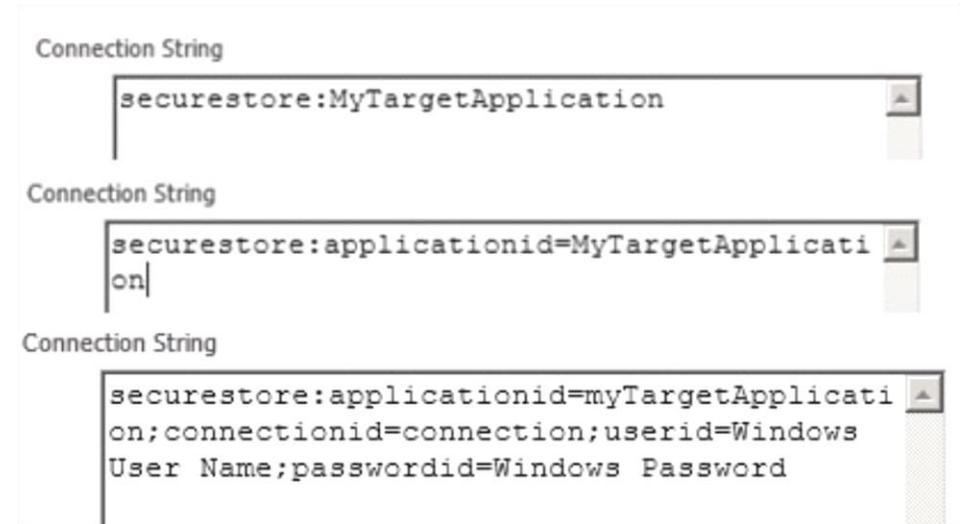
Write-back

Enable Write-back

# BDLC for SharePoint –Highest Security



- With BDLC your users do not access your external data directly. That gives you the highest security level possible.
- You can hide your connection settings by disable access to list settings for your users by SharePoint access rights settings.
- You can use integrated authentication if supported by the data provider.
- You can hide the connection string in web.config for WFE servers. If you define a term myConnectionString in your AppSettings section of web.config, you can use web.config:myConnectionString as BDLC connection string.
- With SharePoint 2010 / 2013 you can use the new Secure Store to store connection settings. See FAQs for more.
- Please note that BDLC is proven to be aware against SQL injection by design.



# BDLC for SharePoint – Highest Performance



- End users do access native SharePoint list data only for highest performance – not the external source.
- For best update performance use as few columns as possible, e.g. no select \* from myTable.
- Restrict your result set if possible using where clauses or similar.
- Fast SharePoint batch API is used to commit changes only.
- BDLC is proven to work with up to 100.000 records / items, depending on configuration and data source performance. Please note that the configuration must meet the Microsoft requirements.
- For manual browser-based updates you possibly need to adjust time out settings for web application (see FAQ).
- Background updates are running on application servers for scalability with best performance.

## Background Update Settings

Enable Background Update

Interval [min]

Next Run  

Last Run: 9/27/2012 9:45:01 AM

Last Duration: 0 [s]

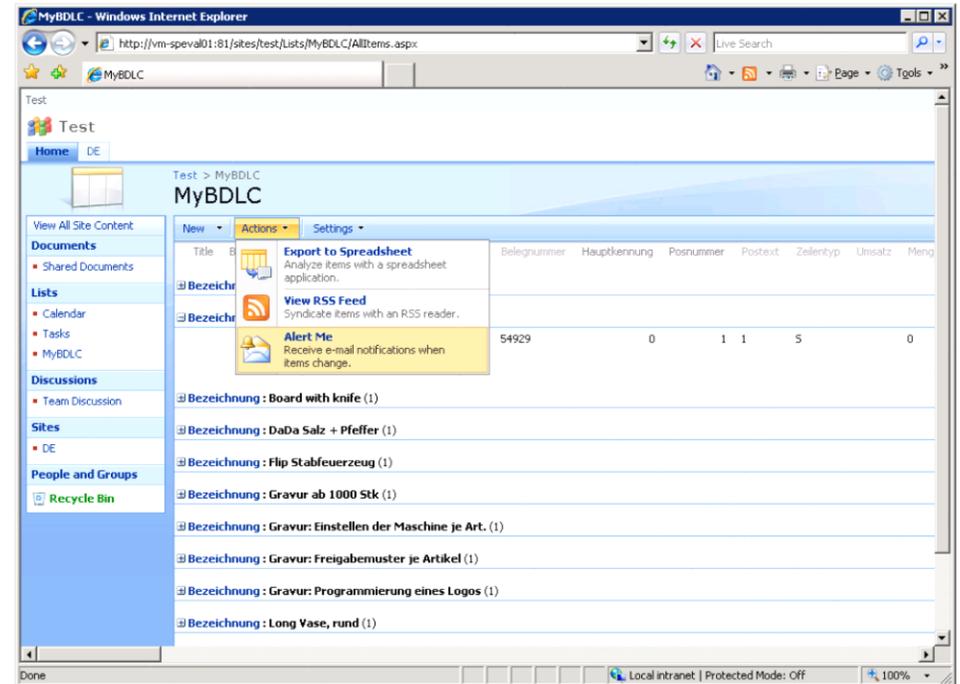
Last Message: Items added: 0, Items deleted: 0, Items updated: 2,  
Items with errors: 0,

Locked (Please unlock here if required)

# BDLC for SharePoint –All NATIVE List Features Available



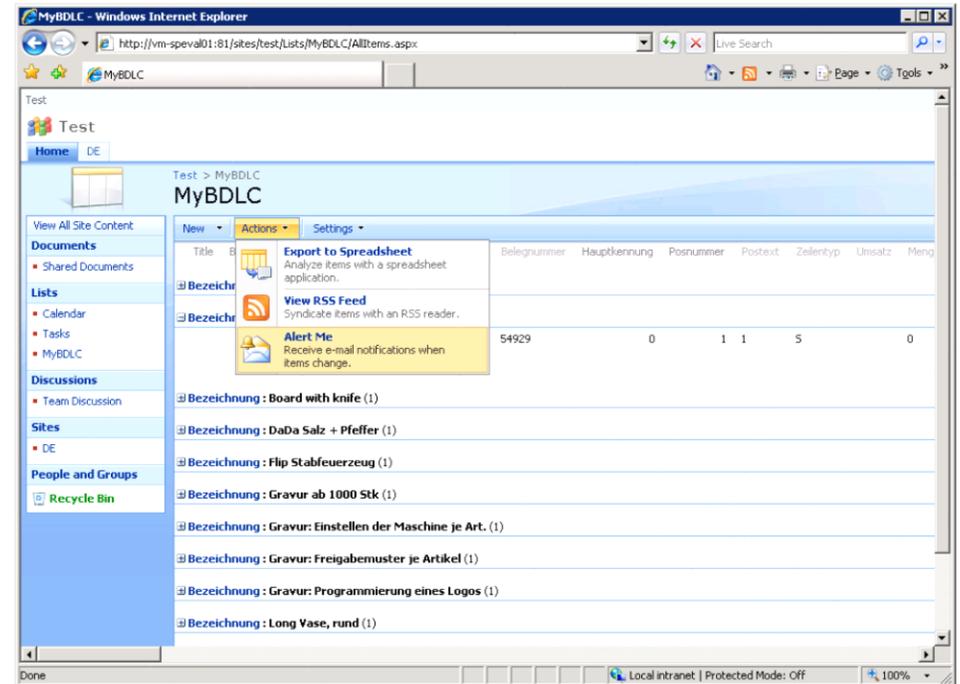
- A BDLC list simply is a native SharePoint list of any type.
- ALL list features are available.
- Views, sorting, filtering, grouping, calculated fields, metadata, tagging ...
- Search with all options as usual.
- Change alerts and notifications, RSS, events ...
- Workflows on external data change (!) with SharePoint Designer, Visio, Visual Studio, Nintex Workflow etc.
- Additional SharePoint-only columns and attachments.
- Offline availability (e.g. in Outlook). Mobile access.
- Datasheet view, detail forms, InfoPath, Nintex Forms etc.
- Item context menus.
- Datasheet view, export to Spreadsheet.
- Web services, XML.
- Compatible with all 3rd party add-ons.



# BDLC for SharePoint –What else can you do?



- Save LOB user CAL licenses, e.g. for CRM/ERP, because users don't access the LOB system directly. They can work with the familiar Office interface now.
- Build secure extranets with pre-selected replicated enterprise data for customers or other partners.
- Aggregate feeds right into SharePoint lists, e.g. RSS or Twitter.
- Sync your Office 365 or SharePoint Online cloud-based data with your local SharePoint.
- Include your external data in SharePoint search, Knowledge Management and Social Networking using terms and tags, enterprise metadata, activity feeds to reach your users.
- Provide consistent enterprise data always up-to-date for your users to create lookups, build forms etc. – before they copy manually.



# Layer2 Data Provider for RSS Feeds



- Makes it as easy as possible to aggregate RSS Feeds in native SharePoint lists
- URL parameter provides the link to the feed (copy from browser)
- Auth provides authentication method, e.g. Anonymous.
- FeedType = RSS, Atom, RDF
- FeedSource provides an additional field Source. Value can be set in connection string.
- Usual RSS fields are exposed, but any other custom fields as well.
- Source code included in distribution as a sample to write your own provider.

A screenshot of a web-based configuration interface for the Layer2 Data Provider. It features two main sections: "Connection Provider" and "Connection String".  
1. "Connection Provider": A dropdown menu with "Layer2 Data Provider for RSS Feeds" selected.  
2. "Connection String": A text area containing the following text:

```
Url=http://www.pressebox.com/rss/flag/sof  
tware.rss;  
Auth=Anonymous;FeedType=RSS;FeedSource=Pr  
essebox
```

  
Below the text area is a "Validate" button.

# Layer2 Data Provider for SharePoint (CSOM) 1/2



- Connects to other SharePoint lists, on-premise and in the Microsoft Office 365 cloud with the following parameter:
- URL parameter (required) provides the link to the source list. Please copy from browser.
- Authentication provides an authentication method, e.g. IntegratedWindows (default), Windows, Office365, IECookie, Anonymous, ADFS, ADFSWindowsIntegrated.
- For Windows integrated authentication take care, that all users that use update on demand have access, and / or the Windows Timer Service account (if background update is used).
- For Windows and Office 365 authentication the parameter user and password are required additionally. Please use the same values as if you would login manually.
- For IECookie authentication Cookie Manager is required. See below for more.
- For ADFS authentication at Office365 / SharePoint Online the parameter OnlineUser, username and password must be provided.
- For ADFSWindowsIntegrated the parameter OnlineUser must be provided.
- OnlineUser must be set to the mapped user id used as online id for Office 365 authentication.

Connection Provider

Layer2 Data Provider for SharePoint (CSOM)

Connection String

```
URL=http://myserver/mysite/Lists/mylist/AllItems.aspx
```

Validate

# Layer2 Data Provider for SharePoint (CSOM) 2/2



- For best performance please use a defined view with the required columns only.
- Select statements are not supported. Please use a view on data source side to select your data.
- There are more options available for more specific requirements. Please see specification in FAQs.
- To access Office 365 and SharePoint Online from inside SharePoint via BDLC / CSOM Web Services required certificates must be in the SharePoint certificate store. See FAQs how to do.
- Contact sales@layer2.de if there are any issues.

A screenshot of a web-based configuration interface for the Layer2 Data Provider for SharePoint (CSOM). The interface is divided into two main sections. The first section, titled "Connection Provider", contains a dropdown menu with the text "Layer2 Data Provider for SharePoint (CSOM)". The second section, titled "Connection String", contains a text area with the following text: "Url=https://mydomain.sharepoint.com/sites/mysite/Lists/myList/myItems.aspx", "Authentication=Office365;", "User=myuser@mydomain.onmicrosoft.com;", and "Pass=mypwd". Below the text area is a "Validate" button.

Connection Provider

Layer2 Data Provider for SharePoint (CSOM)

Connection String

```
Url=https://mydomain.sharepoint.com/sites/mysite/Lists/myList/myItems.aspx
Authentication=Office365;
User=myuser@mydomain.onmicrosoft.com;
Pass=mypwd
```

Validate

# Layer2 Data Provider for XML



- Use this provider to query XML based data from file or web request via Xpath and sync uni-directional. Please note that almost any web service can be exposed as XML-based HTTP web request.
- **URL** can be set to the url (best taken from browser) or file path (e.g. C:\myfile.xml)
- **Authentication** can be set to Windows.
- Optionally user and **password** can be set.
- Any valid Xpath expression is supported as query. It must return a table-like structure.
- There are more options available for more specific requirements. Please see specification in FAQs.
- Contact [sales@layer2.de](mailto:sales@layer2.de) if there are any issues.

Connection Provider

Layer2 Data Provider for XML

Connection String

```
URL=  
http://www.w3schools.com/xml/cd_catalog.xml
```

Validate

Select Statement

```
select * from /CATALOG/CD[COUNTRY='USA']
```

Validate

# Layer2 Data Provider for OData



- Use this provider to query external data via OData interface and sync uni-directional.
- A common usage for this provider is syncing contact data in MS CRM Online with SharePoint contacts to make it available offline in Outlook.
- URL: This is the Service Root URL for the OData source.
- Collection: Identifies the resource to be interacted with, e.g. Products.
- Authentication can be Anonymous or IECookie.
- Any OData select statement supported.
- There are more options available for more specific requirements. Please see specification in FAQs.
- Contact sales@layer2.de if there are any issues.

Layer2 Data Provider for OData

url=http://services.odata.org/Northwind/Northwind.svc/;Collection=Products;Authentication=Anonymous

Encrypt

[Verify connection string](#)

\$select=\*

Encrypt

[Verify select statement](#)

# Layer2 SharePoint List Provider



- Use this provider to query external SharePoint data from **SharePoint 2007 and WSS 3.0**.
- In all other cases (SharePoint 2010 / 2013, on-premise or cloud-based) please use the new CSOM provider described above.
- **URL:** Complete URL to view (best taken from browser), optionally including parameters.
- **Login:** Optional user name, e.g. mydomain\myuser.
- **Password:** Optional user password.
- There are **more options** available for more specific requirements. Please see specification in FAQs.
- Select statements or other queries are not supported. Please use views instead of.
- You can use ID as primary key (as prefilled).
- Contact [sales@layer2.de](mailto:sales@layer2.de) if there are any issues.

A screenshot of a web application interface titled "Delete Item". The interface is divided into three main sections: "Connection Provider", "Connection String", and "Select Statement".  
1. **Connection Provider:** A dropdown menu is set to "Layer2 SharePoint List Provider".  
2. **Connection String:** A text area contains the URL "http://12dev2010/dev/products/BDLC/Li...sts/Categories/AllItems.aspx". Below the text area is a "Validate" button.  
3. **Select Statement:** An empty text area is provided for a select statement. Below it are "Validate" and "Preview" buttons.  
The interface includes instructional text and links to FAQs for each section.

# Free Shareware & Licensing



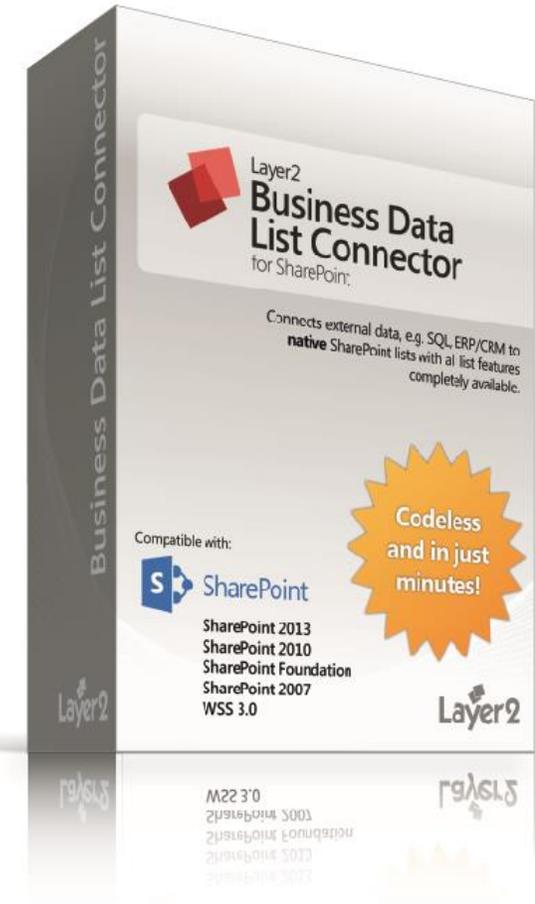
- BDLC can be used as free Shareware with limitations (25 items per list). Full featured 30 days trial license on request.
- BDLC can be licensed per SharePoint WFE & APP server. No user CALs required. One-time fee.
- There is an optional annual Software Assurance for free updates and upgrades per server.
- Several support options, e.g. free or per hour.
- No new installation is required, just placing the license file in feature directory.
- You can order online using any payment procedure you want, or at Layer2 directly.
- Contact [sales@layer2.de](mailto:sales@layer2.de) if you have any questions about licensing.

<b>Business Data List Connector for SharePoint 2007 / 2010 / 2013</b>		
<b>License</b>	<b>List price</b>	
<b>FREE Shareware Version</b>	<b>\$0.00</b>	
<b>1 <u>Single Server</u> License #300332176</b>	<b>\$1,065.00</b>	
<b>1 <u>Annual Software Assurance</u> #300421884</b>	<b>\$225.00</b>	

# Who is using the Layer2 BDLC?



- Please click below to find more customers.



# Layer2 Partner Program for Reseller and Implementer



- Completely cost-free partner program. No contract required.
- Partner links at our product pages. Sales leads will find you as a local partner and will ask for reselling and implementation support.
- 15 - 30% discount on production licenses to use our solutions in your external customer projects or for resale.
- Place your orders using our on-line shop system. Simply enter your partner codes to receive your discounts.
- As a partner you can use our solutions internally, for demonstration or within your intranet, extranet or even Internet as free NFR version.
- Premium support level with high priority and direct access to the product development team. Joint development options. Project support, if required.
- Free marketing and sales support, ready to use digital marketing kit including flyers, presentations and evaluation downloads.
- You will find a list of available partners [here](#).

Order by phone / Telefonisch bestellen  
+1 952 646-5022 (all local rates)  
+49 221 31088-30 (zum Ortsamt)

Language: English

Your Cart

Pos.	Product Name	Delivery	Unit Price	Qty.	Price
1.	<a href="#">Business Data List Connector for SharePoint 2007 and 2010</a> [P300332176]	electronic	EUR 749.00 USD 1,065.00 (plus tax/VAT) EUR 891.31 USD 1,267.35 (including tax/VAT)	5	EUR 3,745.00 USD 5,325.00 (plus tax/VAT) EUR 4,456.55 USD 6,336.75 (including tax/VAT)
			Discount (30%)		EUR -1,123.50 USD -1,597.50

Please enter your coupon code (if available):

Please enter your reseller code here to get 30% discount.

Update

Subtotal: EUR 2,621.50 / USD 3,727.50  
[Info] plus 19% sales tax/VAT: EUR 498.08 / USD 708.22  
Total: EUR 3,119.58 / USD 4,435.72

# Layer2 History



- 1991 Business formation as „Cords und Jacobi, EDV-Beratung und IT-Dienstleistungen“ in Hamburg, Germany
- 2001 Change of the companies name to „Layer2 GmbH
- 2003 Focus on Microsoft Technologies, especially .NET and SharePoint
- 2007 Market entry Austria and Switzerland
- 2008 Microsoft Certified Partner
- 2008 Start of international product marketing



# Layer2 as Microsoft Partner



- 2010 Microsoft Gold Certified Partner ISV / Software Competence
- 2011 Microsoft Cloud Accelerate Partner
- 12-14 Microsoft Gold Certified Partner Portals and Collaboration, Gold Small Business etc.

## Microsoft Partner

- Gold Application Development
- Gold Collaboration and Content
- Gold Small Business
- Cloud Accelerate
- Silver Volume Licensing
- Silver Midmarket Solution Provider



# What are you waiting for?



- Please click below to register, download and evaluate today.

