

# ONEVIEW CONNECT: EASILY DELIVER INFORMATION FROM MULTIPLE SOURCES ON A SHAREPOINT PLATFORM

TECHNICAL AND PRODUCT OVERVIEW

# ONEVIEW CONNECT: EASILY DELIVER INFORMATION FROM MULTIPLE SOURCES ON A SHAREPOINT PLATFORM.

XMLAW'S ONEVIEW CONNECT FROM HUBBARD ONE PROVIDES EFFECTIVE INFORMATION MANAGEMENT THROUGH SHAREPOINT.

## OVERVIEW

OneView™ Connect is a Hubbard One® XMLAW connectivity solution, a next-generation integration platform built exclusively for Microsoft® SharePoint®. It uses a pluggable connector-based approach to provide a universal middleware layer that accesses and aggregates disparate content and information sources for presentation through a native SharePoint user interface.

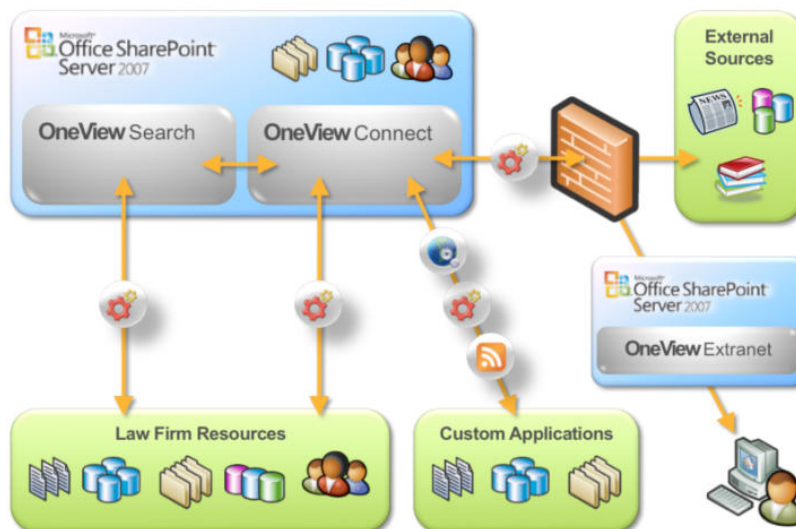
OneView Connect also exposes connected information through industry standard RSS 2.0 and Web service interfaces for use in custom applications, RSS readers or other applications that can consume RSS or Web service content.

This white paper provides product and technical details for SharePoint professionals, Microsoft .NET developers and IT technical and project staff who are using or evaluating Windows® SharePoint Services 3.0, Microsoft Office SharePoint Server 2007 and other XMLAW solutions.

## OPERATION

OneView Connect operates seamlessly within the SharePoint environment and with other XMLAW solutions, such as Search and Extranet, to provide a single, consistent framework for building and maintaining advanced SharePoint sites and applications.

### OneView solution architecture



## CONNECTORS

As an integration layer, OneView Connect aggregates information from multiple, disparate systems using connectors. Connectors provide secure access to an information source, translating data in different formats into a common format that offers you consistent usage regardless of the source or format.

XMLAW solutions provide a standard set of connectors for most database applications and content sources that support industry standard connectivity, such as ODBC or OLEDB.

### Connectors are available in two suites:

- Standard connectors, which are included in the base OneView Connect product
- Enterprise connectors, which provide enhanced connectivity and application features for proprietary or unique sources; enterprise connectors are licensed in addition to the base OneView Connect product

STANDARD CONNECTOR	USE
SQL Server	Connect to Microsoft SQL Server database
ODBC Connector*	Connect to ODBC data sources
OLEDB Connector*	Connect to OLEDB data sources
Oracle Connector	Connect to Oracle data sources
SharePoint Connector	Connect to MOSS or WSS lists, libraries and site collections
Web Services	Connect to Web services

\* The OLEDB and ODBC connectors support any standard ODBC data source or OLEDB driver. XMLAW has specifically tested and confirmed MySQL, Informix in client deployments.

ENTERPRISE CONNECTOR	USE
Interwoven Worksite	Connects to Interwoven Worksite DMS version 7.x or greater
OpenText eDocs	Connects to OpenText eDocs version 5.x
Business Data Catalog	Connects to MOSS Business Data Catalog (BDC) applications and entities
MOSS Search Results	Connects to MOSS search engine and search results
MOSS User Profiles	Connects to MOSS user profile database

### Custom connectors are available.

OneView Connect provides the ability to develop custom connectors using the Microsoft .NET 2.0 framework. Custom connectors can provide access to proprietary data sources that do not support industry standard connectivity and include custom business logic or security above and beyond generic connectivity options.

Requirements and examples of building custom connectors are documented in the OneView Connect SDK.

## DELIVERING INFORMATION THROUGH SHAREPOINT

### OneView Connect Web Parts

OneView Connect is designed to consume information from a variety of sources so it can be delivered and reused as needed through a consistent, integrated user interface based on SharePoint. SharePoint uses modular Web Parts to organize and display information, so OneView Connect provides a collection of Web Part templates and tools to easily customize Web Part displays of connected information. There are:

- Several base Web Part templates
- Specialty Web Parts designed for specific purposes
- A flexible XML-based Web Part that can be used to present information in a highly customizable format using XSLT and XSL stylesheets

### Template Web Parts

Template Web Parts serve as a basis for creating your own Web Part views. By starting with templates designed to deliver specific and common user interface components, such as lists and folders, you can easily present connected information from outside of SharePoint as if it were native SharePoint content.

All Web Part templates follow the SharePoint user interface guidelines to ensure a single, consistent method of creating pages and sites without custom programming or XSL configuration. For example, the list Web Part template looks and behaves exactly like a native SharePoint list, with context menus, sorting, paging, filtering and other features consistent with SharePoint.

However, the information displayed and managed in the OneView list Web Part can come from any source. This creates a consistent user interface regardless of where or how content is stored and makes the underlying systems transparent to the end user.

### ONEVIEW WEB PART

TEMPLATE	USE
List Web Part	Displays information in rows and columns with configurable sorting, paging, filtering and customizable styles; columns can be customized further to display SharePoint-style menus, online user presence information and other extensible display formats
Folder Web Part	Displays hierarchical information in a folder/subfolder display with an unlimited number of nested levels and configurable display formats
Form Web Part	Displays customized search or data entry forms with user-defined fields and field types, lookups to other connected information and configurable form actions
XML Web Part	Customizable XML/XSL Web Part that can transform any connected information from XML to a customizable display format using XSL stylesheets, with support for dynamic XSL parameters

### NAVIGATION WEB PART

NAVIGATION WEB PART	USE
Tabs Web Part	Displays customizable, dynamic and tab-style navigation for use in sites, Webs and document libraries; supports filtering, sorting and customizable styles and display features; fully supports item-level security and audience targeting
Quick Links Web Part	Dynamic fly-out menu with shortcuts to SharePoint lists, libraries and administrative features; full support of item-level security and audience targeting
Page Viewer Web Part	Displays Web pages and Web applications from outside of SharePoint within SharePoint sites and pages, with support for dynamic parameters

### Additional Web Part templates

In some scenarios, information can be presented from systems without the need for an enterprise or custom connector or custom Web Parts. One common example is financial data from billing or practice management systems, which typically expose information through standard connector options such as SQL Server or ODBC. With standard connector options, template Web Parts and Web Part configuration tools, users can present information in a wide variety of flexible display or report formats.

The Hubbard One client services team has worked with clients to create hundreds of Web part template views and reports of information from many common systems and sources. These templates are available to other clients using the same systems or creating similar views.

### Commonly used templates and examples:

WEB PART TEMPLATES	EXAMPLE
Time and Billing (Elite®, CMS, Rippe and Kingston, etc.)	<ul style="list-style-type: none"> <li>– Base client, matter and timekeeper information and relationships</li> <li>– Summary views of WIP, billed and collected hours/dollars</li> <li>– Utilization and performance information such as hours worked MTD, YTD by timekeeper, client, matter or practice</li> <li>– Billing information such as fees billed over time, invoice information and accounts receivable</li> </ul>
RSS Feeds	<ul style="list-style-type: none"> <li>– RSS summary and detail views</li> <li>– My RSS Feeds views</li> <li>– Current awareness information or external news feeds specific to individual clients, practice areas or topics</li> </ul>
Search Applications	<ul style="list-style-type: none"> <li>– Federated search results from other search applications, such as West km® or RealPractice™</li> <li>– Search forms and results from online search tools such as Live.com or Google™</li> </ul>
HR and Employee Directories	<ul style="list-style-type: none"> <li>– Integrated lists, profiles and forms from external HR systems such as Ceridian and PeopleSoft</li> <li>– Search forms and results from external employee content sources</li> <li>– Biography and other attorney information displayed in context</li> </ul>
Calendars and Dockets	<ul style="list-style-type: none"> <li>– Custom display calendar or docketing information within client, matter or individual attorney sites</li> </ul>

### Charting

OneView Connect Charting lets you present numeric data using charts and graphs. An additional module, OneView Connect Charting provides a flexible set of features and options for graphically rich charts and graphs, including three-dimensional rendering and custom display options.



### Configuration Editor

The Configuration Editor is a Web-based tool used to configure and customize OneView Connect Web Parts. It enables administrators, content owners and developers to:

- Connect to different sources using installed connectors
- Configure data source connection and query options
- Customize the display based on the Web Part template selected

All OneView Web Parts can leverage core features, such as configurable Web Part toolbars, user-defined properties and dynamic parameters. These features give you the ability to create flexible, dynamic and contextual Web parts that display different information and have different behavior based on where they are used, who is using them and in what context they are presenting content.

Dynamic parameters let you make dynamic any Web Part or data source property or setting. They get property values from the context in which the Web Part is displayed, the site or site collection, information about the current user and other Web Parts through Web Part connections.

### Enterprise connector features

OneView Connect enterprise connectors provide more than data connectivity and integration. They expose the rich application functionality and capabilities of the sources to which they connect. This lets you create full-featured SharePoint “clients” to these sources, often supplementing or replacing existing client applications in some scenarios.

OneView enterprise connectors include preconfigured Web Parts created from our Web Part templates for specific use with a connected source. For example, the Interwoven Worksite enterprise connector includes a preconfigured folder and list of Web Parts to display the Worksite work list, checked-out document lists, Worksite folder, workspace contents, Worksite search results, document profile and check-in/check-out form Web Parts.

In addition, some enterprise connectors include extended application functionality specific to the connected source, such as document check-in/check-out and Worksite client integration for the Worksite enterprise connector.

### ENTERPRISE CONNECTOR

EXTENDED FEATURE	USE
Interwoven Worksite	<ul style="list-style-type: none"> <li>– Integrated login for secure, single sign-on access to Worksite content</li> <li>– Out-of-the-box Web Parts for My Worklist, My Checked Out Documents, Worksite folder browser, Worksite folder, Workspace contents, document search and profile forms and native Worksite search results</li> <li>– Both client- and server-based integration for DM actions, such as check-in/check-out, dynamic switching between client and server integration modes based on access point, user permissions and availability of the DM client</li> <li>– Full support for custom profile fields for search, display and organization</li> <li>– Workspace connector Web Part for leveraging client- and matter-centric workspaces within SharePoint sites and pages</li> </ul>
OpenText eDocs	<ul style="list-style-type: none"> <li>– Integrated login for secure, single sign-on access to eDocs content</li> <li>– Out-of-the-box Web parts for My Worklist, My Checked Out Documents, Worksite folder browser, Worksite folder, Workspace contents, document search and profile forms and native Worksite search results</li> <li>– Both client- and server-based integration for DM actions, such as check-in/check-out, dynamic switching between client and server integration modes based on access point, user permissions and availability of the DM client</li> </ul>

### SharePoint features

SharePoint 2007 introduces a portable and modular functionality known as a feature, which simplifies modification of sites through site definitions. A feature is a package of SharePoint elements that can be activated for a specific scope that helps users accomplish a particular goal or task.

OneView Connect is installed and activated as a set of SharePoint features (described in more detail in the Installation and Configuration section below). In addition to core product features, OneView Connect offers features that automate and customize the use of different OneView Connect components to meet common design or usage scenarios.

The OneView Tab Navigation feature uses the Tab Navigation Web Part and SharePoint master pages, styles and libraries to provide a customized navigation solution. Simply by activating the feature, you can enable navigation for any given SharePoint site.

## EXPOSING INFORMATION THROUGH RSS AND WEB SERVICES

### Web services

In addition to presenting connected information through a customizable SharePoint interface, OneView Connect exposes information via secure Web services for applications that can consume Web service content and for developers building custom integrated applications.

The OneView Connect data service is integrated into the SharePoint environment, exposed alongside native SharePoint Web services as opposed to a separate application or layer outside of the SharePoint environment. The data service utilizes NTLM authentication and exposes all content in ADO.NET DataSet, DataTable or structured XML format for use in a variety of scenarios. By supporting standard return types supported by ADO.NET, developers or other Microsoft applications or development tools can easily connect to and use the services provided without translation or custom Web service proxy coding.

Access to the data service is similar to access to built-in SharePoint Web services, via a Web service end-point at [http://server-name/\\_vti\\_bin/oneview/dataservice.asmx](http://server-name/_vti_bin/oneview/dataservice.asmx).

### RSS feeds

OneView Connect also exposes connected information via secure RSS feeds in a standard RSS 2.0 format.

Feeds are configured by modifying the feeds.xml file located in the OneView Configuration Library at the root of any site collection where the OneView Connect feature is activated. In this file, you can specify a OneView connector along with data source connection and query information, and you can map data results to RSS feed output to control which information is exposed.

You can access feeds via the RSS endpoint URL at [http://server-name/\\_layouts/oneview/feed.aspx?id=###](http://server-name/_layouts/oneview/feed.aspx?id=###); the "id" parameter specifies the feed configuration from the feeds.xml settings file.

Note that all OneView Connect RSS feeds also comply with the OpenSearch 1.1 standard, making them compatible as federated search connector sources for Microsoft Search Server 2008 or Search Server Express.

## INSTALLATION AND CONFIGURATION

OneView Connect was created exclusively for SharePoint 2007 and operates as a seamless part of the SharePoint environment from installation and activation through usage and customization.

OneView Connect is installed and deployed as a SharePoint solution package, the approach Microsoft recommends for installing and integrating software into a SharePoint farm. By using this approach, all OneView Connect software is automatically installed and configured across all servers in a SharePoint farm, and new servers added to the farm will automatically get updated as needed.

Once installed, OneView Connect is activated as a SharePoint feature. Features control SharePoint functionality at different levels within a SharePoint farm, at the farm or Web application level or at the individual site collection or site level.

OneView Connect is activated at the site collection level through the Site Collection Features option under Site Settings. When activated, its links appear under Site Settings to configure and customize settings and stylesheets, and Web Part templates will appear in the Web Part gallery.

### Managing connectors

You can add connectors manually or import and export them from the connector list located in SharePoint Central Administration. This list manages connector definitions, which specify basic connector information, such as name and description, and include a reference to the .NET assembly for the connector.

An assembly is a DLL file that contains the software code and logic of the connector; each connector may have its own connector assembly. The connector definitions in the list point to these assemblies and make the connectors available to OneView Connect throughout the SharePoint farm.

### Configuration files

OneView configuration files are stored in the OneView Configuration Library, a SharePoint library located at the root of each site collection where OneView Connect is activated containing XML configuration files used by various OneView components. Connectors, Web Parts and specific application features all use settings in these configuration files, which can be edited to change settings values or add custom settings.

### Managing stylesheets

XSL stylesheets are used by the XML Web part for custom displays of information. All default OneView Connect XSL stylesheets are located in the OneView Style Library, a SharePoint library located at the root of each site collection where OneView Connect is activated.

These stylesheets can be customized, and new stylesheets can be stored in the library to be used within customized OneView Web Parts.

## CONTACT INFORMATION

Learn how OneView Connect and other XMLAW solutions from Hubbard One enable you to connect to and deliver needed information, search data quickly and completely, and provide data and collaboration extranets to clients. Visit [hubbardone.com/XMLAW](http://hubbardone.com/XMLAW) or call 312.873.6881.

