

eCommerce with Sage 50 Accounts Integration

Introduction

Online shopping is becoming increasingly popular from both the shopper and the shopkeeper standpoint:

- It offers a 24 x 7 shopping opportunity without leaving your home or office.
- It allows products and services to be presented with a level of detail and expert assistance that may be difficult to deliver through standard channels.
- And, generally, the setup and maintenance costs of a Web store are modest.

A Web store can be operated as either a Business-to-Consumer or a Business-to-Business store and, occasionally, both consumers and businesses may be targeted within the same store.

As the business volume grows, it becomes very important to connect the Web store with the back-end business accounting system. Many small and medium sized businesses resort to manually transcribing orders from the Web store to their accounts system. This is both slow and error prone and becomes impractical as order volumes grow. Some businesses do nightly exports and imports of orders using, for example, spreadsheets or an online connection from the web server that hosts the Web store to the accounting PC. But this “batch process” is unresponsive and lacks immediacy.

Discover IT offers a Web store solution that is connected directly, in real time with a remotely located Sage 50 Accounts system. Although the initial pages of this document presents a specific Discover IT Web store solution, Discover IT also provides a Software Development Kit (SDK) to enable 3rd parties to build this integration into their own Web store solution.

The Integrated Web store

One of the biggest drawbacks of operating a Web store is when you have to maintain your product catalogue and stock control on both your Web store and your accounting system. In addition, re-keying the online orders from your Web store into your accounting system can be very time-consuming and prone to errors. Spreadsheet exports and imports frequently require operator attention and even an online connection for exporting and importing data lacks immediacy.

Discover IT has now launched a versatile Web store application that integrates directly, in real-time with a back-end Sage 50 accounting system. The Web store addresses both Business-to-Consumer and Business-to-Business applications.

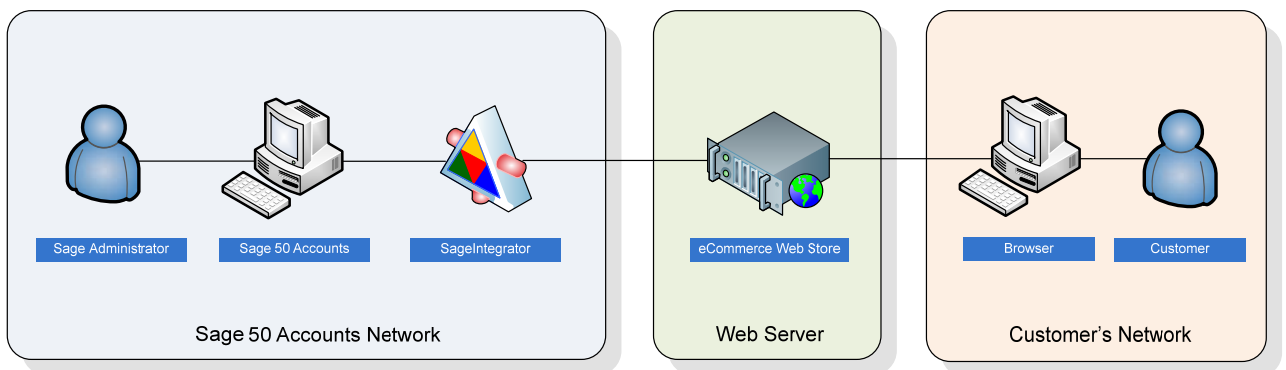
This software allows you to administer and maintain your product catalogue and stock control exclusively on your Sage 50 accounts system. The Web store accesses the latest and up-to-date product prices and saleable stock availability directly from Sage, and the orders from your Web store are automatically entered into your Sage 50 system. This all happens in real-time, 24 x 7.

Key Features of our eCommerce/Sage Integration:

- Supports eCommerce store catalogues from a few products to tens of thousands of products.

- Web store administration panel to organise departments, to organise the display of product variants and to administer store promotions.
- **Real-time** customer registration submission to Sage 50.
- **Real-time** user login authentication and price list/price group retrieval from Sage 50.
- **Real-time** product price and stock level retrieval from Sage 50.
- **Real-time** sales order processing, with validation and submission to Sage 50.
- Scheduled product and customer data updates from Sage 50.
- Automatic storage of customer registrations and orders if the Sage 50 connection link fails, and immediate transmission as soon as the link is restored.

As the front-end Web store and the back-end Sage 50 accounts system are very likely to be in different geographic locations, the Sage 50 integration is implemented using a set of Web Services.



SageIntegrator Software Development Kit

The Sage 50 integration Web Services are also packaged as a Software Development Kit (SDK) available to third party developers. The services can be installed on third party equipment and the SDK comes complete with comprehensive documentation and sample code. The code uses the Microsoft .Net Framework 2.0 and experience with using this framework is strongly recommended for third party developers to use this SDK effectively.

About BV Commerce 5

Discover IT uses **BV Commerce 5** as the basis to develop Business-to-Consumer and Business-to-Business Web stores. BV Commerce 5 is a powerful eCommerce application that uses the Microsoft .Net Framework 2.0. BV Commerce 5 Web stores can be designed and developed to suit most Business-to-Consumer and Business-to-Business functional requirements, supporting catalogues of just a few products and/or services up to major product catalogues featuring ten thousand products or more.

Key Features of our Web store

(Please note: This list is not exhaustive and further functions are available and may be used, especially where the Web store is not integrated with a back-end Sage 50 system. Where the Web store and the back-end Sage 50 system are integrated, the majority of the product catalogue, the customer maintenance and the sales order processing functions would be managed by the Sage 50 system.)

Departments	Unlimited departments and sub-departments Display navigation path . . . breadcrumb trail
Products	Short/long descriptions Unlimited images Radio button, dropdown list, text input field choices for variants Custom descriptions for variants Image swap when choices change (i.e. size/colour)

	<p>Size/weight fields Product ratings and reviews Manufacturer field Minimum quantity MSRP (list price) and site price Cross-sells and up-sells Inventory tracking by variants Unlimited file downloads per product Tax exempt option and tax classes Activate/deactivate</p>
Marketing	<p>Product, order, volume and shipping discounts Discount by % or £ Buy one get one free and similar promotions Number of uses limited by user or store Coupon/promotional codes Sales by product, product type, department and storewide Unlimited mailing lists and email templates Mailing list bulk import/export Automatic URL rewriting and custom URL rewriting Affiliate programmes</p>
Search	<p>Quick keyword search Advanced search by price range, manufacturer, department and product type Automatic sitemap page generation</p>
Customers	<p>Password reminders, change password and change email Remember users/logins and last billings/shipping addresses Select personalised themes Unlimited pricing groups Remember shopping carts Tax exempt option One click re-order button Order history Unlimited mailing lists and email list subscribe/unsubscribe Email a Friend Fixed and variable amount gift certificates Loyalty programme management Affiliate programme and affiliate conflict resolution Commissions by amount</p>
Order management	<p>Checkout without registration and require registration options Customer instructions New order emails POS system - take orders by phone Filter orders by payment status, by order status, by shipping status, by date range and by keyword (user, phone, credit card, etc.). Process payments and issue credits Batch process credit cards Send and process return requests</p>
Support for a wide variety of payment options	<p>Credit and debit cards Purchase order</p>

Online administration facility	View and manage orders View, create and manage users View, create and manage the entire product catalogue View, create and manage categories
Reports	Annual, monthly and daily sales Sales by affiliate, coupon, product and customer
Extensible architecture	3 rd party plug ins and custom content

Example BV Commerce 5 Web stores developed by Discover IT:

www.atecdirect.co.uk

www.mycartridge.co.uk

www.roalddahlmuseumstore.org

www.woodynook.com.au

About Sage 50

Sage 50 Accounts is the industry leading accounting software for managing the finances of small and medium sized businesses. It is used by over 40% of UK small and medium sized businesses across all industry sectors.

The Sage 50 Accounts, Accounts Plus and Accounts Professional editions all include the Sage Data Objects (SDO) that allow 3rd party developers to develop solutions that link client applications like a BV Commerce 5 Web store to the Sage 50 Accounts system.

SageIntegrator supports the following Sage products:

- Sage Line 50 Accountant 2007.
- Sage Line 50 Accountant Plus 2007.
- Sage Line 50 Financial Controller 2007.
- Sage 50 Accounts 2008.
- Sage 50 Accounts Plus 2008.
- Sage 50 Accounts Professional 2008.

Reasons to Buy

Choose Sage 50 Accounts 2008 if:

- You need software that is easy to use and covers all your accounting needs, from VAT returns to credit control.
- You want full control over your business finances.
- You need an accounts system that helps your company to grow, allowing different people to use the system at the same time.
- You require accurate management information and reports.
- **You need software that integrates with your other software to develop a more efficient business system . . . especially, your Web store.**

Technical Overview

The benefit of using a Web Service based architecture is that data can be exchanged readily between two computers at **different physical locations** (and running on different operating systems), which is often the case where an Internet based solution has to connect to a back-end business system.

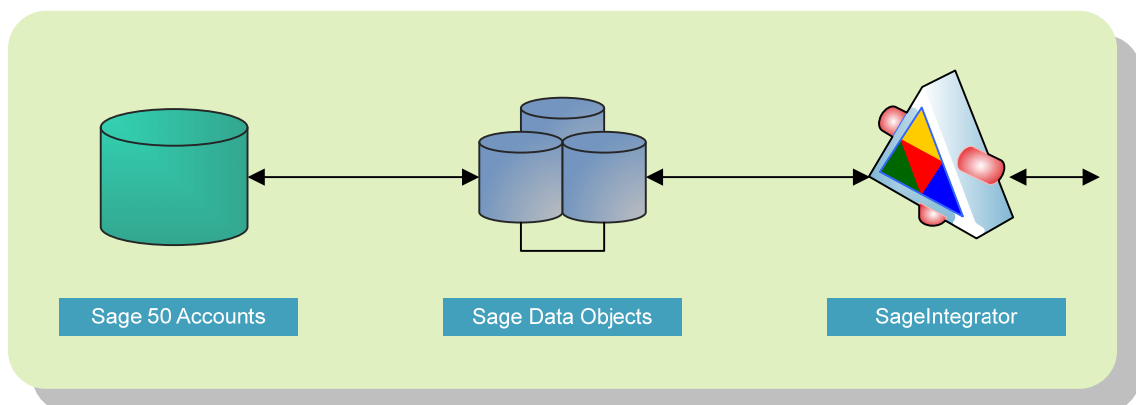
The Web Services are stored on the computer hosting the Sage 50 Accounts system. This computer must be connected to the Internet via a broadband link with a static IP address. It may and almost certainly should be located behind a firewall.

The eCommerce Web store is hosted on a web server often at a separate physical location. It is usually connected to the Internet and open to public access although, of course, it may be located on an Intranet designed for access within a specific organisation.

Web store SageIntegrator SDK

The SageIntegrator Software Development Kit (SDK) contains the DiscoverITSL50SageIntegrator.msi file that installs:

- 3x Web Services:
 - SageLine50InterfaceCustomerRecords.asmx WSDL file.
 - SageLine50InterfaceProductRecords.asmx WSDL file.
 - SageLine50InterfaceSalesOrderProcessing.asmx WSDL file.
- 6x DLLs and 2x TLB files:
 - DiscoverIT.SL50WebServices.dll
 - DiscoverIT.SL50WebServices.BusinessLogic.dll
 - DiscoverIT.SL50WebServices.Utilities.dll
 - DiscoverIT.SL50WebServices.Licence.dll
 - Interop.SageDataObject130.dll COM/.Net interoperation (v13).
 - Interop.SageDataObject140.dll COM/.Net interoperation (v14).
 - SdoEng130.tlb Type Library File (v13).
 - SdoEng140.tlb Type Library File (v14).
- Other Files:
 - Web.config
 - DiscoverITSL50SageIntegratorHelp.chm Help file with examples.



Key

PK	Primary Key: Unique record ID.
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n/c	Non-changeable: Data item cannot be changed once created.
n/a	Not applicable.
Admin	Administrator controlled from within Sage.

Customer Properties

Object: SL50Customer

Property	Property Description	Create	Get	Update
PK: CustomerAcctRef	Customer account reference	✓	✓	n/c
CustomerAcctName	Customer account name	✓	✓	✓
CustomerAddrLine1	Customer address line 1	✓	✓	✓
CustomerAddrLine2	Customer address line 2	✓	✓	✓
CustomerAddrLine3	Customer address line 3	✓	✓	✓
CustomerAddrLine4	Customer address line 4	✓	✓	✓
CustomerAddrPostCode	Customer address postcode	✓	✓	✓
CustomerCreditLimit	Customer credit limit	✓	✓	Admin
CustomerVATNumber	Customer VAT no.	✓	✓	n/c
CustomerDiscountRate	Customer discount rate	✓	✓	Admin
CustomerEmail	Customer email address	✓	✓	✓
CustomerContactName	Customer contact name	✓	✓	✓
CustomerPhone	Customer telephone no.	✓	✓	✓
CustomerFax	Customer fax no.	✓	✓	✓
CustomerWebsiteAddress	Customer website URL	✓	✓	✓
CustomerTradeContact	Customer trade contact	✓	✓	✓
CustomerAcctStatus	Customer Sage account status	✓	✓	Admin
CustomerAcctOpened	Customer account opened date	✓	✓	n/a
CustomerBankName	Customer bank name	✓		✓
CustomerBankRollNumber	Customer bank roll no.	✓		✓
CustomerBankAcctName	Customer bank account name	✓		✓
CustomerBankAcctNumber	Customer bank account no.	✓		✓
CustomerBankAcctSortCode	Cust. bank account sort code	✓		✓

CustomerBankAddrLine1	Customer bank address line 1	✓		✓
CustomerBankAddrLine2	Customer bank address line 2	✓		✓
CustomerBankAddrLine3	Customer bank address line 3	✓		✓
CustomerBankAddrLine4	Customer bank address line 4	✓		✓
CustomerBankAddrPostCode	Customer bank address postcode	✓		✓
CustomerBankBICSwiftData	Customer bank SWIFT/BIC no.	✓		✓
CustomerBankIBANData	Customer bank IBAN number	✓		✓
CustomerBankAdditionalRefLine1	Customer bank additional ref. 1	✓		✓
CustomerBankAdditionalRefLine2	Customer bank additional ref. 2	✓		✓
CustomerBankAdditionalRefLine3	Customer bank additional ref. 3	✓		✓
CustomerDefaultNominalCode	Customer default nominal code	✓	✓	Admin
CustomerDefaultTaxCode	Customer default tax code	✓	✓	Admin
CustomerTermsAgreed	Customer terms agreed	✓	✓	Admin
CustomerDelAddrLine1	Customer delivery address line 1	✓	✓	✓
CustomerDelAddrLine2	Customer delivery address line 2	✓	✓	✓
CustomerDelAddrLine3	Customer delivery address line 3	✓	✓	✓
CustomerDelAddrLine4	Customer delivery address line 4	✓	✓	✓
CustomerDelAddrPostCode	Cust. delivery address postcode	✓	✓	✓
CustomerDelCountryCode	Cust. delivery address country code	✓	✓	✓
CustomerDelPhone	Cust. delivery address telephone no.	✓	✓	✓
CustomerDelFax	Cust. delivery address fax no.	✓	✓	✓
CustomerDelContactName	Cust. delivery address contact name	✓	✓	✓
CustomerDelName	Cust. delivery address name	✓	✓	✓
CustomerDelTaxCode	Cust. delivery address tax code	✓	✓	✓
CustomerDelVATNumber	Cust. delivery address VAT no.	✓	✓	n/c
CustomerAnalysis1	Customer analysis 1	✓	✓	✓
CustomerAnalysis2	Customer analysis 2	✓	✓	✓
CustomerAnalysis3	Customer analysis 3	✓	✓	✓

Product Properties**Object: SL50Product**

Property	Property Description	Create	Get	Update
PK: ProductSKU	Product stock code		✓	n/c
ProductNominalCode	Product nominal code		✓	Admin
ProductDescription	Product description		✓	Admin
ProductSalePrice	Product sales price		✓	Admin
ProductSalePriceFromPriceList	Product sales price from price list		✓	Admin
ProductCostPrice	Product cost price		✓	Admin
ProductItemtype	Item type: Stock, non-stock, etc.		✓	n/c
ProductQuantityInStock	Product quantity in stock		✓	n/c
ProductQuantityInStock	Product quantity on order		✓	n/a
ProductQuantityAllocated	Product quantity allocated		✓	n/c
ProductQuantityForSale	Product quantity for sale		✓	n/c
ProductLastUpdated	Product record last updated		✓	✓
ProductUnitofSale	Product unit of sale		✓	Admin
ProductUnitofWeight	Product unit of weight		✓	✓
ProductTaxCode	Product tax code		✓	Admin
ProductDepartment	Product department designation		✓	Admin
ProductCategory	Product category designation		✓	Admin
ProductWebLongDescription	Product web long description		✓	✓
ProductWebShortDescription	Product web short description		✓	✓
ProductCategoryA	Product category A		✓	✓
ProductCategoryB	Product category B		✓	✓
ProductCategoryC	Product category C		✓	✓

Sales Order Processing Properties**Object: SL50SalesOrder**

Property	Property Description	Create	Get	Update
PK: SageOrderNumber	Sage issued order number		✓	n/a

CustomerAcctRef	Customer account reference	✓	✓	n/a
CustomerAddrLine1	Customer address line 1	✓	✓	n/a
CustomerAddrLine2	Customer address line 2	✓	✓	n/a
CustomerAddrLine3	Customer address line 3	✓	✓	n/a
CustomerAddrLine4	Customer address line 4	✓	✓	n/a
CustomerAddrPostCode	Customer address postcode	✓	✓	n/a
CustomerPhone	Customer telephone number	✓	✓	n/a
CustomerContactName	Customer contact name	✓	✓	n/a
CustomerDiscountRate	Customer discount rate	✓	✓	n/a
CustomerOrderNumber	Customer order number	✓	✓	n/a
AmountPrepaid	Order amount prepaid	✓	✓	n/a
OrderDate	Order date	✓	✓	n/a
CustomerDelAddrLine1	Customer delivery address line 1	✓	✓	n/a
CustomerDelAddrLine2	Customer delivery address line 2	✓	✓	n/a
CustomerDelAddrLine3	Customer delivery address line 3	✓	✓	n/a
CustomerDelAddrLine4	Customer delivery address line 4	✓	✓	n/a
CustomerDelAddrPostCode	Customer delivery address postcode	✓	✓	n/a
CarriageDepartmentNumber	Carriage department number	✓	✓	n/a
CarriageNetAmount	Carriage net amount	✓	✓	n/a
CarriageTaxAmount	Carriage tax amount	✓	✓	n/a
CarriageNominalCode	Carriage nominal code	✓	✓	n/a
CarriageTaxCode	Carriage tax code	✓	✓	n/a
GlobalNominalCode	Global nominal code	✓	✓	n/a
GlobalDetails	Global details	✓	✓	n/a
GlobalTaxCode	Global tax code	✓	✓	n/a
OrderTakenBy	Taken by	✓	✓	n/a
SalesOrder	Points to the items for the order (Array of SL50SalesOrderItem)	✓	✓	n/a
Notes1	Notes 1	✓	✓	Admin

Notes2	Notes 2	✓	✓	Admin
Notes3	Notes 3	✓	✓	Admin

Object: SL50SalesOrderItem (always a child of SL50SalesOrder and a member of its SalesOrder array)

Property	Property Description	Create	Get	Update
ProductSKU	Product stock code	✓	✓	n/a
ProductDescription	Product description	✓	✓	n/a
NominalCode	Product nominal code	✓	✓	n/a
ProductTaxCode	Product tax code	✓	✓	n/a
ProductOrderQuantity	Product order quantity	✓	✓	n/a
ProductUnitPrice	Product unit price	✓	✓	n/a
ProductUnitofSale	Product unit of sale	✓	✓	n/a
ProductTaxRate	Product tax rate	✓	✓	n/a
ProductLineTotalNetAmount_WithoutDiscount	Line item full net amount	✓	✓	n/a
ProductLineTotalNetAmount	Line item order net amount	✓	✓	n/a
ProductTaxAmount	Line item order tax amount	✓	✓	n/a
ProductOrderComment1	Comment 1	✓	✓	Admin
ProductOrderComment2	Comment 2	✓	✓	Admin

Object: SL50SalesOrderResult (Return type of SubmitSalesOrder)

Property	Property Description	Create	Get	Update
FailedProducts	An array of invalid products should sales order fail on the basis of an invalid product		✓	n/a
FailureReason	Reason, if known, of sales order posting failure		✓	n/a
OrderPlaced	Indicates if the order was successfully placed		✓	n/a
SageSOPOrderNumber	Sage issued sales order number		✓	n/a
SDOErrorMessage	Sage issued error message, if issued.		✓	n/a

Customer Methods

Object: SL50Customer

Method	Method Description	Parameters	
		Input	Output
AddNewCustomer	Add a new customer to Sage	SL50Customer	None
CheckCustomerCreditForOrder	Finds out if the customer can place an order within their current credit limit	Account reference Order value	True or False
CheckCustomerForCredit	Finds out if the customer is in credit	Account reference	True or False
CheckSalesOrderStatus	Finds out the status of a sales order	Sage order number	SL50SalesOrderStatusSummary
GetCustomerByAccountName	Gets customer data	Account name	SL50Customer
GetCustomerByAccountRef	Gets customer data	Account reference	SL50Customer
GetCustomerByEmailAddress	Gets customer data	Account email address	SL50Customer
GetCustomerListFullDetails	Gets data on all customers	None	Array of SL50Customer
GetCustomerListSummary	Gets summarised data on all customers	None	Array of SL50CustomerSummary
GetCustomersByPostcode	Gets customers based on postcode	Postcode	Array of SL50Customer
SubmitProductReturn	For returning product	SL50ProductReturn	None
TestForSuccessfulIntegration	To determine if the Web Services can retrieve data from the accounting system	None	Name of Customer account
UpdateCustomer	Change certain customer data	SL50Customer	None

EmailAllCustomerData	Email CSV file of all customer data	Dest. email addr. Sender email addr. Subject Delete file (bool.)	Customer account reference Customer account balance Customer contact name Customer country code Default nominal code Default tax code Customer email address Customer account name Customer VAT number Customer address line 1 Customer address line 2 Customer address line 3 Customer address line 4 Customer address postcode Customer delivery address line 1 Customer delivery address line 2 Customer delivery address line 3 Customer delivery address line 4 Cust. delivery address postcode Cust. delivery address tel. no. Cust. delivery address fax no. Customer delivery contact name
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Product Methods

Object: SL50Product

Method	Method Description	Parameters	
		Input	Output
GetFirstNewProduct	Gets the first newly entered product	None	SL50Product
GetListOfDepartments	Gets a list of all departments	None	Array of SL50Department
GetPricesAndStockForProduct	Gets current price and stock data for a product	Product SKU Optional email address	SL50ProductPriceAnd_StockSummary
GetProductData	Gets data for a product	Product SKU Optional email address	SL50Product
GetProductListFullDetails	Gets data on all products	Optional email address	Array of SL50Product
GetProductListSummary	Gets summarised data on all products	None	Array of SL50ProductSummary
GetRelatedProducts	Gets variants for a product	Common SKU	SL50RelatedProducts

UpdateProduct	Change certain product data	SL50Product	None
EmailAllProductData	Email CSV file of product catalogue	Dest. email address Sender email address Subject Delete file (bool.)	Stock code (SKU) Product description Item type Tax code Cost price Sales price Quantity in stock Quantity allocated Quantity for sale Quantity on order Unit of sale Unit weight Web long description Category A Category B Category C

Sales Order Processing Methods

Object: SL50SalesOrder

Method	Method Description	Parameters	
		Input	Output
GetExistingSalesOrder	Gets an existing sales order	Sage order number	SL50SalesOrder
SubmitSalesOrder	Sends a sales order to Sage	SL50SalesOrder	SL50SalesOrderResult

Web store SageIntegrator Installation

Accounting PC Requirements:

Minimum CPU	Pentium 4, 1Ghz or equivalent
Hard disk space (Web Services only)	5MB available
Operating System with latest Service Pack	Windows XP Professional or Windows Vista Business or Windows Server 2003
Internet Information Services (IIS)	6 or 7
Microsoft .Net Framework	2.0
Sage Accounting System	Sage Line 50 Accountant 2007 or Sage Line 50 Accountant Plus 2007 or Sage Line 50 Financial Controller 2007 or Sage 50 Accounts 2008 or Sage 50 Accounts Plus 2008 or

	Sage 50 Accounts Professional 2008
Connection to the Internet	Broadband with HTTP and HTTPS protocols enabled

Installation Order:

- Internet Information Services (IIS 6 or 7).
- Microsoft .Net Framework 2.0.
- Sage Line 50 or Sage 50 – applicable version.
- In Sage Line 50 or Sage 50 create a login for the Web Services (details in the help file).
- Enable Sage Data Objects (SDO) – requires authorisation call to Sage.
- Run the SageIntegrator installer DiscoverITSL50SageIntegrator.msi.
- For the Web Services, in web.config add entries as specified in the help file (Web Service username and password, licence key, etc.).

bvCommerce 5 installation

Web Server Requirements

Minimum CPU	Pentium 4, 1Ghz or equivalent
Hard disk space	100MB available
Operating System with latest Service Pack	Windows Server 2003
Internet Information Services (IIS)	6 or 7
Microsoft .Net Framework	2.0
Database with latest Service Pack	Microsoft SQL Server 2005 Express Microsoft SQL Server 2005 Standard

Recommended Installation Order

- SQL Server 2005.
- Internet Information Services (IIS) 6 or 7.
- Microsoft .Net Framework 2.0.
- Run the BV Commerce 5 installer Bvc5Setup.msi.