

# ***XLeratorDB In-Database Analytics for SQL Server***



# **XLeratorDB Installation Guide**

rev. 1

# Installation Guide - XLeratorDB for SQL Server

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# Installation Guide - XLeratorDB for SQL Server

## Introduction

Thank you for your using XLeratorDB. The purpose of this document is to provide background on the XLeratorDB product technology and serve as a guide for installing the XLeratorDB software onto (and un-installing from) the SQL Server platform. This document is intended for a technical audience such as Database Administrators (DBAs) or Information Technology (IT) professionals with knowledge of SQL Server administration.

## Technology

XLeratorDB is a library of business functions that can be added to a Microsoft SQL Server 2005 (or later) database and invoked via SQL queries. This is known as '*In-Database Analytics*'. XLeratorDB functions are grouped into packages, such as **XLeratorDB/financial**, **XLeratorDB/statistics**, **XLeratorDB/math**, and others. The functions are built on Microsoft .NET technology hosted in the SQL Server database engine and implemented as SQL-CLR *assemblies* that contain the individual functions such as **XIRR**, **LINEST**, etc. XLeratorDB functions are *not* stored procedures and the source code is not accessible.

The XLeratorDB package is installed onto an existing SQL Server database. The package assembly containing the XLeratorDB functions is an *object* in the database, just like a table or index. When a SQL Server database is backed up and restored, or failed-over, the XLeratorDB assembly is transferred along with all other database objects and data.

The XLeratorDB assembly binary is extracted during the installation process and copied into the target database or databases selected by the user. A utility program called the *Database Installation Wizard* is also extracted along with the product binary and is described in more detail later in this document.

XLeratorDB is compatible with all version of Microsoft SQL Server from 2005 on, including the standard, enterprise, developer and express editions.

XLeratorDB packages with '2008' in the name, such as **XLeratorDB-Suite-2008** and **XLeratorDB/financial 2008** are for all SQL Server versions from SQL 2008 and later (2008R2, 2012, 2014, etc.).

The first XLeratorDB packages were built for SQL Server 2005 and were designed to work around certain restrictions in the SQL2005 architecture that were rectified in all later SQL Server versions from 2008 and later.

## Security

The XLeratorDB assembly, as well as the individual functions contained within, are securable by the administrator via the standard security and permissions mechanisms used by SQL Server. Additionally, SQL Server has three levels of *Code Access Security* that restrict what types of server resources SQL-CLR assemblies can access. All XLeratorDB packages (with the exception of only the **XLeratorDB/windowing** package) are installed with *SAFE* level access which is defined by Microsoft as:

Only internal computation and local data access are allowed. SAFE is the most restrictive permission set. Code executed by an assembly with SAFE permissions cannot access external system resources such as files, the network, environment variables, or the registry.

All XLeratorDB functions are *read-only* - they never alter stored data, they only read input data provided to the function from the calling query.

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## Installation Process

Installing XLeratorDB consists of a few simple steps which are straight-forward and should only take a few minutes to complete:

### Pre-install

[Step 1 - Register servers for the purchased license \(for purchased packages only, not trial\)](#)

[Step 2 - Download installation \(.msi\) file and save to target server](#)

### Install

[Step 3 - Execute .msi file directly on the server](#)

[Step 4 - Proceed through Windows Installer prompts](#)

[Step 5 - Proceed through Database Installation Wizard prompts](#)

### Post-install

[Step 6 - Test that the software installed successfully](#)

## Step 1

### Register servers for the purchased license

*(purchased packages only, does not apply to trial packages)*

#### Entering the registered server names to be embedded in the license

For purchased XLeratorDB packages, one or more registered server names are contained within the embedded license, along with other license information such as expiration date (if any), order date and more. The server names to register are provided by the end user in the 'order details' page on the westclintech.com website after purchasing and before downloading.

figure 1 - 'order details' page ; server name registration grid

27	XLeratorDB/financial 2008	No. servers:3 Licensing Opt:Standard Clustering:Non-Clustered Coupon: Agree to EULA:YES	XLDB-fin08	1	\$1,199.97	1.15	testf@westclintech.com
----	---------------------------	---	------------	---	------------	------	------------------------

Server No.	Server Name	Action
1	<input type="text"/>	Save
2		
3		

Downloads: 0 Server Chgs: 0

Register at least one server name before downloading

# Installation Guide - XLeratorDB for SQL Server

Server name registration is applied by entering each server name to license and clicking 'Save' from the 'order details' page of the XLeratorDB order, which can be found listed on the 'My Orders' tab of the westclintech.com website when signed in with a userid and password.

The server name to register is the Windows computer name assigned to the computer. The computer name can easily be determined by executing the following SQL query against any database on the server:

```
select SERVERPROPERTY( 'ComputerNamePhysicalNetBIOS' )
```

This should return the Windows computer name and works for both physical servers and virtual machines (VM's).

XLeratorDB verifies that it is installed and running on one of the registered servers registered within the embedded license, both during install time and at run time. If the software detects that it is not running on a registered server then a licensing exception is thrown and processing is halted.

If the XLeratorDB package will be transferred between different servers via backup and restore, failover, etc., then the license must be registered with all the server names on which it will reside.

## What not to register

- Do not include the SQL Server *instance* name (typically seen in this format: *myServer\myInstance*), only the *server* name is needed since XLeratorDB is licensed per server and can be installed on any and all databases on any and all SQL Server instances on the registered server.
- Do not register the *fully qualified domain name* (fqdn) or ip address. These should not be used since they are not the computer name. There can be **no dots** ( '.' ) in the server name!
- Do not register a 'place holder' name such as 'TBD' or 'future\_dr\_box'. With standard licenses, once the software is downloaded, these names become fixed and cannot be changed to a proper server name later on. Instead leave the *Server Name* field blank.

## Changing a Registered Server within an Extended License ('ELO')

The XLeratorDB extended license option ('ELO') allows for transferring (moving, not copying) the XLeratorDB software to a new server if it is replaced for any reason, such as repair, upgrade, etc. While the ELO term is in effect on the license any registered server name can be changed. This is done by returning to the 'order details' page from the 'My Orders' tab and clicking the 'Change' link next to the server name. An editable text field appears allowing re-entry of a new server name. After the new server name is entered click the 'Save' link to apply the registered name, and then re-download and re-install the software onto the new server after removing it from the old server using Windows Control Panel. (See [Un-Installing XLeratorDB](#) later in this document.)

figure 2 - 'order details' page ; changing registered server name

Server No.	Server Name	Action
1	PC13	Change
2	<input type="text" value="PC13T2"/>	Save
Downloads: 3 Server Chgs: 4		

ELO expires on 21-Jan-2019

# Installation Guide - XLeratorDB for SQL Server

## Multi-server licenses

A multi-server XLeratorDB license allows for a singular XLeratorDB installation to be installed on more than one server, up to the the number of servers specified (purchased) in the license. This is accomplished by entering the number of servers the license will cover in the 'No. servers' field during checkout.



The image shows a form field with the label "No. servers" and a dropdown menu. The dropdown menu is open, showing the number "2" selected. The field is enclosed in a dashed border.

*Multi-Server licenses enable seamless movement of databases containing XLeratorDB between registered servers via **backup/restore** or **failover** without the need to re-run installation scripts.*

One important caveat to this, however, is that if a registered server is to receive a database containing XLeratorDB via backup/restore or failover *only*, ie *without ever having had the XLeratorDB installation process explicitly run on it directly*, then it is necessary to make sure that CLR integration has been enabled on that server. This can be done manually using the following SQL, and need be executed *one time only* on the server:

```
/* enable CLR integration in SQL Server */
sp_configure 'clr enabled', 1
GO
RECONFIGURE
GO
```

It is still possible to restore a database containing XLeratorDB onto a server *not included* in the restored XLeratorDB installation's license, assuming an XLeratorDB license exists for the destination server, but it requires the extra step of re-applying the XLeratorDB installation script either via the existing *Database Installation Wizard* or by re-executing the installation (.msi) file licensed for the destination server.

## Registering only some of the servers available in a Multi-Server license

For multi-server licenses, as shown in figure 1 above, it is possible to download (and install) the XLeratorDB installation (.msi) file onto one or more servers *before all servers are registered in the license*. This is useful if some, but not all, server names are known at the time when the software must be installed. It is fine to return to the 'order details' page in the future and register more server names and then re-download the installation file with the additional registered servers. In this scenario, the updated .msi file should be installed on the newly registered server(s). It only needs to be re-installed on the original servers if the databases with the XLeratorDB package applied are to be (or might ever be) copied between the newly registered servers and the original servers via backup/restore or failover.

## Clustered SQL Server installations

*(Applies to **SQL2008/2008R2** failover clusters only-NOT SQL2012 and later Always On/Availability Groups!)*

When applying XLeratorDB to servers that are members of a SQL2008 / 2008R2 failover cluster the corresponding 'Clustering' option must have been specified when the XLeratorDB order was originally placed. *(Don't panic! this can be updated after the order is placed by contacting [support@westclintech.com](mailto:support@westclintech.com))*

The cluster types are Active/Active and Active/Passive, corresponding to the SQL Server Cluster configuration that was set up by the administrator.

Server names for clustered active and passive node servers are determined in the exact same manner as any other computer name as mentioned above, and must be registered to the XLeratorDB license in the same manner.

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figure 3 - 'order details' page ; **active / passive** clustered server name registration grid

Product Name	Options	Item code	Quantity	Amount	Version	License CustomerID	License Key
XLeratorDB/financial 2008	No. servers:1 Licensing Opt:Standard Clustering:Active/Passive Coupon: Agree to EULA:YES	XLDB-fin08	1	\$399.99	1.15	testf@westclintech.com	971979-krRyO

Server No.	Active Server Name	Passive Server Name	Action
1	<input type="text"/>	<input type="text"/>	Save
Cluster			Change
Downloads: 0 Server Chgs: 0			

Register at least one server name before downloading

For Active/Active clusters it only makes sense to specify 2 or more servers in the license (ie a multi-server license), since an A/A cluster implies more than one active server. From XLeratorDB's perspective, it does not actually matter if the XLeratorDB cluster type is specified as *clustered* active/active or *non-clustered*, as long as the correct number of (active) servers is specified in the 'No. servers' field.

No. servers	2
Licensing Opt	Standard
Clustering	Active/Active

figure 4 - 'order details' page ; **active / active** clustered server name registration grid

Product Name	Options	Item code	Quantity	Amount	Version	License CustomerID
XLeratorDB/financial 2008	No. servers:2 Licensing Opt:Standard Clustering:Active/Active Coupon: Agree to EULA:YES	XLDB-fin08	1	\$799.98	1.15	testf@westclintech.com

Server No.	Active Server Name	Action	
1	<input type="text"/>	Save	
2	<input type="text"/>		
Cluster			Change
Downloads: 0 Server Chgs: 0			

Register at least one server name before downloading

The virtual cluster name can be ascertained with the following SQL query and is also registered with the license,

```
select @@SERVERNAME --returns virtual cluster name
```

however, the cluster name is not really important for licensing and is kept for reference purposes only - it is not validated like the active and passive server names are. In other words, an XLeratorDB licensing exception will not be thrown if the registered cluster name does not correspond to the current cluster.

XLeratorDB will do it's best to validate the registered server names even if it finds it is running in a different cluster type than specified, ie if the XLeratorDB license is *clustered* but the database is actually in a non-clustered SQL Server instance, or conversely, if the XLeratorDB license is *non-clustered* but is actually running in a clustered instance. In these scenarios, the only potential problem is that a registered *passive* server name will not be recognized if the software is not running in a passive node server within an A/P cluster. All registered *active* node servers will always be recognised as valid.

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## Step 2

### Download installation (.msi) file and save to target server

XLeratorDB installation files are Microsoft install (.msi) files. These are downloaded directly from the westclintech.com website, either as a free 15 day trial download installation or as the licensed installation file after purchasing.

### Trial Package Download

Trial installations are valid for 15 days from date of download (not from date of installation.) There are several trial packages to choose from: **XLeratorDB SuitePLUS** for SQL Server 2008 and later, as well as for the legacy SQL Server 2005 platform; **XLeratorDB/windowing**; and others. Trial software is intended for evaluation purposes only and can be extended beyond 15 days if needed by re-downloading and re-installing a new Trial package after un-installing the previous from the server using Windows Control Panel. (See [Extending XLeratorDB Trial Evaluation](#) later in this document)

The trial installation file is available on the '[Download Trial](#)' page of the westclintech.com website. The download links are only available if you are signed in with a westclintech userid and password. Otherwise create a new account by filling out the form fields on the *Download Trial* page, or if you already have an account sign in first by clicking the '[Login](#)' link in the upper right of the site.

### Purchased Package Download

Purchased downloads are available from the 'order details' screen found in the 'My Orders' tab visible when signed into westclintech.com with a user name and password. There is a server name registration grid for each XLeratorDB package in the order, with a download button (containing a 'down-arrow' icon) at the bottom-right edge of each grid.

figure 5 - 'order details' page ; server name registration grid **with download button**

XLeratorDB/util	No. servers:2 Licensing Opt:Standard Clustering:Non-Clustered	XLDB-util	1	\$0.00	1.01	testf@westclintech.com
-----------------	---	-----------	---	--------	------	------------------------

Server No.	Server Name	Action
1	PC13	
2	<input type="text"/>	Save

Downloads: 1   Server Chgs: 1

Register at least one server name before downloading

At least one server name must be registered before the download button appears enabling downloading of the installation (.msi) file. For standard XLeratorDB licenses which do not allow for transfer to a new server like extended licenses do, once the software is downloaded all registered server names are fixed, ie cannot be changed.

However, *until* the first download, it *is* possible to change any registered server names. (See the [XLeratorDB Licensing Guide](#) - coming soon - for more information on standard and extended licenses.) Therefore it is important to be careful to register the server name correctly. There is a free **XLeratorDB/utility** package which can be used to verify that the registered server name is correct before attempting server registration for a purchased package. ([see more](#) on this later in this document.)

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After changing or adding server names to the purchased XLeratorDB license from the 'order details' page it becomes necessary to re-download and re-install the updated installation (.msi) file on all applicable servers as described above in Step 1, *it is not enough to simply change the names on the website!* Existing XLeratorDB installations do not automatically 'see' the updated licensed servers simply because they have been registered on the website; the XLeratorDB software must be un-installed and replaced with the updated installation containing the updated registered servers.

## Software Updates

For purchased packages, if the extended license option ('ELO') is in effect then the latest updated build of the XLeratorDB package will be downloaded. This includes all enhancements and new functions that have been added since the last time the purchased package was downloaded. As mentioned above, it is necessary to re-install the updated software to all applicable databases to realize the updates. Conversely, if the license is a standard license then the newly downloaded .msi file will contain the latest *license* information but will remain at the original product build that was first downloaded, ie it will not contain any new functions that have been released since the first download.

Trial XLeratorDB packages always contain the latest build of the software package.

## Downloading

To download the XLeratorDB installation file, click the appropriate link (trial) or button (purchased) as mentioned, and allow a few seconds (up to 30) for the web browser to respond with a 'Save As' prompt. The installation file can be saved anywhere but must be copied to the registered server or servers for installation. See Step 3 below for more information on executing the installation file.

Keep in mind that for a multi-server XLeratorDB license the installation (.msi) file need be downloaded only once, and that *same* .msi file is used to install the XLeratorDB package on each of the registered servers.

## Step 3

### Execute .msi file directly on the server

Once the XLeratorDB installation (.msi) file has been downloaded it must be executed directly on the SQL Server machine. The install file is a standard Microsoft .msi file that creates an entry in the 'All Programs' list under the Windows Start Menu and it appears in the list of tasks installed in Windows as seen in the 'Programs and Features' applet of Windows Control Panel.

### Installation by Backup/Restore and Failover

If installation will be accomplished indirectly by restoring a database with XLeratorDB package already applied from another SQL Server source (either the same SQL Server instance or a different instance) then step 3 and onward are unnecessary.

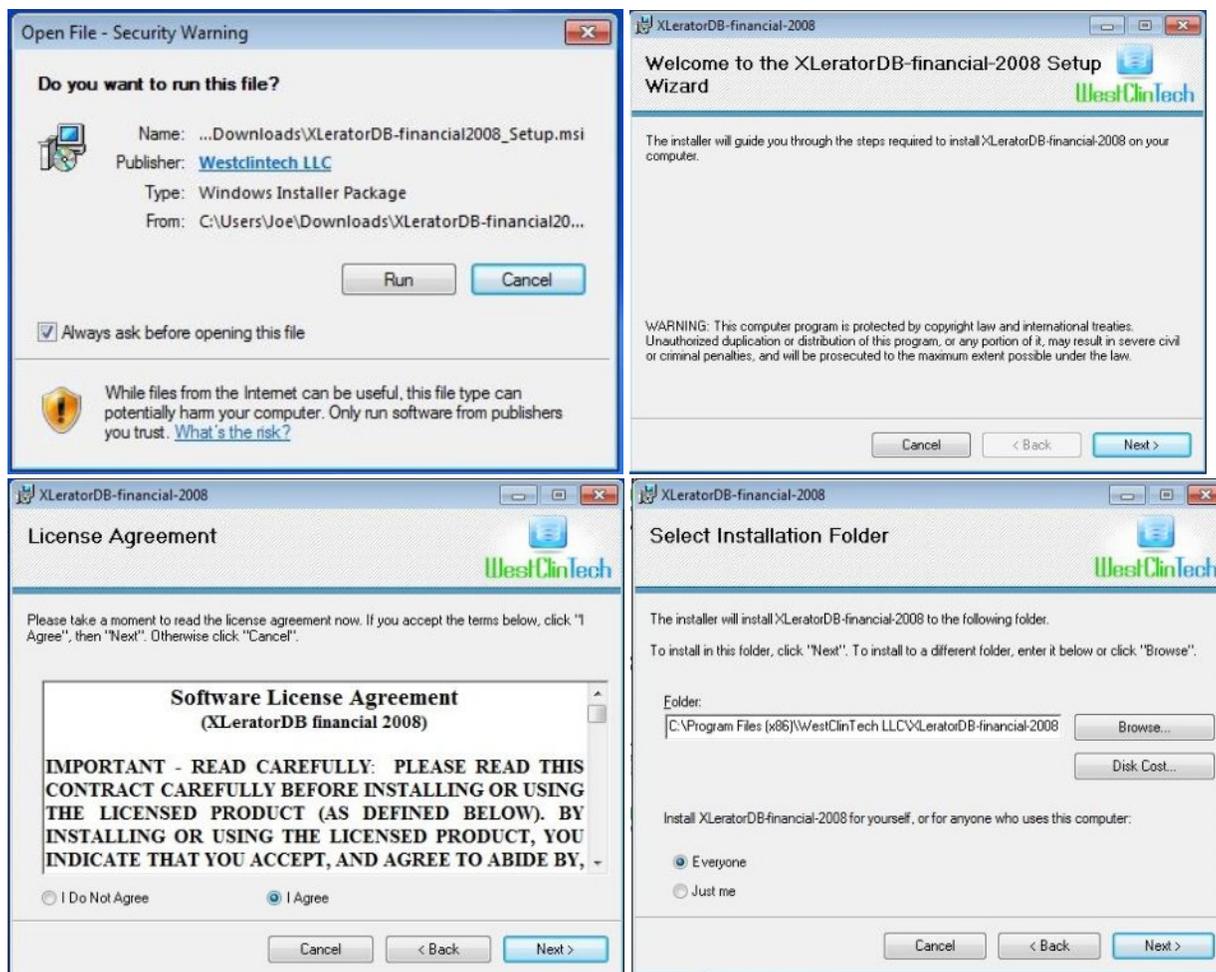
See the sub-section "[Multi Server Licenses](#)" in Step 1 for more information about installation by backup/restore and failover.

## Step 4

### Proceed through Windows Installer prompts

Proceed through the standard Windows Installer screens that precede the XLeratorDB *Database Installation Wizard* utility. The *License Agreement* screen displays the End User License Agreement (EULA) for the package and must be accepted before the software is installed onto the server.

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## Installation Folder

The Installation Folder is an important aspect of the XLERatorDB installation process. The destination folder defaults to the system's local *Program Files(x86)* folder,

```
C:\Program Files (x86)\WestClinTech LLC\XLeratorDB-<package>\
```

The XLERatorDB package binary file is extracted to this folder, or the folder otherwise specified in this editable field, and is later copied from this folder into the destination SQL Server database(s) selected by the user. Therefore the SQL Server instance must have appropriate network and file permissions to access this folder.



From here the installer presents the '*Database Installation Wizard*' utility for applying the XLERatorDB package to the SQL Server database or databases selected by the user on the host server.

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## Step 5

### Proceed through Database Installation Wizard prompts

The XLeratorDB Windows Installer seamlessly launches the *Database Installation Wizard* utility. This utility provides a user interface for selecting the database or databases on the target SQL Server to install the XLeratorDB package.



The *License Information* screen of the *Database Installation Wizard* simply shows some embedded license details including the customer id and license key. (Note that the license key

is shown for *reference only* and is read-only, there is no need to enter or validate a license key.) The license key should correspond with the key shown with the order details on the westclintech.com website.



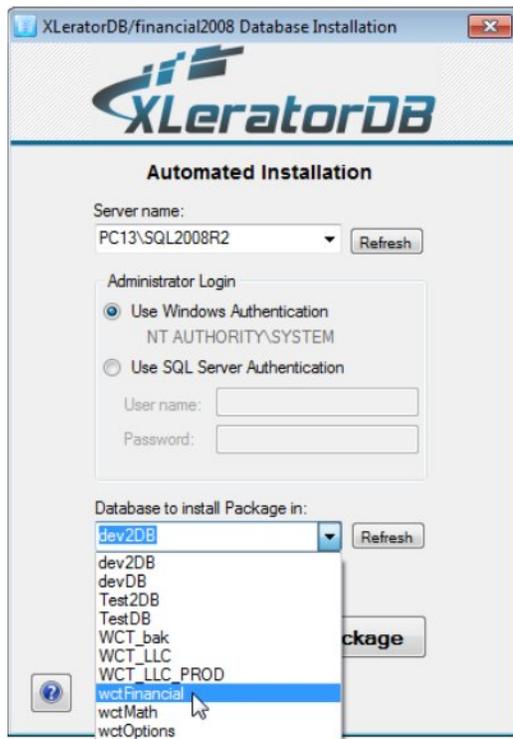
The next screen presents the '*Automated Install*' and '*Manual Install*' options. *Automated Install* will connect to the selected database or databases directly and install the XLeratorDB software **immediately**. The credentials needed to connect to the selected database/s are required. *Manual Install* generates a .SQL script (plain text) file that can be used as part of an in-house custom or automated install process. The XLeratorDB software is not installed until the script is executed.

### Automated Install

This is the most commonly used option. The specified server, database, and login credentials are used to connect directly to the selected database and install the XLeratorDB package.

The local server should be selected in the server name field, it is not recommended to specify a remote server from the Automated Installation. See [Installing to a Network Share](#) for information on installing XLeratorDB to a remote (licensed) server with the *Manual Install*.

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If the 'Databases to install package in' field is empty then the login credentials provided are not able to connect to the selected SQL Server. See the [Troubleshooting](#) section below for more information on resolving connection issues.

Click the *Install XLeratorDB Package* button to install the software to the selected database.

If any errors are encountered then detailed error text will be provided which can be sent to [support@westclintech.com](mailto:support@westclintech.com).

## Manual Install

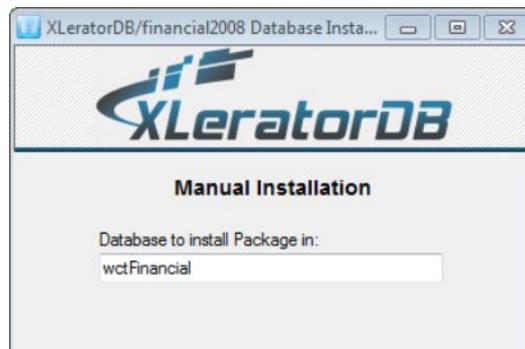
The *manual installation* option simply generates the installation script as an .SQL script file (plain text) that can be saved, edited if needed, and executed at a later time. It can be opened and executed with a tool such as *SQL Server Management Studio* (SSMS) or included as part of an automated workflow.

The target database name is specified in the input field to be used in the installation script. It can be found at the very beginning of the generated script in the 'USE' clause...

```
/* enable CLR integration in SQL
Server */
sp_configure 'clr enabled', 1
GO
RECONFIGURE
GO
USE [wctFinancial]
GO
```

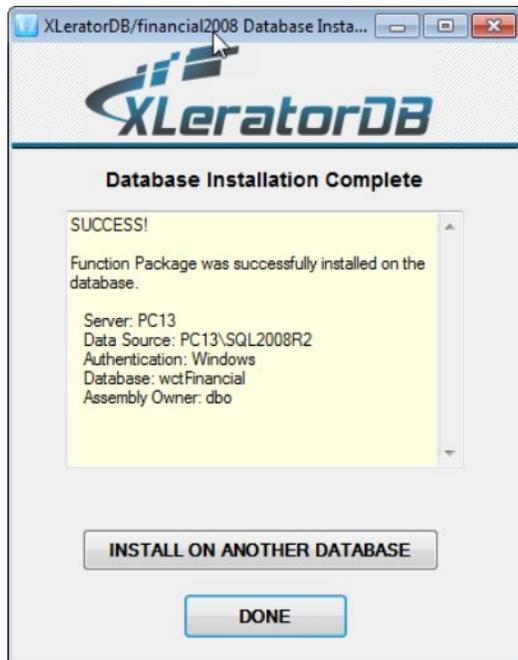
The target database can be modified simply by updating this 'USE' clause (in the generated .SQL text file) to another database. No other script changes are required to specify a different target database.

The final *Database Installation Wizard* screen confirms the success of the installation, and also provides a button to return to the *Automated Install* screen if needed [to install to additional databases](#).



# Installation Guide - XLeratorDB for SQL Server

Final screen - automated install



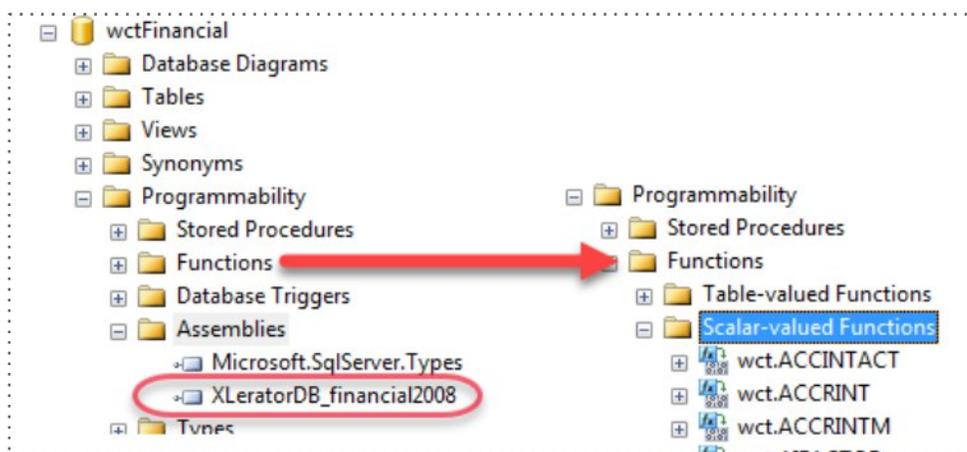
Final screen - manual install



## Step 6

### Test that the Software Installed Successfully

One way to determine that XLeratorDB has been successfully installed to the desired database is to view the installed functions using *SQL Server Management Studio*. In the 'Object Explorer' pane on the left, expand the database node, then the 'Programmability' node, then 'Assemblies'. *It is always best to first right-click the node and click 'Refresh' from the context menu.* The XLeratorDB package should appear in the list of assemblies...



Expanding the 'Functions' node will reveal the installed XLeratorDB functions contained within the assembly. SQL Server groups functions into 3 categories: *Table-Valued*, *Scalar-valued*, and *Aggregate*. XLeratorDB functions are pre-pended with the 'wct.' schema, ie namespace, to avoid potential conflicts with other named objects in the database.

If you can't find the function you are looking for check under a different function category.

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Another way to confirm that XLeratorDB has been installed is to call the version function for the package. Each XLeratorDB package has its own scalar-valued version function typically named `wct.xldb_<package>_version`. This function takes a parameter to specify whether to return the license information for the package (1) or just the version and build number (0). Be sure to invoke the function from the correct database context...

```
use wctFinancial; select wct.xldb_financial_version(1)
```

(Note that the database 'wctFinancial' specified above is an example, you should substitute your database name.)

This produces the following result, your results will differ...

```
-----  
Product: XLeratorDB-financial2008  
Version: 1.15  
Build: 0623.636  
License Ver: 5  
CustomerID: testf@westclintech.com  
OrderID: 1762 / 2298  
Retail Edition: Standard  
License Key: 105945-Wlo7VW  
License Plan: ELO 5 Year  
Order Date: 11 April 2013  
Extended Licensing Option (ELO) Expiration Date: 04/11//2018  
License SQL Server Cluster Type: Non-Clustered  
Licensed Servers: PC13  
Current Server: PC13  
(aliased Server name: PC13\SQL2008R2)  
Current Server is Clustered: NO  
Expiration Date: 12/31/2099  
OS: Microsoft Windows NT 6.1.7601 Service Pack 1; (Win32NT)  
Processors: 8  
.NET: 2.0.50727.5485  
Copyright: XLeratorDB (c)2008-2016 WestClinTech LLC, Irvington, NY. WestClinTech.com  
Host Application: Microsoft SQL Server 2008 R2 (SP3) - 10.50.6220.0 (X64)  
Mar 19 2015 12:32:14  
Copyright (c) Microsoft Corporation  
Enterprise Edition (64-bit) on Windows NT 6.1 <X64> (Build 7601: Service Pack 1)
```

Successfully retrieving results from the XLeratorDB package's version function is a good indicator that the entire XLeratorDB function package has been installed to the database.

This concludes the description of the *Installation Process* steps. The remainder of this document covers post-installation topics.

# Installation Guide - XLeratorDB for SQL Server

## Related Topics

### Adding XLeratorDB to additional databases after installation

The XLeratorDB installation creates a sub-menu under the 'All Programs' list of the Windows Start Menu. This sub-menu contains links to the package's *End-User License Agreement* (EULA) as well as to the *Database Installation Wizard* and the *Database Un-Install Wizard*.



The *Database Installation Wizard* utility can be re-invoked at any time to install the XLeratorDB package to additional databases. The software can also be removed from databases (without un-installing the software package from the server) via the *Database Un-Install Wizard* - see the section titled '*Un-Installing XLeratorDB*' for more information.

### Un-Installing XLeratorDB

From the server where the .msi was executed, open the *Programs & Features* applet of Control Panel, find the XLeratorDB package in the list of installed applications, right-click and select 'Uninstall'.

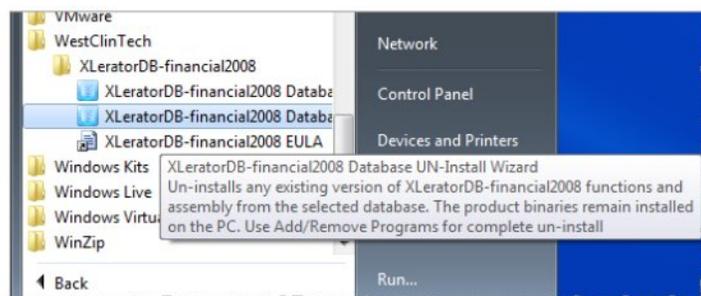


Follow the Windows Installer and *Database Un-Installation Wizard* screens in the same manner as the installation process.

Keep in mind that there are two aspects to the XLeratorDB installation - (1) the source binary files extracted from the .msi file, which include the product package binary and *Database Installation Wizard* utility, and (2) the installations onto individual databases. When XLeratorDB is installed onto a database the source binary is actually *copied* onto the database. It is important to remove all the copies of XLeratorDB from all databases where it was installed, otherwise those XLeratorDB packages will simply remain installed in those databases after the original .msi file is removed, thus leaving '*orphaned*' installations on the database.

### Un-installing XLeratorDB from a database

To un-install the XLeratorDB package from one or more databases without actually un-installing the XLeratorDB installation itself from the server, use the *Database Un-Install Wizard* utility described earlier. This is invoked from the server's Windows Start menu -> All Programs -> Westclintech LLC -> *package* -> {2nd blue icon}

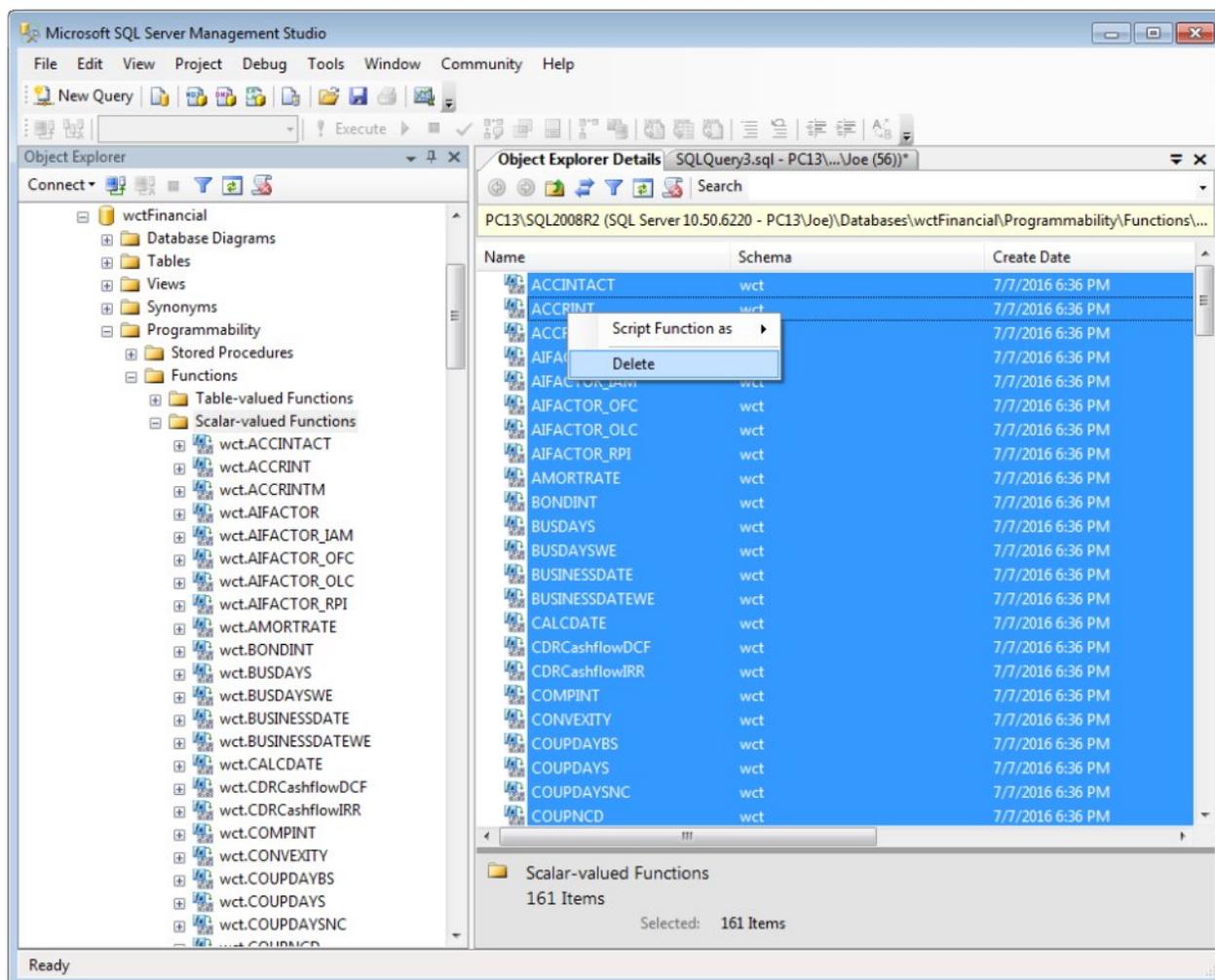


# Installation Guide - XLeratorDB for SQL Server

## Manually un-installing XLeratorDB from a database

If the XLeratorDB software has been un-installed from the server via Windows Control Panel, but the assemblies have been inadvertently left (*orphaned*) on one or more databases and still need to be removed, they can be removed *manually* using SQL Server Management Studio.

This is a multi-step process. (1) Expand the database node and then the *Programmability* node in the *Object Explorer* panel, (2) open the 'Object Explorer Details' window by pressing F7 or from the 'View' menu, (3) Expand the *Scalar Valued Functions* node, (4) Select all of the functions in the *Object Explorer Details* window by clicking any one function and then hitting CTRL-A on the keyboard - *NOTE: de-select any functions that are not part of the 'wct' schema, if any, since those are not XLeratorDB functions*, (5) right-click and click 'Delete' from the context menu, (6) wait for all functions to be deleted and repeat for *Table-Valued Functions* and *Aggregate Functions*. (Additionally, some packages such as **XLeratorDB/financial-options** also contain SQL-CLR stored procedures which must be deleted from the *Stored Procedures* node.) (7) Expand the *Assemblies* node, right-click the XLeratorDB package and click *Delete* from the context menu. If the assembly fails to delete it is most likely that some functions in the package were not deleted. Typically SQL Server will display the error details.



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## Installing XLeratorDB to a network share

For multi-server XLeratorDB licenses it may be easier to execute the installation (.msi) from just one server and install the package to databases on the other licensed servers without having to execute the .msi installation on each of those servers.

This is done by executing the .msi installation file and selecting the 'Manual Install' option which generates an installation script that can be executed from a utility such as *SQL Server Management Studio* (SSMS).

The script must be edited to point to a network location where the extracted the XLeratorDB binary file has been copied. This is done in the 'CREATE ASSEMBLY' clause...

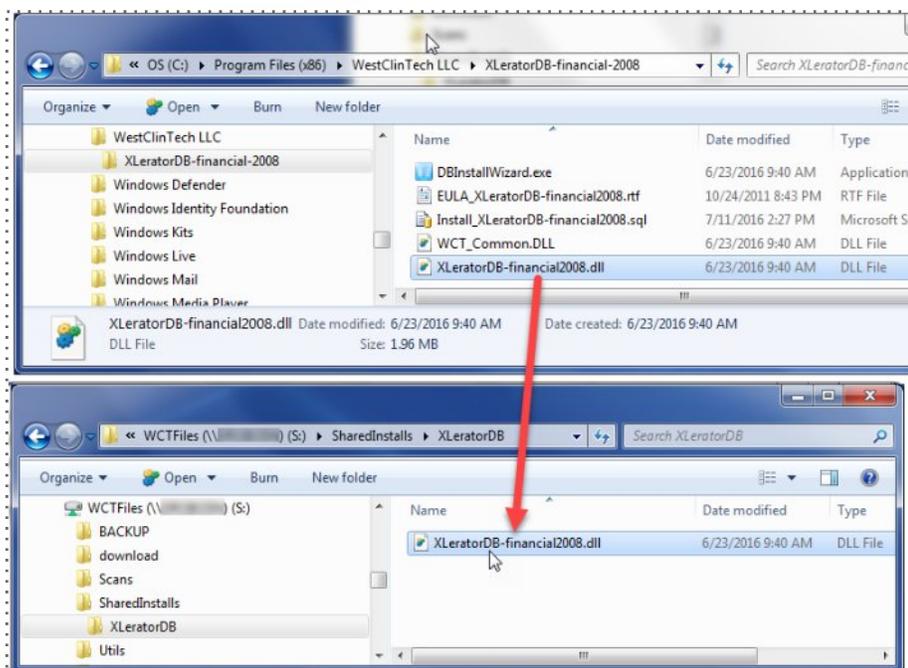


```
311 IF EXISTS (SELECT * FROM sys.assemblies asms WHERE asms.name = N'XLeratorDB_financial2008') DROP ASSEMBLY [XL
312 GO
313
314 CREATE ASSEMBLY [XLeratorDB_financial2008]
315 AUTHORIZATION [dbo]
316 FROM 'C:\Program Files (x86)\WestClinTech LLC\XLeratorDB-financial-2008\XLeratorDB-financial2008.dll'
317 WITH PERMISSION_SET = SAFE
318 GO
319
320
321
322
323
324 CREATE ASSEMBLY [XLeratorDB_financial2008]
325 AUTHORIZATION [dbo]
326 --FROM 'C:\Program Files (x86)\WestClinTech LLC\XLeratorDB-financial-2008\XLeratorDB-financial2008.dll'
327 FROM 'S:\SharedInstalls\XLeratorDB\XLeratorDB-financial2008.dll'
328 WITH PERMISSION_SET = SAFE
329 GO
330
```

Before executing that script, the XLeratorDB binary file must be copied from the local directory where it has been extracted - typically the default

"C:\Program Files(x86)\Westclintech LLC\..." folder - to the network folder specified in the installation script.

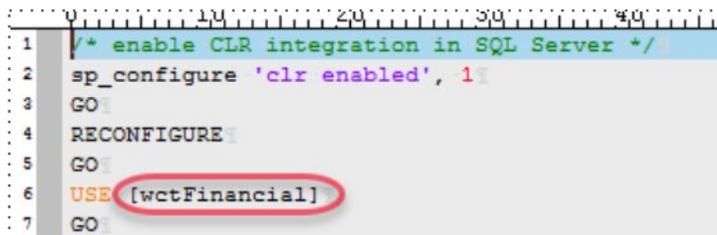
The binary is a single stand-alone .dll file typically named *XLeratorDB-<package>.dll*



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Note that this is an illustration, the “S:\SharedInstalls\XLeratorDB” network location in this example should be replaced with your network path.

After copying the XLeratorDB binary package file to the network and updating the assembly path in the script, open the edited script in *SQL Server Management Studio* (or equivalent utility), connect to the target database on the target (licensed) server, make sure the appropriate database name is specified in the ‘USE’ clause at the top of the script (edit if necessary)...



```
1 /* enable CLR integration in SQL Server */
2 sp_configure 'clr enabled', 1
3 GO
4 RECONFIGURE
5 GO
6 USE [wctFinancial]
7 GO
```

Save and execute the updated script. The package is installed if no errors are displayed. The message: “Configuration option ‘clr enabled’ changed from 1 to 1. Run the RECONFIGURE statement to install.” is normal and can be ignored, it does *not* indicate an error occurred.

Repeat for each target database and server that are registered in the purchased XLeratorDB package. This requires executing the updated script in a new connection to each licensed target server in *SQL Server Management Studio*.

## Extending the XLeratorDB trial evaluation

XLeratorDB trial packages are configured to expire 15 days from date of *download*. If a bit more time is needed to evaluate the software a new trial can simply be re-downloaded from the ‘Download Trial’ tab on the westclintech.com website and re-installed on the server.

Before re-installing the new trial package it is necessary to first completely un-install the old XLeratorDB trial package from the server using Windows Control Panel, as detailed in the section “[Un-Installing XLeratorDB](#)”.

Keep in mind that the trial software is intended (and licensed) for evaluation purposes only. It is a breach of the licensing agreement to use the software in a non-evaluation capacity.

## Installing purchased software over the trial or an older version

When installing a newly downloaded purchased XLeratorDB package over an older version of the package (which is only applicable with *extended* XLeratorDB licenses which provide access to software updates - see the licensing document - coming soon - for more information) or over a trial XLeratorDB package, the existing XLeratorDB package must first be completely un-installed from the server using Windows Control Panel, as detailed in the section “Un-Installing XLeratorDB”.

After all prior XLeratorDB package installations have been removed from the database(s) and server(s), then the purchased XLeratorDB package installation (.msi) can be executed and installed to the target licensed server(s).

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## Verifying correct server name registration with XLeratorDB/utils package

The [XLeratorDB/utils](#) package is provided for free and is useful to test if the server name registered in the license is correct before registering the server name to a purchased license.

Download the [XLeratorDB/utils](#) package by signing into the westclintech.com web site with your username and password (you will need to register a new account on the site first if you do not yet have one) and add the utils package to your cart from here:

<http://westclintech.com/tabid/66/CategoryID/3/List/1/Level/a/productid/5/Default.aspx>

Proceed through the checkout just like you would for a purchased product. No credit card is needed. The final checkout screen will place you on the 'order details' page just like for a purchased XLeratorDB package. Proceed with downloading and installing the *utils* package as described in this document.

If no errors are encountered while installing the *utils* package then the registered server name is most likely correct. Verify further by following the instructions in *Step 6* of the "Installation Process" section of this document: "Test that the Software Installed Successfully".

Additionally, the 'wct.TestServer' function in the [XLeratorDB/utils](#) package can also be used to verify the registered server name. Documentation for that function can be found here:

<http://westclintech.com/Products/XLeratorDButil/XLeratorDButilDocumentation/tabid/144/topic/TestServer/Default.aspx>

```
SELECT wct.TestServer()  
  
Here is the result set  
-----  
*** SERVER TEST SUCCESSFUL! ***  
  
(1 row(s) affected)
```

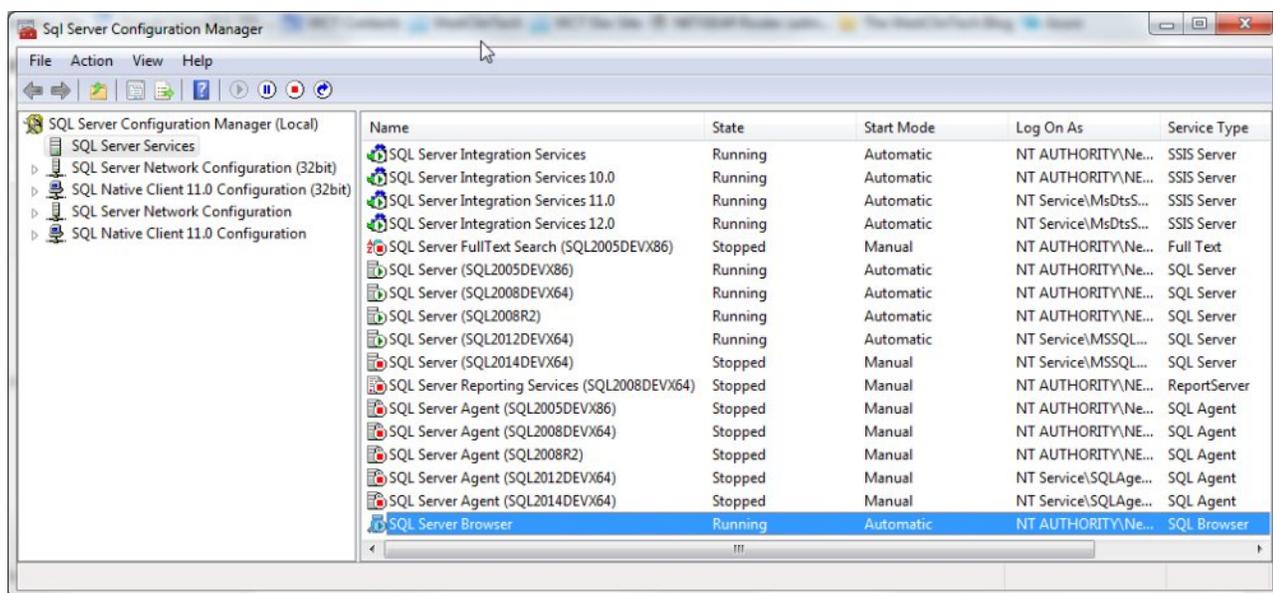
After this exercise is complete the [XLeratorDB/utils](#) package can then be un-installed from the server using Windows Control Panel as described elsewhere in this document.

# Installation Guide - XLeratorDB for SQL Server

## Troubleshooting

### Database Installation Wizard - Servers not populated in 'Server Name' field

In the 'Automated Installation' mode of the *Database Installation Wizard* (DBIW), server names will only be populated automatically if the 'SQL Server Browser' service is running. Launch the *SQL Server Configuration Manager* applet provided with SQL Server to check if this service is installed and running.



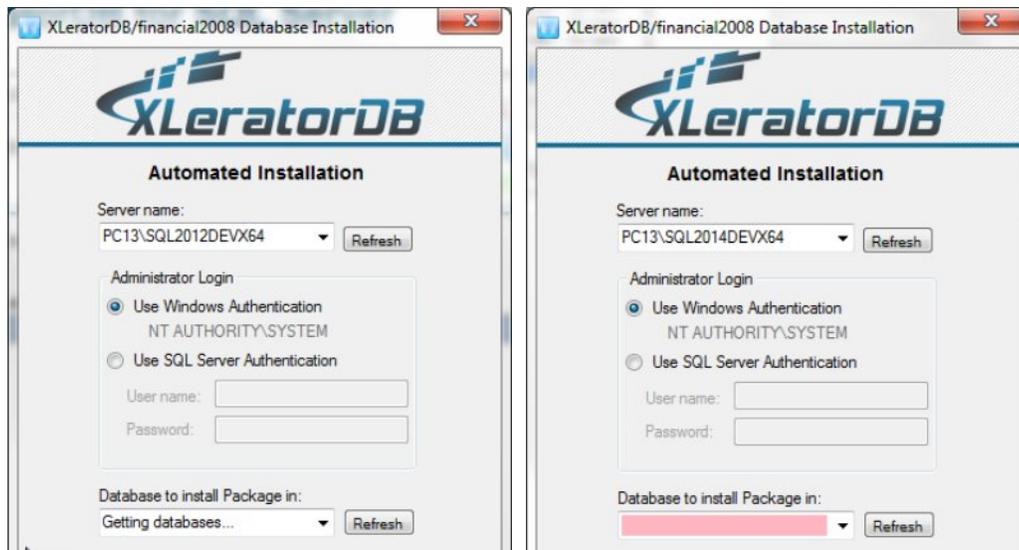
If this service is not running, the server name can be typed in manually, in the format `<server name>\<instance name>`. The exact name can be found in the *Object Explorer* pane of *SQL Server Management Studio* in the first node of the connection.

### Database Installation Wizard - Databases not populated

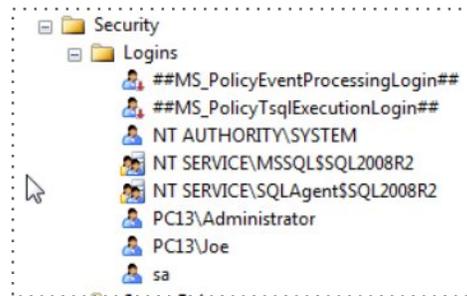
If the Database field of the Automated Installation screen is not populated then the Database Installation Wizard was not able to connect to the specified SQL Server instance.

This is typically due to one of two reasons: (1) the credentials provided are not accepted on the SQL Server instance, or (2) the SQL Server service is not running for the specified SQL Server instance.

# Installation Guide - XLeratorDB for SQL Server



For case (1) when using *Windows Authentication*, check that the Windows account context that the DBIW is running under, shown immediately underneath the 'Use Windows Authentication' option button, is established as a login account under the 'Security' node -> 'Logins' node.



Keep in mind that the DBIW context is different when it is launched from the .msi installer as opposed to being invoked by the user from the Windows Start menu. It may be helpful to exit out of the installation process at this point. The software binaries will still be installed on the server. You can then invoke the *Database Installation Wizard* from the Windows Start menu (as described [elsewhere](#) in this document) and try again since it will then be running under your Windows account context instead of the *Windows Installer's* context. If your Windows account is configured as a valid SQL Server login then this method should resolve the un-populated databases problem.

When using the *SQL Server Authentication* option ('mixed mode') check that the specified SQL Server login id (such as 'sa') and password are valid in the *Security->Logins* configured in the SQL Server instance.

For case (2) simply open the *SQL Server Configuration Manager* applet and check the status of the SQL Server instance, and start it if it is not running.

Click the 'Refresh' button next to the Databases field to (attempt to) re-populate the databases after taking corrective measures.

# Installation Guide - XLeratorDB for SQL Server

## Resource Links

Westclintech website	<a href="http://westclintech.com">http://westclintech.com</a>
Trial Downloads	<a href="https://westclintech.com/DownloadTrial/tabid/238/Default.aspx">https://westclintech.com/DownloadTrial/tabid/238/Default.aspx</a>
<b>XLeratorDB/utilities</b> package	<a href="http://westclintech.com/Products/XLeratorDButil/tabid/147/Default.aspx">http://westclintech.com/Products/XLeratorDButil/tabid/147/Default.aspx</a>
XLeratorDB Licensing	<coming soon>
All packages - Pricing	<a href="http://westclintech.com/Pricing/tabid/175/Default.aspx">http://westclintech.com/Pricing/tabid/175/Default.aspx</a>

Westclintech LLC  
44 West Clinton Ave Irvington NY 10533  
(+1) 866-486-1376  
[westclintech.com](http://westclintech.com) / [support@westclintech.com](mailto:support@westclintech.com)

--- End of XLeratorDB Installation Guide (rev.1 / Jul-2016)