

Runner Technologies SQL CLR Installation

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Changes

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- Change database creation script to create a database that is 4mb to be compatible with SQL 2012

Overview

The SQL CLR is a .net assembly that contains code to implement stored procedure which will call the Runner Technologies Clean Address web service.

There are API's build on top of this as SQL stored procedure that implement specific functionality including a simplified AJAX interface that returns a pipe delimited string and separate interfaces for PeopleSoft and other systems.

Requirements

SQL Server

- This script and related software have been created on SQL 2008 R2 but has been tested on SQL 2005, SQL 2008, SQL 2008 R2 and SQL 2012
- SQL Database compatibility level must be at least 9.

.NET

- This installation requires .net 3.5.
- Currently at: <http://www.microsoft.com/en-us/download/details.aspx?id=21> but if this does not work, do a search for “.net 3.5 distributable”.
- Check for .net installation, there should be a “v3.5” directory in your windows directory here:
C:\Windows\Microsoft.NET\Framework64

Disk space

- The scripts and binary files require < 10 mbytes of space.
- The CLEAN_Address database mdf/ldf files are < 5 mb initially. It is possible this could grow in the future or as it is used so it would be best to the data and log files somewhere else.

Install

The default directory is: C:\CLEAN_Address_SQLCLR. This is the assumed directory unless you make changes to the installation scripts. The install is done by running batch file:

InstallSQLCLR.bat

This executes the following SQL Scripts:

- 00_CLEAN_Address_Install
 - o This file checks the batch file parameters and file locations then calls script 01 and optionally script 02
- 01_CLEAN_Address_DBProcs.sql
 - o This file creates the CLEAN_Address database, installs the SQL CLR assemblies, and creates tables, procedures, functions and inserts default data for lookups and parameters.
- 02_Verify_Address_AJAX.sql
 - o Creates the Verify_Address_AJAX.sql procedure.
- 99_OptionalGrantPermissions.sql
 - o If PSUSER is not "sa" then PSUSER will be granted permissions on the appropriate database objects.

The batch file can be customized to set the following:

Server Instance:

- o Command Line: -S PLOVER3\LATINBINCOLLATE

CLEAN_Address database file location.

- o Command Line: -v SQLDBPATH = "C:\Clean_Address_SQLCLR\Data\"
- o SQL Script: \$(SQLDBPATH)
- o Directory should exist and path should end with a "\"

DLL's (binary files) for the SQL CLR

- o Command Line: -v SQLCLRBIN = "C:\CLEAN_Address_SQLCLR\bin\"
- o SQL Script: \$(SQLCLRBIN)
- o Directory should exist and path should end with a "\"

CLEAN_Address service

- o Command Line: -v CLNADRHOST = <http://localhost:8097/CLNVerify>
- o SQL Script: \$(CLNADRHOST)
- o Note that the "Localhost", or IP address or host name must match what was setup for the CLEAN_Address web service.

Peoplesoft (or linked server) user:

- o Command Line: -v PSUSER = "dcntest"
- o SQL Script: \$(PSUSER)
- o If PSUSER is not "sa" then the 02 permissions script will be executed.

Installation Test

A sql script has been included that will help verify that CLEAN_Address is correctly installed and running. The script is:

CleanAddress_Test_Verify.sql

Make sure the CLEAN_Address webservice is running.

What is installed?

The following will be created:

CLEAN_Address Database

○ Tables

- cln_ajax_cache
 - Provides select access to certain ajax functions
- Cln_Log
 - Not currently used
- Cln_Lookups
 - Various support data for lookups such as states, countries and error codes.
- Cln_Settings
 - Used to store groups of settings for clean address service and api functions. For example to set if address suggestions should be provided.

○ Procedures

Verify

- This is the main address correction procedure. It is actually a SQL CLR program written in C# that will call the CLEAN_Address web service.

Verify_Addresss_AJAX

- This routine returns a pipe delimited string for parsing and consumption by an ajax web page.
- An entry is also written into the cln_ajax_cache to cover cases where a procedure with a return parameter is not allowed.

Verify_GENERIC

- This procedure is a wrapper for Verify exposing the most common fields that are required by address correction functions.

Set_Settings

- Used to set a Cln_Settings setting. Default @Group is blank.
- Separate sets of settings can be isolated by setting the 50 character group to something non-blank then passing it where required.

○ Functions

Clean_Field

- Sets a null field to a single space

Get_Address_Error

- Look up description of address error code

Get_Address_Status

- Look up description of address status code

Get_Country_name

- Get full country name given the country code.

Get_DPV_Status

- Get DPV status string given the dpv code

Get_Setting

- Return string with setting value of given group and code

Help_DPV_Status

- Get DPV status string given the dpv status code

InitCap

- Emulate Oracle InitCap function to make the first character upper case

Translate

- Emulate Oracle translate function

API's

As of this writing there is a people soft implementation.

Demo

There is an asp.net website located at:

C:\CleanAddress_SQLCLR\CleanAddress_SQLAjax

That contains the standard ajax_example.html talking to a page
CLEAN_Address_APP_AJAX_Verify_Address_AJAX.aspx (and code behind .cs) that uses ado.net to call the
Verify_Address_AJAX and returns a pipe delimited structure.