

## Automic's SSiS Package Execution Action pack 2.x

This Action Pack is intended to execute Microsoft SQL Server Integration Service (SSIS) Packages. The SSIS Packages must be deployed in the Integration Services Catalogs

Please note that SSiS accept requests from Windows users which uses Windows Authentication only. Please make sure that the SQL Agent accordingly configured.

The Action Pack consists of four different Actions

- Retrieve SSIS Environment information: Read from the SSIS Database the configuration parameters necessary to use the 'Execute SSIS Package' Action
- Execute SSIS Packages: Executes a SSIS package
- Retrieve the SSIS result report from the SSIS package execution
- Update the internal SSIS system information lists.

Special thanks to Leonard Olteanu and the other Blogs available in the Web. This action based on their inputs.

## Tested SSIS Version

The Action Pack is developed and tested with Microsoft SQL Server 2014

## Setup

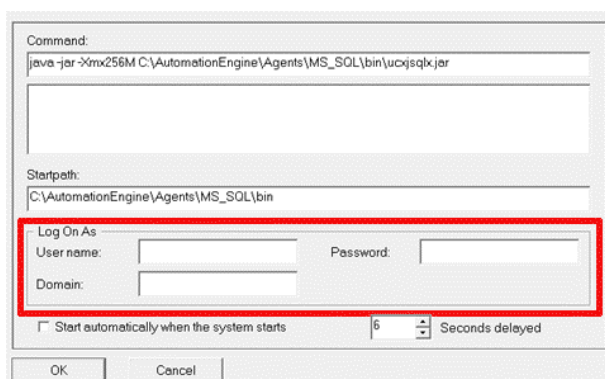
The Action Pack expects an Automic SQL Agent which is configured to use Window Authentication which is not the case by default.

It is recommended to install the SQL Agent on the same machine which runs the SSIS.

Configure the SQL Agent to use the Windows Authentication

Install the SQL Agent as described in the documentation. In addition to the usual SQL Agent configuration changes in the ucxjsqlx.ini file. Make sure that the setting 'type' is set to MSSQL and the 'WindowsAuthentication' is to '1'. Both settings are located in the [SQL] section.

The SQL Agent binary has to be executed with a Windows user which has the permission to access SSIS. When using the Automic Service Manager you might have to use the 'Log On As' settings of the properties.



## Configuring Anonymous Access for the SQL Agent

(SQL) Agents using Windows Authentication have to use the Anonymous mode. In order to activate the Anonymous mode it is necessary to duplicate UC\_HOSTCHAR\_DEFAULT in client 0. Use as new name (e.g.) UC\_HOSTCHAR\_ANONYMOUS. Change following settings

Name	Description
<b>ANONYMOUS_JOB</b>	Running Jobs using the Anonymous mode. Works with SQL, Win/Unix Jobs.
<b>ANONYMOUS_FT</b>	Using the Anonymous mode for Automatic Manage File Transfer (JOBF)
<b>ANONYMOUS_FE</b>	Using the Anonymous mode for File Events

Next you have to modify the UC\_EX\_HOSTCHAR Configuration VARA object. There you find as key the name of the new SQL Agent and as 'Value1' the value 'DEFAULT'. Change the value from DEFAULT to ANONYMOUS (or the name of the duplicated UC\_HOSTCHAR\_DEFAULT).

## Configure the Automatic SQL CONNECTION Object

You have to configure 'PKG.CONN.SQL.SSISDB.WIN.AUTH' Connection object.

Name	Description
<b>Database Type</b>	MS-SQL Server.
<b>Server:Port</b>	Hostname and port of the database server which runs SSIS
<b>Database Name</b>	Name of the Database Instance. Usually it is 'SSISDB'.
<b>Alternative User Name</b>	Name of a user with the permission to access SSIS using 'Windows Authentication' It is the same user which runs the SQL Agent.
<b>Alternative Password</b>	Enter a dummy password since the Agent is running in the Windows Authentication mode.

The 'Test' button of the connection object might not work. It may fire always an error message.

## Configuring the SSIS internal update job

The Extended version of the SSIS package Execution Action using static VARA objects to display the SSIS system information. These VARA object needs to be periodically updated in order to display the correct system information.

1. Create a Standard Workflow object use as something like JP.SSIS.PERIOD.UPDATE.SYS.INFO
2. Add to this Workflow Object the Action **Update Internal SSIS Information**
3. Configure the Prompt of the **Update Internal SSIS Information** Action

Name	Description
<b>SSIS Database Name</b>	Name of the SSIS Database. It is usually SSISDB.
<b>Automatic SQL Agent</b>	Name of the Automatic SQL Agent to be used for the communication with SSIS
<b>SQL CONNECTION Object</b>	The name of the Automatic SQL Connection object. You should keep the default 'PKG.CONN.SQL.SSISDB.WIN.AUTH'

4. Finalize and store the Workflow.

5. Execute the Workflow periodically using 'Execute – Execute Recurring' or a Schedule object.  
It is not necessary to execute the Job too often. However it depends how often SSIS Packages get created or removed. Note an update of a SSIS Package does not require the execution of this update Workflow.

Continue with retrieving the SSIS Environment Information.

The SSIS Administrator or developer should be able to provide you with following information

Name	Description
<b>SSIS System DB Name</b>	In most cases it is the default 'SSISDB'
<b>SSIS Environment name</b>	Name of the SSIS Environment to be used. Leave the field empty if no SSIS environment is available or should be used.
<b>SSIS Project Name</b>	Name of the SSIS Project.
<b>SSIS Package Folder</b>	Name of the SSIS Folder which includes the SSIS packages

Setting up useful default values

Since most of the SSIS system environment is mostly fix, it is useful to change the default values directly within the Action prompts. Open the following Automic object and go to 'Variables and Prompts'. Change the prompt values. These values will be used as default values.

- PCK.CUSTOM\_EXECUTE\_SSIIS\_PACKAGES.PUB.ACTION.EXECUTE\_SSIIS\_PACKAGE\_EXT
- PCK.CUSTOM\_EXECUTE\_SSIIS\_PACKAGES.PUB.ACTION.EXECUTE\_SSIIS\_PACKAGES
- PCK.CUSTOM\_EXECUTE\_SSIIS\_PACKAGES.PUB.ACTION.RETRIEVE\_SSIIS\_RESULT\_REPORT
- PCK.CUSTOM\_EXECUTE\_SSIIS\_PACKAGES.PUB.ACTION.RETRIEVE\_SSIIS\_RESULT\_REPORT\_EXT
- PCK.CUSTOM\_EXECUTE\_SSIIS\_PACKAGES.PUB.ACTION.UPDATE\_INTERNAL\_SSIIS\_INFORMATION

## Using the 'Retrieve SSIS Environment information' Action

The Extended version of the SSIS Action provides the SSIS system environment information via listboxes. However this Action collects all information necessary to run the SSIS Packages and is also a good test for the Automic Connection Object configuration.

The Action expects three parameter

Parameter	Description
<b>SSIS Database Name</b>	Name of the SSIS Database. It is usually SSISDB.
<b>Automic SQL Agent</b>	Name of the Automic SQL Agent to be used for the communication with SSIS
<b>SQL CONNecTion Object</b>	The name of the Automic SQL Connection object. You should keep the default 'PKG.CONN.SQL.SSIISDB.WIN.AUTH'

Once the Action was executed, you find in the four Job reports of the name of the SSIS project, Folder, and Packages.

## Difference between the Ext and non Ext version

The 'Extended' version of the Action provides Listboxes for the most relevant configuration settings. It simplifies the configuration but the **Update Internal SSIS Information** Action has to be executed periodically otherwise the listboxes will display outdated information.

**Important:** Follow the 'Configuring the SSIS internal update job' section to configure the periodically running update Action.

## Using the 'Executing SSIS Packages Ext' Action

There are two types of 'Execute SSIS Packages Action', The 'Execute SSIS Package Ext' Action let you choose from a list of values. Please read the section 'Using the 'Execute SSIS Package Ext' Action' carefully.

Configuration Item	Description
<b>SSIS Database Name</b>	Name of the SSIS Database. It is usually SSISDB.
<b>Automic SQL Agent</b>	Name of the Automic SQL Agent to be used for the communication with SSIS
<b>SQL CONNection Object</b>	The name of the Automic SQL Connection object. You should keep the default 'PKG.CONN.SQL.SSISDB.WIN.AUTH'
<b>SSIS Project</b>	Name of the SSIS Project
<b>SSIS Package folder</b>	The name of folders where the SSIS packages are located.
<b>SSIS Package Name</b>	Name of the SSIS package to be executed by the Action.
<b>SSIS Environment</b>	Name of the SSIS Environment to be used. Leave the field empty if no SSIS environment is available or should be used. Note: It displays all available SSIS Environments even those which not belong to the chosen SSIS project.
<b>Retry Count</b>	Number of retries if execution fails (SSIS has to run in Scale Out Mode)
<b>Logging Level</b>	Defines the level of details generated in the Job report. Note that you have to use the 'Retrieve SSIS Result Report' Action to get the report. 0 – None 1 – Basic 2 – Performance 3 – Verbose 4 – Runtime Lineage 100 – Custom See in the <a href="#">Microsoft SSIS Documentation</a> for more details
<b>DUMP ON ERROR</b>	0 – Deactivated 1 –SSIS will generate a DUMP file.
<b>DUMP ON EVENT</b>	0 – Deactivated 1 – Will monitor for the given event code. See SSIS documentation for more details.
<b>DUMP EVENT CODE</b>	Enter a comma separated list of event codes the 'DUMP ON EVENT' functionality should react.

It can be up to 15 parameters provided.

Configuration Item	Description
<b>Parameter Type</b>	Choose from one of the eight data types, depending on the data type the SSIS Package expects Keep this item blank to hide the parameter from the SSIS Package.
<b>Parameter location</b>	An SSIS Parameter can be defined of Package or Project.
<b>Parameter Name</b>	Name of SSIS Package Parameter. '
<b>Parameter Value</b>	Decimal separator of float values can either be comma or point. There are three different format for date value available.

### Result Value

The &UCRB\_SSIS\_EXEC\_ID# will include SSIS execution/operation ID which is necessary for the Result report Action.

### Using the Retrieve SSIS Result Report' Action

The Action expects following parameters

Parameter	Description
<b>SSIS Execution ID</b>	SSIS execution/operation id where the report should be retrieved from. The execution id is optional, if no execution id is set, the latest/newest result report of the given package name will be retrieved. You may use the &UCRB_SSIS_EXEC_ID# variable, see Execution Action for more details.
<b>SSIS Package Name</b>	Name of the SSIS package to be retrieved by the Action. This parameter is optional if the Action is part of a Workflow.
<b>Optional Result Record Filter</b>	A typical result report consist of dozens of records. This filters allows to filter only for the interesting records such as the processed record count.
<b>SSIS DB Name:</b>	Name of the SSIS database. Use the name you might have used for the "Retrieve SSIS Environment information' Action
<b>SQL Agent for the SSIS communication</b>	Name of the SQL Agent to be used for the communication with SSIS
<b>SSIS Connection Object</b>	The name of the SQL Connection object. You should keep the default 'PKG.CONN.SQL.SSISDB.WIN.AUTH'