SQL Server Integration Services Technology Map v0.6
By Wilson Urdaneta - wilson.urdaneta@gmail.com

Main Tools

Solution → **Project** → **Package**

Connection Managers

ADO	ADO.NET	Analysis Services	Cache 08	DQS Cleansing 12	Excel 32	File	Flat File
FTP	HTTP	MSMQ	Multiple Files	Multiple Flat Files	OLEDB	ODBC	SMO
SMTP	WMI						

Control Flow

Containers

For Each Loop	For Loop	Sequence	Task Host			Events

Tasks

CDC Control 12	Data Flow	Data Profiling 08	Execute Package	Execute Process	Execute SQL	File System
FTP	Message Queue	Script	Send Mail	Web Services	XML	

Data Flow

Audit Transformations

Audit	Row Count

Rowset Transformations

Aggregate	Percentage Sampling	Pivot	Row Sampling	Sort	Unpivot

Split and Join Transformations

Balanced Data Distributor	Cache	CDC Splitter 12	Conditional Split	Lookup	Merge	Merge Join
Multicast	Union All					

BI Transformations

CDC Source 12	Data Mining Query EE	DQS Cleansing	Fuzzy Grouping	Fuzzy Lookup EE	SCD	Term Lookup EE
Term Extraction EE						

Row Transformations

Character Map	Copy Column	Data Conversion	Derived Column	Export Column	Import Column	OLEDB Command
Script Component						

Third-party Transformations

Table Difference	Dimension Merge SCD

Configuration and Dynamism

Variables	Parameters 12	Expressions

Deployment

Project Deployment 12	DTUTIL	Deployment Wizard	Deployment Utility	Package Deployment	XMLA

File System	MSDB Database	SS File System (Package Store)

Execution

Powershell	SSMS	SQL Server Agent	SSDT (Debug Execution)	Command Line	The IS Service	The IS Catalog	The IS Catalog Stored Proc

DTEXEC.EXE	Exe. Pack Util. dtexecui.exe

Wizards

Deployment Wizard	Source Assistant 12	Proj. Conversion Wizard	Package Conf. Wizard	SCD Wizard	Import / Export Wizard	Destination Assistant	SSIS Package Upgrade Wizard

Programming and Extending

Scripting	New Components

Event Handlers

OnError	OnExecStatusChanged	OnInformation	OnPostExecute	OnPostValidate	OnPreExecute	OnPreValidate	OnProgress
OnQueryCancel	OnTaskFailed	OnVariableValueChanged	OnWarning				

Optimisation

DF Design Best Practices

| Buffers | Synch Transformations | Asynch Transformations | Execution Trees |

Buffer Sizing

| Estimated Row Size | DefaultMaxBufferRows | DefaultMaxBufferSize | MinBufferSize |

Parallelism

| Parallelise Dest Operations | Partially Parallel. Operations | Parallelise All Operations | Optimise The Slowest | Scaling out |

Tools

| SSIS Logging | SQL Server Profiler | Performance Counters |

Administration

Basic

| Installation | Upgrade | Configuration | Backup | 64 bits considerations |

SSIS Catalog

| Create | Backup, restore, and move |

Security

| Digital Signature | Excluding Sensitive Inf | Encrypting Information | Fixed DB-Level Roles | File System Permissions |

Logging and Auditing

| SSIS Catalog Logging 12 | Package Logging | Custom Logging | Built-in Reports |

Data Integration

Data Cleansing

Data Profiling

Fact Table Loading

Dimension Table Loading

Incremental Data Load

| Control Table | Dump and Reload | ✛SS Change Data Capture | Audit Columns | Log Scraping | Timed Extracts | DB Diff | Hashing |

SCD

| Using SSIS SCD Transform | Using Merge | ◆ Using Third-party SCD Trans. |

Debugging and Troubleshooting

Performance Issues

Package Failures

Data Issues

Architecture

Run-time Engine

Data Flow Engine

Notes

1. The ▲ symbol is used to group all items related to SSIS and Events.
2. The ✛ symbol is used to group all items related to SSIS and Change Data Capture.
3. The ◆ symbol is used to group all items related to SSIS and third-party transformations for Slow Changing Dimensions.
4. Darker items with a cut top-right corner are used to highlight important and or common items. E.g. The "OnError" and "OnPostExecute" items under the "Event Handlers" section. When shown, the understanding and study of these items should be prioritized.