SIM v6.0 Release

Jul 19, 2017

Contents

1	Welc	ome	3
	1.1	Requirements	3
	1.2	Installation	5
	1.3	Manual	20
	1.4	Changelog	29
	1.5	Supported configurations	29
	1.6	Support	29

Note: Documentation is still in development process. Please do not hesitate to contact us on support@silvermonkey.net for further information.

CHAPTER 1

Welcome

This document is meant to be a source for all information regarding the administration and installation of the Silver Monkey v6.1 engine.

Contents:

Requirements

Application Server (IIS)

- Microsoft Windows Server 2012 or higher
- Internet Information Server
- Microsoft .NET Framework 4.6.1
 - https://support.microsoft.com/en-us/kb/3102436
 - With Windows Server 2012, the installation requires Windows Update KB2919355, which may be included in your update stream
 - If not already included, please install manually as described here: https://support.microsoft.com/en-us/kb/ 2919355

Database Server (SQL)

- Microsoft SQL Server 2012 or higher
- Or Microsoft SQL Server Express with Advanced Services
- 2012: http://www.microsoft.com/en-us/download/details.aspx?id=29062 (ENUx86SQLEXPRADV_x86_ENU.exe)
- 2014: https://www.microsoft.com/en-US/download/details.aspx?id=42299

Important:	Make sure to download	"ADV"	package:
------------	-----------------------	-------	----------

Download Microsoft® S × ← → C ■ https://www.microsoft.com/en-US/download/details.aspx	?id=42299	
Choose the download you want		⊗
File Name Express 32BIT\SQLEXPR_x86_ENU.exe	Size	Download Summary:
Express 64BIT\SQLEXPR_x64_ENU.exe	196.7 MB	 ExpressAdv 64BIT\SQLEXPRADV_x64_ENU.exe
ExpressAdv 32BIT\SQLEXPRADV_x86_ENU.exe	1.1 GB	
ExpressAdv 64BIT\SQLEXPRADV_x64_ENU.exe	1.1 GB	
ExpressAndTools 32BIT\SQLEXPRWT_x86_ENU.exe	840.8 MB	
ExpressAndTools 64BIT\SQLEXPRWT_x64_ENU.exe	833.2 MB	Total Size: 1.1 GB
		Next

Server Hardware Requirements (IIS+SQL)

The system requirements for processors, RAM and hard disk space depend on the size of the correspondig ConfigMgr environment and the number of users working at the same time. Anyway, there is always the option to easily move the application to a more powerful machine or to distribute it across several servers with load balancing.

In addition to the requirements of the operating system, the following conditions arise:

- CPU 1GHz
- RAM 2GB
- Database size 500MB
- Website/Application files 50MB

(Valid for up to 10,000 systems and 20 concurrent users on the Web Application)

Workplace Systems

• Microsoft Internet Explorer 10 or higher

- Mozilla FireFox 5 or higher (Windows SSO is not supported by browser)
- · Google Chrome

Installation

In this articl	le:
• Requi	rements
• IIS Fee	atures
• Micro.	soft SQL Server
- 1	installation Setup
- 5	SQL Server TCP/IP Configuration
- 5	SIM SQL DB Installation
Config	ure IIS
- (Create IIS App Pool
- (Create SilverMonkey folder
- (Create IIS Application
• Install	Windows Service

• Test Installation

Requirements

- 1. For general information on system requirements see *Requirements*.
- 2. SQL Service Account for accessing SIM SQL DB (in this article sim-svc-sql)

Important: Please install all requirements before beginning with this guide!

IIS Features

Execute the following command to enable IIS features on the application server:

```
CMD.EXE /C DISM.EXE /enable-feature /all /online /featureName:IIS-WebServerRole /
-featureName:IIS-WebServer /featureName:IIS-CommonHttpFeatures /featureName:IIS-
-StaticContent /featureName:IIS-DefaultDocument /featureName:IIS-DirectoryBrowsing /
-- featureName:IIS-HttpErrors /featureName:IIS-HttpRedirect /featureName:IIS-
-ApplicationDevelopment /featureName:IIS-ASPNET /featureName:IIS-NetFxExtensibility /
→featureName:IIS-ASPNET45 /featureName:IIS-NetFxExtensibility45 /featureName:IIS-ASP_
→/featureName:IIS-CGI /featureName:IIS-ISAPIExtensions /featureName:IIS-ISAPIFilter /
-- featureName:IIS-ServerSideIncludes /featureName:IIS-HealthAndDiagnostics /
-- featureName:IIS-HttpLogging / featureName:IIS-LoggingLibraries / featureName:IIS-
-RequestMonitor /featureName:IIS-HttpTracing /featureName:IIS-CustomLogging /
→featureName:IIS-ODBCLogging /featureName:IIS-Security /featureName:IIS-
→BasicAuthentication /featureName:IIS-WindowsAuthentication /featureName:IIS
→DigestAuthentication /featureName:IIS-ClientCertificateMappingAuthentication /
1.2 Installation /featureName:IIS-
                                                                                    5
 URLAuthorization /featureName:IIS-RequestFiltering /featureName:IIS-IPSecurity /
→featureName:IIS-Performance /featureName:IIS-HttpCompressionStatic /featureName:IIS-
-HttpCompressionDynamic /featureName:IIS-WebDAV /featureName:IIS-
-WebServerManagementTools /featureName:IIS-ManagementScriptingTools /featureName:IIS-
```

For easy deploymnet: Download the script.

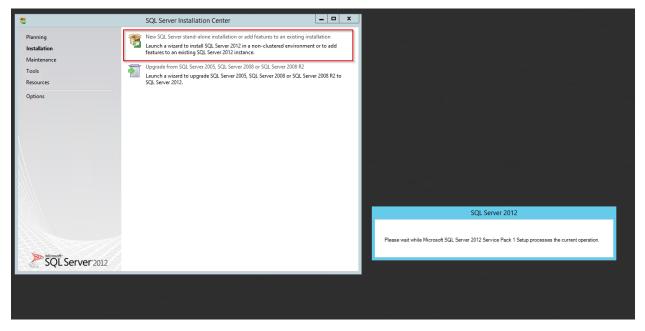
Microsoft SQL Server

For information about supported SQL Server versions see Supported configurations

The installation of the SQL Server will be described in the following steps.

Installation Setup

Start the SQL Server installation setup. Choose the "New SQL Server stand-alone installation..."-Option in the foll-wing Window:



Throughout the installation, please choose the same features as shown below:

1	SQL Server 2012 Setup	_ □ X	
Feature Selection Select the Express features to in Setup Support Rules License Terms Feature Selection Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration	Instance Features Instance Features Database Engine Services SQL Server Replication Full-Text and Semantic Extractions for Search Reporting Services - Native Shared Features SQL Server Data Tools Documentation Components	Feature description: Includes the Search engine that supports Full-Text Extraction for fast text search as well as Semantic Extraction for key phrases (likek texp) and cimilarity reserve no content	
Error Reporting Installation Configuration Rules Installation Progress Complete	Management Tools - Basic SQL Client Connectivity SDK LocalDB Redistributable Features Select All Unselect All	Already installed:	
	Shared feature directory: C:\Program Files\Micro Shared feature directory (x86): C:\Program Files (x86)\I		
	< Back	Next > Cancel Help	

Name the instance SIM or choose another name:

1	SC	QL Server 2012 Se	etup		_ 🗆 X
Instance Configuration	ı				
Specify the name and instance	ID for the instance of SQL	. Server. Instance ID I	pecomes part of the in	stallation path.	
Setup Support Rules License Terms Feature Selection	 Default instance Named instance: 	SIM			
Installation Rules Instance Configuration Disk Space Requirements	Instance ID:	SIM			
Server Configuration Database Engine Configuration	Instance root directory:	C:\Program Files\N	/licrosoft SQL Server∖		
Error Reporting Installation Configuration Rules Installation Progress	SQL Server directory: Installed instances:	C:\Program Files\N	licrosoft SQL Server\M	ISSQL11.SIM	
Complete	Instance Name	Instance ID	Features	Edition	Version
			< Back Nex	t > Cancel	Help

Configure the server as follows:

1	SQL Server 201	2 Setup		_ 🗆 X
Server Configuration Specify the service accounts and Setup Support Rules	collation configuration.			
License Terms Feature Selection	Microsoft recommends that you use	a separate account for each	SQL Server service	2.
Installation Rules	Service	Account Name	Password	Startup Type
Instance Configuration	SQL Server Database Engine	NT Service\MSSQL\$SIM		Automatic 🗸
Disk Space Requirements	SQL Full-text Filter Daemon Launc	NT Service\MSSQLFDLa		Manual
Server Configuration	SQL Server Browser	NT AUTHORITY\LOCAL		Disabled 🗸
Database Engine Configuration Error Reporting Installation Configuration Rules Installation Progress Complete				
		< Back Next >	Cance	l Help

Customize the Database Engine

1	SQL Server 2012 Setup
Server Configuration	
Specify the service accounts and	collation configuration.
Setup Support Rules License Terms Feature Selection Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration Error Reporting Installation Configuration Rules	Service Accounts Collation Database Engine:
Installation Progress Complete	
	< Back Next > Cancel Help

Choose the Database Engine called 'SQL_Latin_General_CP1_CI_AS':

Customize the SQL Server 2012 Database Engine Collation						
Select the collation you would like to use:						
 Windows collation designator ar 	d sort order					
Collation designator:	Latin1_General		V			
Binary	Binary-code point					
Case-sensitive	Kana-sensitive					
Accent-sensitive	Width-sensitive					
Supplementary characters						
SQL collation, used for backwar	ds compatibility					
SQL_Icelandic_Pref_CP1_CI_AS			<u> </u>			
SQL_Latin1_General_CP1_CI_AI SQL_Latin1_General_CP1_CI_AS						
SQL_Latin1_General_CP1_CS_AS SQL_Latin1_General_CP1250_CI_AS			~			
SQL_Latin_General_CF1250_CI_K5						
Collation description:						
Latin1-General, case-insensitive, accent-sensitive, kanatype-insensitive, width-insensitive for Unicode Data, SQL Server Sort Order 52 on Code Page 1252 for non-Unicode Data						
	OK Cancel					

Select the 'mixed mode'-authentification and add your AD service account for SQL (sim-svc-sql) as SQL Server administrator:

1	S	QL Server 2012 Setup	_ D X
Database Engine Config Specify Database Engine authen		administrators and data directories.	
Setup Support Rules License Terms Feature Selection Installation Rules Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration Error Reporting Installation Configuration Rules Installation Progress Complete	Authentication Mod Windows authen Mixed Mode (SQ Specify the password Enter password: Confirm password: Specify SQL Server a PHATCONSULTING	tication mode L Server authentication and Windows authentication) rd for the SQL Server system administrator (sa) account.	
		< Back Next >	Cancel Help

You have completed the setup!

SQL Server TCP/IP Configuration

Open the SQL Server Configuration Manager, choose 'SQL Server Network Configuration' and then 'Protocols for [Database Name]'. Change the TCP/IP Status to *Enabled*:

Sql S	Server Configuration Manager	_ 🗆 X
File Action View Help		
🗢 🔿 🖄 🖾 🔒 👔		
SQL Server Configuration Manager (Local) SQL Server Network Configuration (32bit) > SQL Server Network Configuration (32bit) 4 SQL Server Network Configuration Protocols for SIM > SQL Native Client 11.0 Configuration SQL Server Network Configuration Protocols for SIM > SQL Native Client 11.0 Configuration	Protocol Name Status Shared Memory Enabled Named Pipes Disabled TCP/IP Enabled	

Right-click the TCP/IP line and choose 'Properties':

🖀 Sql Ser	ver Configuration Manager	_ D X
File Action View Help		
(+ - +) 2 🖾 🗟 🛛		
SQL Server Configuration Manager (Local) SQL Server Network Configuration (32bit) P SQL Server Network Configuration (32bit) P SQL Server Network Configuration Protocols for SIM SQL Server Network Configuration Client Protocols Aliases	Protocol Name Status Shared Memory Enabled Named Pipes Disabled Properties Help	
Displays Help for the current selection.		

TCP Dynamic Ports TCP Port	0	^
Active	Yes	
Enabled	No	
IP Address	::1	
TCP Dynamic Ports	0	_
TCP Port		
E IP4		
Active	Yes	
Enabled	No	
IP Address	127.0.0.1	≡
TCP Dynamic Ports	0	
TCP Port		
TCP Dynamic Ports	64879	
TCP Port	1433	~
Active Indicates whether the select	ted IP Address is active.	

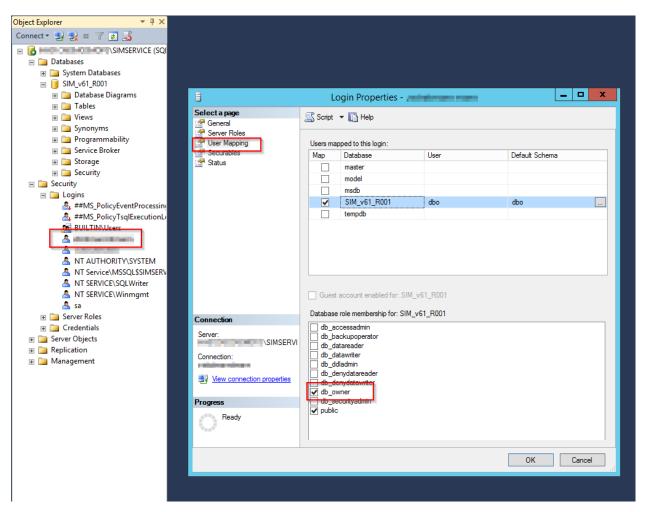
Choose the tab "IP Adresses" and change the 'TCP Port'-entry to 1433:

Afterwards, navigate to the SQL Server Services and restart the 'SQL Server ([Database Name]):

Sql Sei	ver Configuration	Manager		-	• 🗆 X
File Action View Help					
	Name	State er Stopped Duranino Start Stop Pause Resume Restart Properties Help	Start Mode Other (Boot, Syste Automatic Other (Boot, Syste Manual	Log On As NT AUTHORITY\LO NT Service\MSSQL NT AUTHORITY\NE NT Service\MSSQL	3336 0
	<				>
Displays Help for the current selection.	<u> </u>				

SIM SQL DB Installation

- 1. Create database SIM_v60_R001
- 2. Grant SilverMonkey Service Account (sim-svc-sql) "db_owner" rights for the corresponding database



- 3. Import .SQL file from installation media (.\Database) into SQL Management Studio
- 4. Make sure the USE command aims to the correct database created above and execute script

Configure IIS

Create IIS App Pool

1. Go to IIS Manager and create an AppPool with .NET CLR version set to $v4.0^{*}$:

Add Application Pool ? ×		
Name:		
SIM_v60_R001		
.NET CLR version:		
.NET CLR Version v4.0.30319 V		
Managed pipeline mode:		
Integrated V		
Start application pool immediately		
OK Cancel		

Create SilverMonkey folder

- 1. Create C:\SilverMonkey
- 2. Copy files from installation media to C:\SilverMonkey\v60\

Create IIS Application

1. Add application (e.g. to DefaultWebSite), choose SIM AppPool (created above) and target to C:\SilverMonkey\v60\Web\R001.

Hint: The alias defines the later URL: http://HOSTNAME/ALIAS

Internet Information	Services (IIS) Manager	_ □ ×
🕞 💽 💱 > Start Page		🖸 🛛 🟠 🔞 🗸
File View Help		
File View Help Connections Start Page Start Page SIMSRV009 Application Pools Sites Default Meb Site Explore Edit Permissions Edit Permissions Add Application Add Virtual Directory Edit Bindings Edit Bindings Manage Website Refresh Remove Add FTP Publishing Install Application From Gallery Deploy Deploy Rename Switch to Content View Switch to Content View	Application Server N Recent connection SIMSRV009	

/	Add Application	? X		
Site name: Default Web Site Path: /				
Alias:	Application pool:			
SIM_v60_R001	SIM_v60_R001	Select		
Example: sales				
Physical path:				
C:\SilverMonkey\v60\Web\R001				
Pass-through authentication Connect as Test Settings				
Enable Preload				
	ОК	Cancel		

2. Change value databaseConnectionString to SIM v60 DB in file C:\SilverMonkey\v60\R001\Web.Config

Install Windows Service

- 1. Go to C:\SilverMonkey\v60\WinService
- 2. Change value databaseConnectionString to SIM v60 DB in file C:\SilverMonkey\v60\WinService\SilverMonkeyService.exe.config
- 3. Execute Install.cmd with administrative rights
- 4. Open services.msc and make sure that the Windows Service SIMv60Service is installed

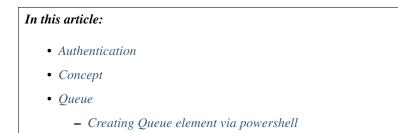
	Ser	vices				
View Help						
🗐 🖸 🛃 🚺 📷 🕨 🔲 🔝						
cal) Services (Local)						
Windows Encryption Provider He	Name ^	Description	Status	Startup Type	Log On As	
Service	Network Store Interface Ser	This service		Automatic	Local Service	
	Q Optimize drives	Helps the c		Manual	Local Syste	
Start the service	Reformance Counter DLL	Enables rem		Manual	Local Service	
	Reformance Logs & Alerts	Performanc		Manual	Local Service	
Description:	Riug and Play	Enables a c	Running	Manual	Local Syste	
Windows Encryption Provider Hos		Enforces gr	-	Manual (Trig	Local Syste	
Service brokers encryption related	Ok Power	Manages p	Running	Automatic	Local Syste	
functionalities from 3rd Party Encryption Providers to processes	Rrint Spooler	This service	Running	Automatic	Local Syste	
that need to evaluate and apply EA	AS Printer Extensions and Notif	This service		Manual	Local Syste	
policies. Stopping this will	. Problem Reports and Soluti	This service		Manual	Local Syste	
compromise EAS compliancy che that have been established by the	cks 🤹 Remote Access Auto Conne	Creates a co		Manual	Local Syste	
connected Mail Accounts	Remote Access Connection	Manages di		Manual	Local Syste	
	🤹 Remote Desktop Configurat	Remote Des	Running	Manual	Local Syste	
	🤹 Remote Desktop Services	Allows user	Running	Manual	Network S	
	🧠 Remote Desktop Services U	Allows the r	Running	Manual	Local Syste	
	🤹 Remote Procedure Call (RPC)	The RPCSS	Running	Automatic	Network S	
	🧠 Remote Procedure Call (RP	In Windows		Manual	Network S	
	Remote Registry	Enables rem		Automatic (T	Local Service	
	Resultant Set of Policy Provi	Provides a n		Manual	Local Syste	
	🧠 Routing and Remote Access	Offers routi		Disabled	Local Syste	
	🐘 RPC Endpoint Mapper	Resolves RP	Running	Automatic	Network S	
	🤐 Secondary Logon	Enables star		Manual	Local Syste	
	Secure Socket Tunneling Pr	Provides su		Manual	Local Service	
	Security Accounts Manager	The startup	Running	Automatic	Local Syste	
	Server Server	Supports fil	Running	Automatic	Local Syste	
	Shell Hardware Detection	Provides no	Running	Automatic	Local Syste	
	SIMv60Service		Running	Automatic	Local Syste	
	SIMv61Service		Running	Manual	sim-svc@p	
	Smart Card	Manages ac		Disabled	Local Service	
	Smart Card Device Enumera		Running	Manual (Trig	Local Syste	
	Smart Card Removal Policy	Allows the s		Manual	Local Syste	
	SMS Agent Host	Provides ch	Running	Automatic (D	-	
	SNMP Trap	Receives tra	Description	Manual Automatia (D	Local Service	
	Special Administration Con	Enables the Allows adm	Running	Automatic (D Manual		
	Spot Verifier	Verifies pot		Manual (Trig	Local Syste Local Syste	
	SQL Full-text Filter Daemon		Running	Manual (Trig	NT Service	
	SQL Full-text Flitter Daemon	Provides sto	-	Automatic	NT Service	
	SQL Server (SIM)		Kunning	Disabled	Network S	
	SQL Server Agent (SIM)	Executes jo		Disabled	Network S	

Test Installation

Manual

Modules:

Manual for module "Webservice"



```
- Creating a plugin
```

• Query

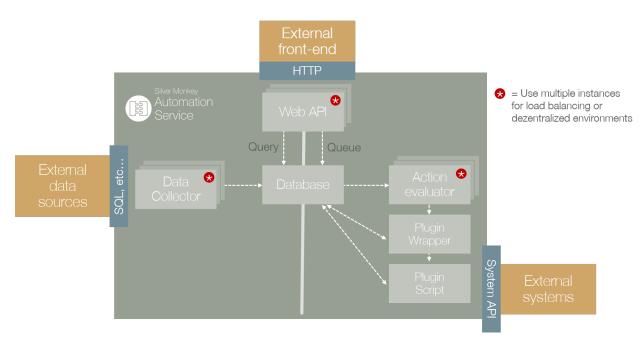
Warning: This article is under construction! Please DO NOT use any of the instructions below, yet! You may cause damage to your system. This article will be finished soon.

Authentication

Depending on the setting of the IIS application there are two possible authentication methods

- 1. Windows Authentication (recommended)
- 2. Authentication via firewall exception in IP base

Concept



The Webservice module consists of two main function: /queue and /query. Everything is accessable through a web api based on JSON format.

Queue For triggering and getting infos from (such as status) actions the /queue namespace have to be used.

All actions are created as planned actions in the SQL database table "queue". The "Action Evaluator" asks for planned actions. If an action is found, the Wrapper.ps1 is started with the information from definition XML and passes this data to the corresponding plugin PS1.

Query For retreiving dynamic data lists /query have to be used.

Queue

Adding a queue element for executing a powershell addon script

Creating Queue element via powershell

```
param(
 [string]$definition,
 [string]$url
)
Invoke-RestMethod -Uri "$url/api/queue?definition=$definition"
```

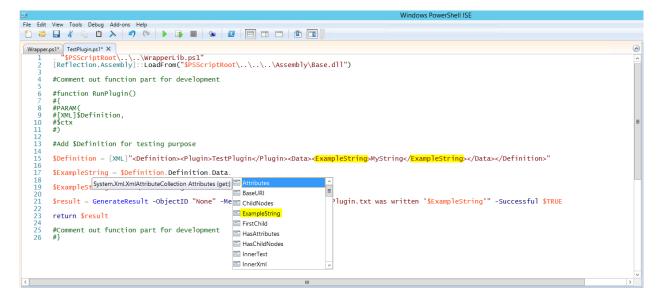
Creating a plugin

For creating plugins there are several rules:

- 1. Every plugin must consist of a main function (with specific parameters) which will be executed by the wrapper.ps1
- 2. Every plugin must return a specific class, which will be created by GenerateResult

```
. "$PSScriptRoot\..\WrapperLib.ps1"
function RunPlugin()
{
PARAM (
[XML] $Definition,
$ctx
)
    Try
    {
        #Place here general plugin functions
        #Generate a plugin result:
        $result = GenerateResult -ObjectID "None" -Message "Some return description_
↔ for queue result..." -Successful $TRUE
    }
   Catch
    {
        $ErrorMessage = $_.Exception.Message
        $result = GenerateResult -ObjectID "None" -Message "Unhandled exception_
→thrown while running plugin: $ErrorMessage" -Successful $FALSE
    }
    return $result
}
```

For development the wrapper behaviour can be simulated by commenting out the function part, and adding the XML string directly. Once the Powershell ISE run the XML variable declaration, the XML schema is available through code completion:



```
. "$PSScriptRoot\..\WrapperLib.ps1"
#Comment out function part for development
#function RunPlugin()
# {
#PARAM(
#[XML]$Definition,
#$ctx
#)
#Add $Definition for testing purpose
$Definition = [XML]"<Definition><Plugin>TestPlugin</Plugin><Data><ExampleString>
→MyString</ExampleString></Data></Definition>"
$ExampleString = $Definition.Definition.Data.ExampleString
$ExampleString >> "C:\SIMTestPlugin.txt"
$result = GenerateResult -ObjectID "None" -Message "To file C:\SIMTestPlugin.txt was_
⇔written '$ExampleString'" -Successful $TRUE
return $result
#Comment out function part for development
#}
```

Query

Getting information from the web service.

- Information will be handed in later -

Forms:

Manual for views

Note: Documentation is still in development process. Please do not hesitate to contact us on support@silvermonkey.net for further information.

This document is meant to be a source for all information regarding the administration and installation of Silver Monkey v6 Views.

In this article:
• Views
– Data
– Form
– HTML-Elements
– Atributes
– Button
– Lists
– WorkflowControl
– ButtonMore
- WorkflowChart
– Chart
– Search
– Rating
– Tile
– NavTree
– Repeater
– DataTable
– List
– Splitter
– Functionbar
– Frame
– Header
– Script
– Style
- General configuration

Views

Data

All data which is used on the page is inserted via sql-statement.

Form

HTML-Elements

Atributes

Atribute	Description
Туре	Static. If no other type is defined, textbox is going to be used as standart
Data	SQL Queries used to generate data for this particular configuration
ID	ID of the controlling element. If no ID is set while configuring, one will automatically be generated
Title	Name of the view
Format	Design options to format the views, typo, color, fontsize, etc
Class	
Style	css sheet for general style options
Watermark	digitally watermark against copyright infringement

Button

Button are triggers in order to execute certain scripts or commands with interaction from the user. The table below shows different configuration elements.

Atribute	Description
ID	Unique Name used for referencing
Function	

Lists

Display entrys of another class (e.g. table). It is possible to use placeholders for attributes in this statement.

Atribute	Description
ID	Unique name, used for referencing and identifying.
Command	

An example of how to use the different attributes.

WorkflowControl

ButtonMore

Is used to initiate furher actions for this button. For example postPushButton scripts as seem in the example below.

WorkflowChart

Visualizes workflows through bpmn or epk diagramm.

Insert jpeg here of visualized workflow.

Explanation how it works to implement one of these workflows

Chart

A visualization of numbers in a diagram. Used mostly in dashboards to show peaks of downloads or orders in this tool.

insert jpeg here

insert how it works below

Data comes from an sql?

Search

A function to iterate through the whole database comparing the search item with it. Can be implemented through a search bar or used in the configuration as seen below.

Rating

An attribute used for items such as hardware or softwware rated by the users who ordered them in self service. Based on this rating filtering and sorting items in different views. The shop area for self service is an example for. every item has an additional field for a rating from 0-5.

Insert shop picture unsorted and sorted.

Tile

Tiles are design elements for webdesign. A tile contains branding and color is easy to reproduce. Different color- and fontsets can be used design a constant look for the website.

NavTree

A NavTree uses an already existing table to build a navigation element out of it. Every column represents the first level of navigation and it contains all elements as a second level navigation in that column.

Repeater

A funcion to repeat certain commands. Refreshing a list in a certain view for example.

DataTable

A DataSet is made up of a collection of tables, relationships, and constraints. In ADO.NET, DataTable objects are used to represent the tables in a DataSet. A DataTable represents one table of in-memory relational data; the data is local to the .NET-based application in which it resides, but can be populated from a data source such as Microsoft SQL Server using a DataAdapter. The DataTable class is a member of the System.Data namespace within the .NET Framework class library. You can create and use a DataTable independently or as a member of a DataSet, and DataTable objects can also be used in conjunction with other .NET Framework objects, including the DataView. You access the collection of tables in a DataSet through the Tables property of the DataSet object. The schema, or structure of a table is represented by columns and constraints. You define the schema of a DataTable using DataColumn objects as well as ForeignKeyConstraint and UniqueConstraint objects. The columns in a table can map to columns in a data source, contain calculated values from expressions, automatically increment their values, or contain primary key values. In addition to a schema, a DataTable must also have rows to contain and order data. The DataRow class represents the actual data contained in a table. You use the DataRow and its properties and methods to retrieve, evaluate, and manipulate the data in a table. As you access and change the data within a row, the DataRow object maintains both its current and original state. You can create parent-child relationships between tables using one or more related columns in the tables. You create a relationship between DataTable objects using a DataRelation. DataRelation objects can then be used to return the related child or parent rows of a particular row. For more information, see Hinzufügen von 'DataRelations'.

List

Represents a strongly typed list of objects that can be accessed by index. Provides methods to search, sort, and manipulate lists.

Splitter

Represents a splitter control that enables the user to resize docked controls.

Functionbar

The bar simply lists all the function definitions inside the file. The pattern matching used to generate the function list.

Frame

A frame is used to build a website, to make it more navigateable. Certain elements of the website are put into single frames to make resizing more manageable.

Header

Menubar to navigate trough a certain page/view. It is built up like a navigation-element.

Script

Scripts are interpreted programms to automate processes. They can be implemented through a variety of triggers and actions.

Style

A style is used to implement a general configuration of style elements like color, font, fontsize and branding.

General configuration

How to generally configurate your own views is descriped here. The items are linked to the configuration items in order to give further explanation. ..Link every item to its own site

..code-block:: <View Icon="Place designated icon here">

<Name Lang="DE">**Name of the view used for referencing**</Name> <Data>

SQL-Query to get the needed data

</Data> <Form> specify form of the view here

<Header> <HeaderMenuItem Title="First Level menu item" Link="Link to the specified view" /> <HeaderMenuMore Title="First Level menu item">

<HeaderMenuItem Title="Second level menu item" Link="Link to the specified view" />

</HeaderMenuMore>

</Header> <Splitter>

<Left>

<List Id="List" Command="LoadFrame('EditItem', 'View.aspx?ViewId=40050&Id='+strId, strDirect</pre>

<ListItem>

```
<div class="Content"> <div class="Title">{DisplayName}</div> <div
class="Text">{Count} Installationen</div>
```

</div>

</ListItem>

</List>

</Left> <Right>

<Frame Id="EditItem" />

</Right>

</Splitter>

</Form>

</View>

Changelog

Version	TicketId	Product	Description
6.0.0	None	Initial Version	

Supported configurations

Supported Microsoft SQL Server Versions

Product	Version	Supported
SQL Server 2012	11.0	Yes
SQL Server 2014	12.0	Yes
SQL Server 2016	13.0	Yes

Supported Microsoft Windows Server Versions

Product	Version	Supported
Windows Server 2012	NT 6.2	Yes
Windows Server 2012 R2	NT 6.3	Yes
Windows Server 2016	NT 10.0	Yes

Supported .Net Framework Versions

• Hence the code was written in .Net Core 1.0 only this version is supported

Support

If you have further questions regarding out products or the documentation contact us:

- Tel. : +49 40 226 383 160
- E-Mail: Support@SilverMonkey.net

If you need general Information about our Products visit: http://www.SilverMonkey.net