Silverlight - 1.4

The **Silverlight extension** is deprecated and no new development will be actioned. All new features and functionality for the support of Silverlight are now handled instead by the **.NET XAML** extension. Please see the section of documentation entitled **Existing extensions for WPF and Silverlight** for more information about the .NET XAML extension and the impacts of moving to it.

Summary: This document provides basic information about the beta release of the extension providing Silverlight support for C# and VB.NET

Extension ID

com.castsoftware.silverlight

What's new?

See Silverlight 1.4 - Release Notes for more information.

Description

This extension provides support for **Silverlight**. The calculation of Automated Function Points for your .NET analyses will be supplemented through the creation of new objects and links specific to the Silverlight framework that will link back to objects/links produced by the base .NET analyzer.

In what situation should you install this extension?

If your .NET application contains Silverlight source code and you want to view these object types and their links, then you should install this extension.

Silverlight framework support

The following Silverlight frameworks are supported by this extension:

Version	Supported
All versions up to 5.0	✓

Function Point, Quality and Sizing support

This extension provides the following support:

- **Function Points (transactions)**: a green tick indicates that OMG Function Point counting and Transaction Risk Index are supported
- **Quality and Sizing**: a green tick indicates that CAST can measure size and that a minimum set of Quality Rules exist

Function Points (transactions)	Quality and Sizing
✅	❌

CAST AIP compatibility

This extension is compatible with:

CAST AIP release	Supported	Technology
8.3.x	✓	C# and VB.NET
8.2.x	✓	C# and VB.NET

Supported DBMS servers

This extension is compatible with the following DBMS servers:

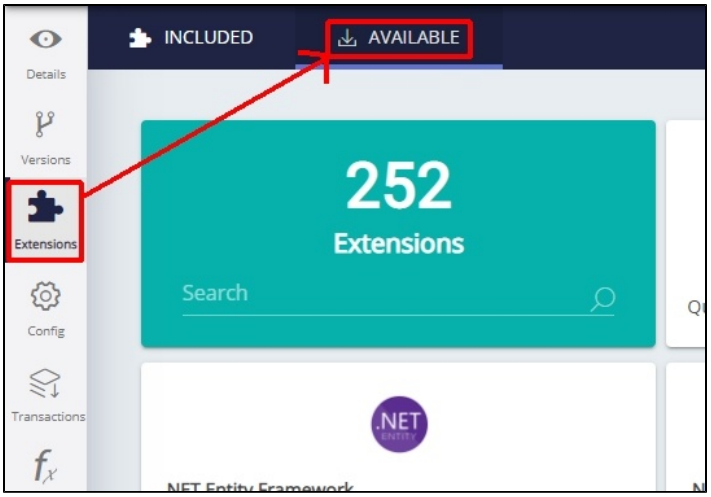
DBMS	Supported
CSS/PostgreSQL	✓
Oracle	✓
Microsoft SQL Server	✗

Prerequisites

✓	An installation of any compatible release of CAST AIP (see table above)

Download and installation instructions

Include the extension using the interface in AIP Console:



There is nothing further to do. Follow the instructions below to run a new analysis/snapshot to generate new results:

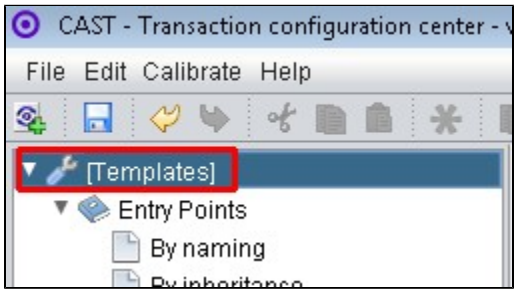
- **Advanced onboarding - run and validate the initial analysis**
- **Advanced onboarding - snapshot generation and validation**

CAST Transaction Configuration Center (TCC) Entry Points

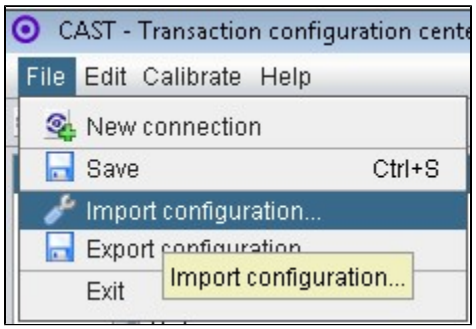
In **Silverlight 1.2.x**, if you are using the extension with **CAST AIP 8.3.x**, a set of Silverlight specific **Transaction Entry Points** are now **automatically imported** when the extension is installed. These **Transaction Entry Points** will be available in the CAST Transaction Configuration Center:

Manual import action for CAST AIP 8.2.x

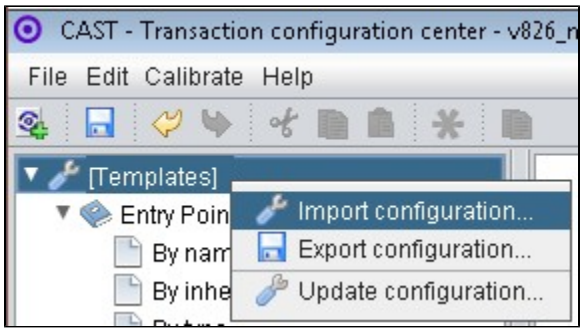
- Locate the .TCCSetup file in the extension folder: **Configuration\TCC\DotNet_Silverlight.TCCSetup**
- In the CAST Transaction Configuration Center, ensure you have selected the **Templates** node:



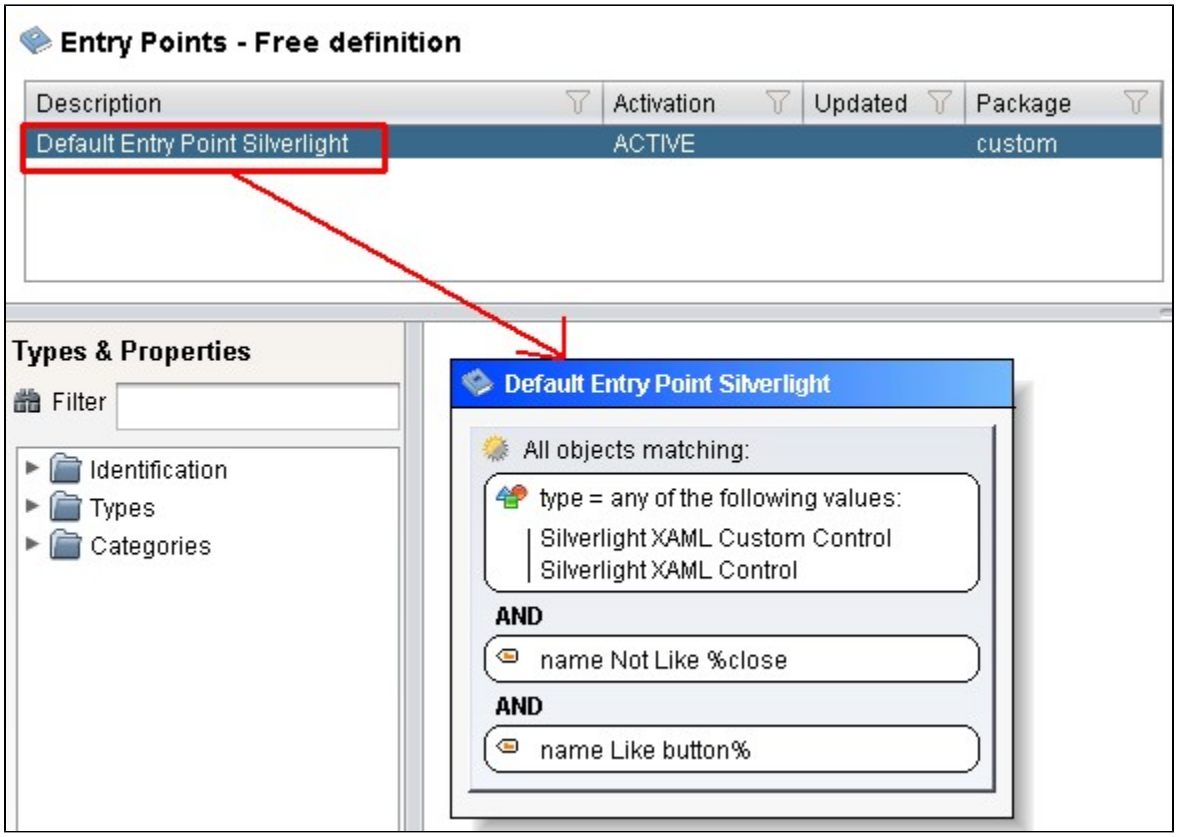
- This .TCCSetup file is to be imported into the CAST Transaction Calibration Center using either the:
  - **File** > **Import Configuration** menu option:



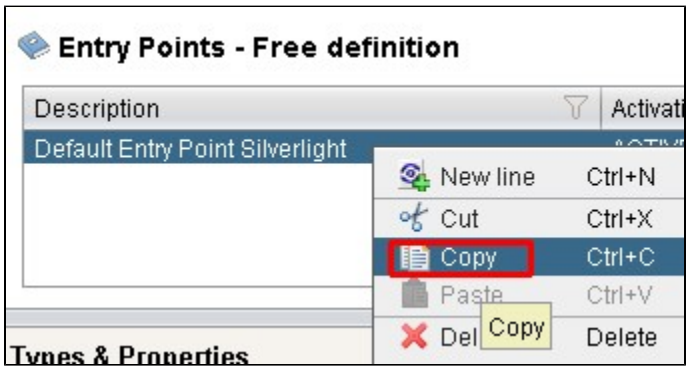
  - Or right clicking on the **Template node** and selecting **Import Configuration**:



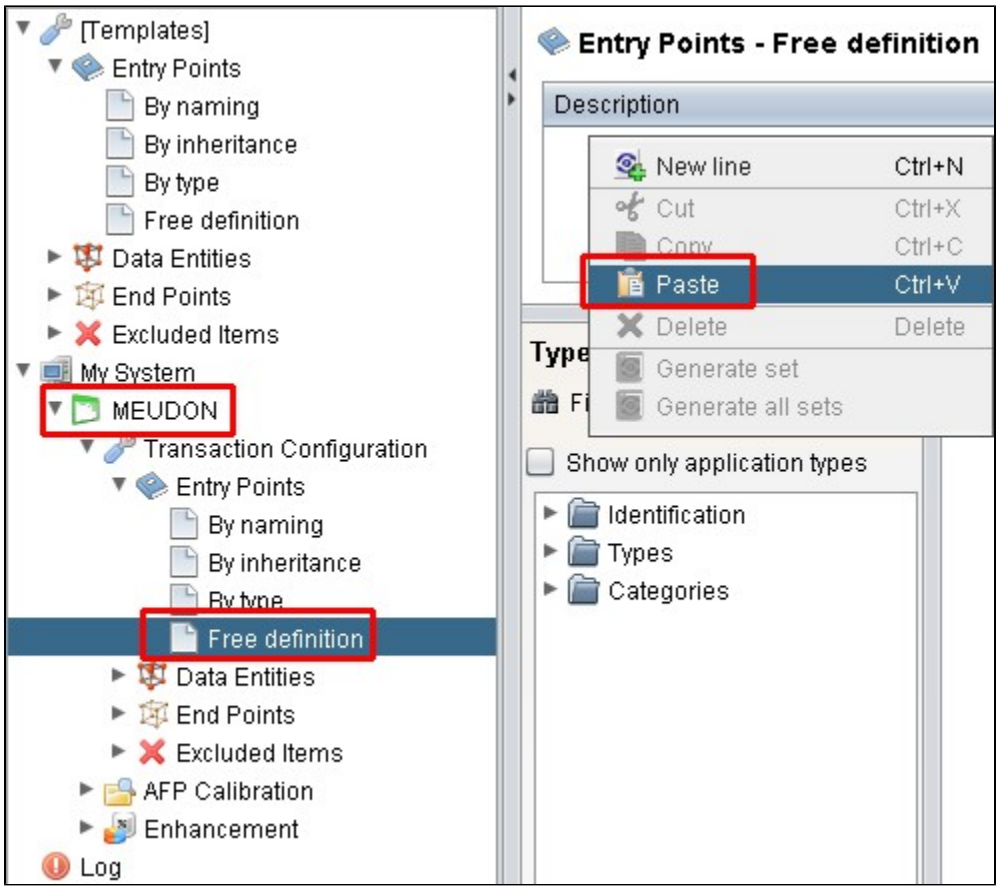
- The import of the "**DotNet_Silverlight.TCCSetup**" file will provide you with a sample Transaction Entry point in the **Free Definition** node under **Templates**:



- Now right click the "**Default Entry Point Silverlight**" item and select copy:



- Paste the item into the **equivalent node** under the **Application**, for example, below we have copied it into the **Application MEUDON**:



Packaging, delivering and analyzing your source code

Once the extension is installed, no further configuration changes are required before you can package your source code and run an analysis. The process of packaging, delivering and analyzing your source code does not change in any way:

- **Package and deliver** your application (that includes source code which uses **Silverlight**) in the exact same way as you always have.
- **Analyze** your delivered J2EE application source code in the CAST Management Studio in the exact same way as you always have - the source code which uses **Silverlight** will be detected and handled correctly.

What results can you expect?

Once the analysis/snapshot generation has completed, you can view the results in the normal manner. The following **objects** and **links** will be displayed in CAST Enlighten:

Objects

All objects are represented under the **File browser** > **Xaml Source file** folders in CAST Enlighten:

Icon	Object type
	Silverlight XAML Control
	Silverlight XAML Custom Control

Note that if the **Name Attribute** of an object is present, then it will be used to display that object in CAST Enlighten. For example:

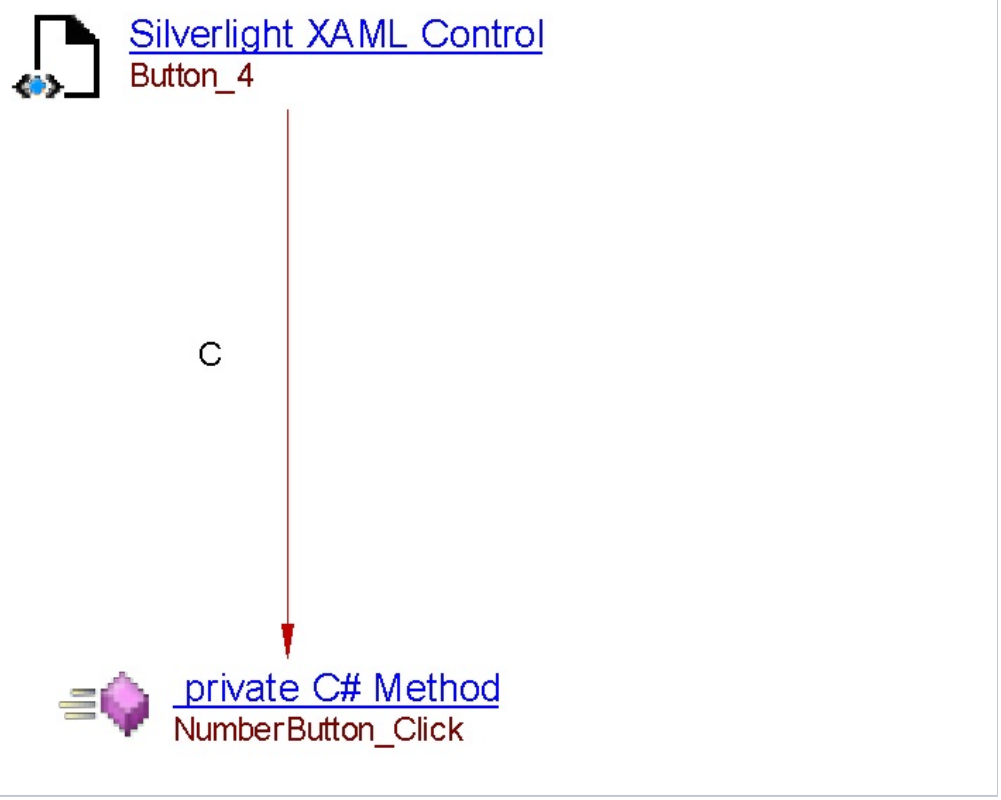
Name not present	Name present

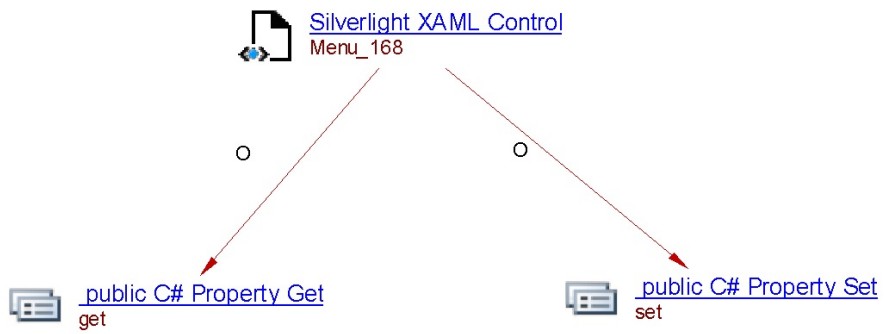
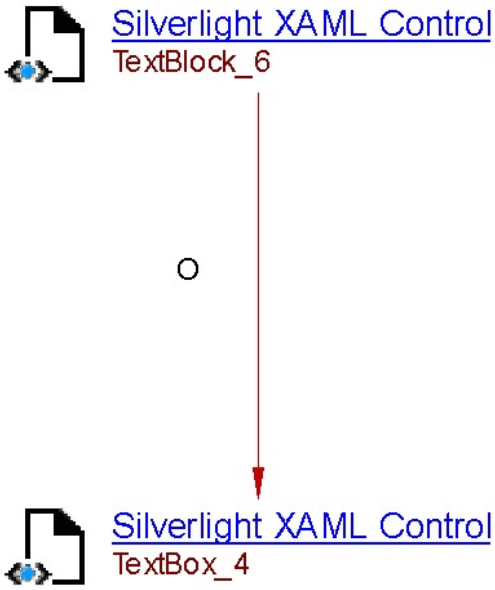
The following objects are detected:

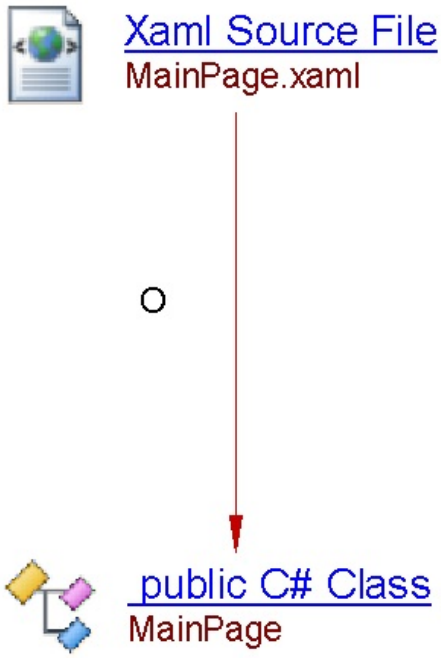
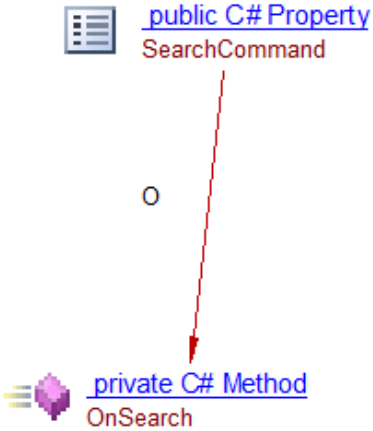
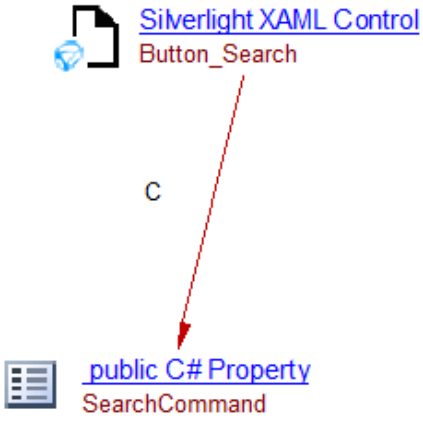
Border
BulletDecorator
Button
Calendar
Canvas
CheckBox
ComboBox
ContextMenu
DataGrid
DatePicker
DockPanel
DocumentViewer
DropShadowBitmapEffect
Expander
FlowDocumentPageViewer
FlowDocumentReader
FlowDocumentScrollViewer
Frame
Grid
GridSplitter
GroupBox
HyperlinkButton
Image
Label
ListBox
ListView
Menu
Panel
PasswordBox
Popup
ProgressBar
PrintDialog
RadioButton
RepeatButton
Ribbon

RichTextBox
ScrollBar
ScrollViewer
Separator
Slider
StackPanel
StatusBar
TabControl
TextBlock
TextBox
ToolBar
ToolTip
TreeView
UserControl
WrapPanel
Viewbox

Links

Source	Link type	Target	Example
XAML Control	call	Action Event method implemented in source file	

XAML Control	relyOn	Set and get accessors of Property implemented in source file	
XAML Control	relyOn	XAML Control which is used by another XAML Control	
XAML Control	call	Binding property in DataContext	-

XAML Source File	relyOn	Referred Class	
C# property (relay command)	relyOn	C# method (delegate	
XAML Control	call	C# property (relay command)	

XAML Source File	relyOn	Datacontext class	

Limitations

In this section we list the most significant functional limitations that may affect the analysis of applications using Silverlight:

- **Binding in code** is not supported - see https://msdn.microsoft.com/en-us/library/ms742863(v=vs.110).aspx?cs-save-lang=1&cs-lang=csharp#code-snippet-1 for an example
- **Binding links** are not handled correctly when the same **binding target** exists in different classes
- **The direction of the data flow** (Binding.Mode properties such as OneWay, TwoWay and OneWayToSource) is not supported - see https://msdn.microsoft.com/en-us/library/ms752347(v=vs.110).aspx#direction_of_data_flow for an example
- **The RelativeSource property** (Gets or sets the binding source by specifying its location relative to the position of the binding target) is not supported - see https://msdn.microsoft.com/en-us/library/system.windows.data.binding.relativesource(v=vs.110).aspx for an example
- Some XAML control objects which are visible in CAST Enlighten may not be seen in the CAST Application Engineering Dashboard.
- Links between XAML Control objects and code embedded in XAML are not supported.