

HTML5 and JavaScript - 1.4

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Target audience:

Users of the extension providing HTML5/JavaScript support for Web applications.



Summary: This document provides basic information about the extension providing HTML5/JavaScript support for Web applications.

What's new:

- This new version optimizes memory consumption.

Description

This extension provides support for **HTML5/JavaScript**.

In what situation should you install this extension?

The analyzer could be used if your application is a **Web Application**, has **HTML/Javascript/CSS files** and/or contains HTML/Javascript **fragments**.

Files analyzed

- *.html
- *.js
- *.css

The analyzer will be used to handle **HTML files**:

- creates one "HTML5 Source Code" object that is the caller of html to js links and a transaction entry point
- broadcasts tags and attributes/values to other CAST extensions such as [AngularJS](#). Other extensions will not need to analyze the files themselves.

The analyzer will be used to handle **Javascript files**:

- creates "functions"
- local call links between function calls and functions inside each JavaScript file.

The analyzer will also find SQL queries run by **ExecuteSQL** Javascript annotation

NEW

The analyzer also provide the following features:

- Automated Function Point counting.
- Checksum, number of code lines, number of comment lines, comments are present.
- Local and global resolution is done when function is called directly through its name (inference engine resolution is not available).
- For global resolution, caller is searched in all **.js** files. If only one callee is found, a link is created. If several callees are found, the analyzer watches inclusions in html files to see if it can filter the callee. If nothing is found in html files to filter, links are created to all possible callees.
- Files whose names end with **.min.js** and **Spec.js** (tests) are ignored.



Note that by default some files are automatically excluded from the analysis, typically third-party frameworks which are not required. Please see the `filters.json` file located at the root of the extension folder for a complete list of default exclusions.

Transaction configuration

HTML5 source code: it represents the whole HTML file content.

Supported Languages

Technology (version)	Supported
HTML (1 to 5)	✓
JavaScript (1 to 1.8.1)	✓
JavaScript ECMA 6	✗
CSS (1 to 3)	✓

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
✓	✓

Comparison with existing support for JavaScript in CAST AIP

CAST AIP has provided support for analyzing JavaScript via its **J2EE and .NET analyzers** (provided out of box in CAST AIP) for some time now. The **HTML5/JavaScript extension** also provides support for JavaScript but with a focus on web applications. CAST highly recommends that you use this extension if your Application contains JavaScript and more specifically if you want to analyze a web application, however you should take note of the following:

- You should ensure that you configure the extension to NOT analyze the back end web client part of a .NET or J2EE application.
- You should ensure that you configure the extension to ONLY analyze the front end web application built with the HTML5/JavaScript that communicates with the back end web client part of a .NET or J2EE application.
- If the back end web client part of a .NET or J2EE application is analyzed with the HTML5/JavaScript extension and with the native .NET/J2EE analyzers, then your results will reflect this - there will be duplicate objects and links (i.e. from the analyzer and from the extension) therefore impacting results and creating erroneous Function Point data.

CAST AIP compatibility

This extension is compatible with:

CAST AIP release	Supported
8.2.x	✓
8.1.x	✓
8.0.x	✓
7.3.4 and all higher 7.3.x releases	✓

Supported DBMS servers

This extension is compatible with the following DBMS servers:

CAST AIP release	CSS2	Oracle	Microsoft
All supported releases	✓	✓	✗


Prerequisites

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

Please see:

- <http://doc.castsoftware.com/display/EXTEND/Download+an+extension>
- <http://doc.castsoftware.com/display/EXTEND/Install+an+extension>

 The latest [release status](#) of this extension can be seen when downloading it from the CAST Extend server.

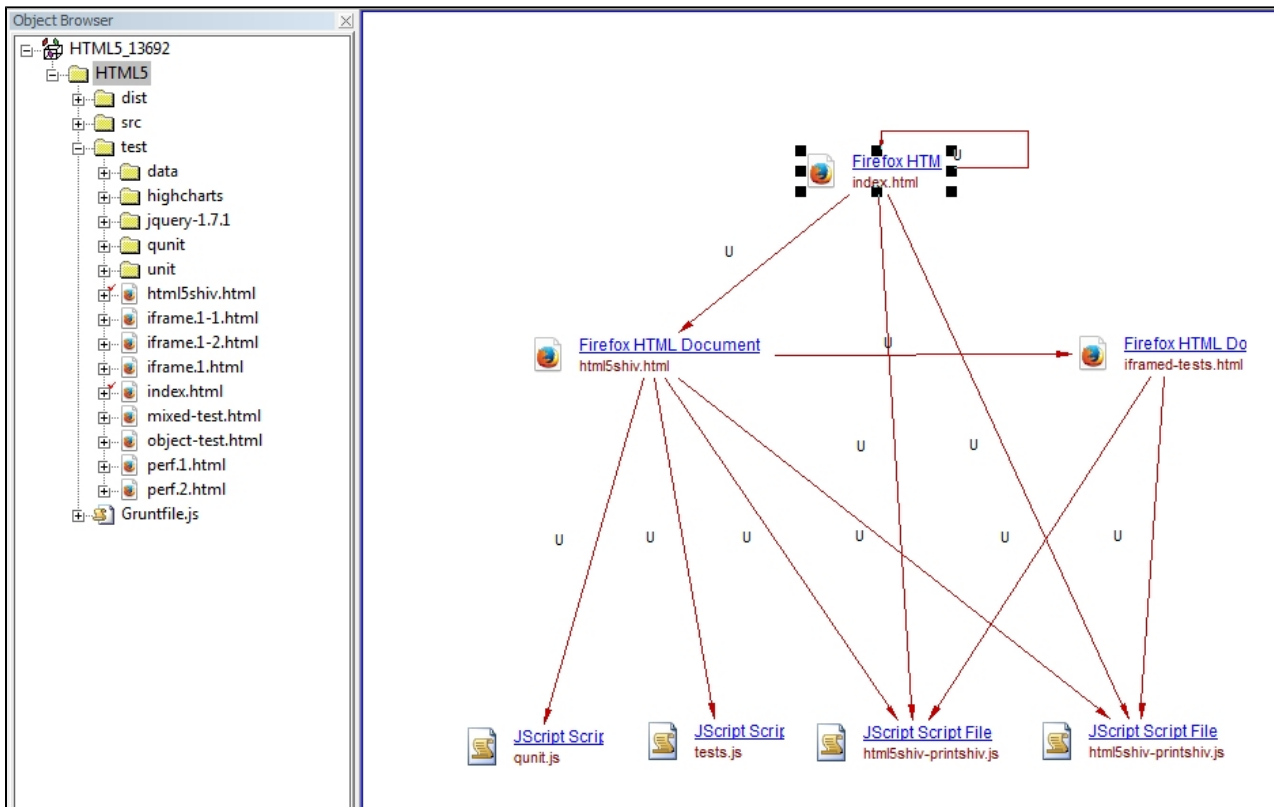
Packaging, delivering and analyzing your source code

Please see: [HTML5 and JavaScript - Packaging, delivering and analyzing your source code](#)

What results can you expect?

Once the analysis/snapshot generation has completed, you can view the results in the normal manner:

CAST Enlighten





CAST Management Studio analysis content






Objects Set Content	
Type	Number of Objects
HTML5 JavaScript function	736
AngularJS Model function	272
AngularJS Model variable	156
File which contains source code	98
AngularJS POST resource service	48
Universal Directory	45
AngularJS Directive	42
HTML5 source code	37
AngularJS GET resource service	34
AngularJS directive link function	28
AngularJS Controller	24
AngularJS Factory	22
HTML5 JavaScript source code	22
AngularJS PUT resource service	14
AngularJS Directive Controller	12
Universal Project	1

OK

Objects

The following objects are displayed in CAST Enlighten:

Icon	Description
	JavaScript file
	HTML5 Source Code
	HTML5 CSS Source Code
	HTML5 CSS Source Code Fragment
	HTML5 JavaScript Function
	HTML5 JavaScript Source Code
	HTML5 JavaScript Source Code Fragment

	HTML5 Web Socket Service
	HTML5 Get XMLHttpRequest Service
	HTML5 Update XMLHttpRequest Service
	HTML5 Post XMLHttpRequest Service
	HTML5 Delete XMLHttpRequest Service

Rules

The list of rules is available here:

<https://technologies.castsoftware.com/rules?riH=AIP/extensions/com.castsoftware.html5/versions/1.4.0-funcrel/quality-rules>