

# Plot Plugin

## Plugin Information

View Plot [on the plugin site](#) for more information.



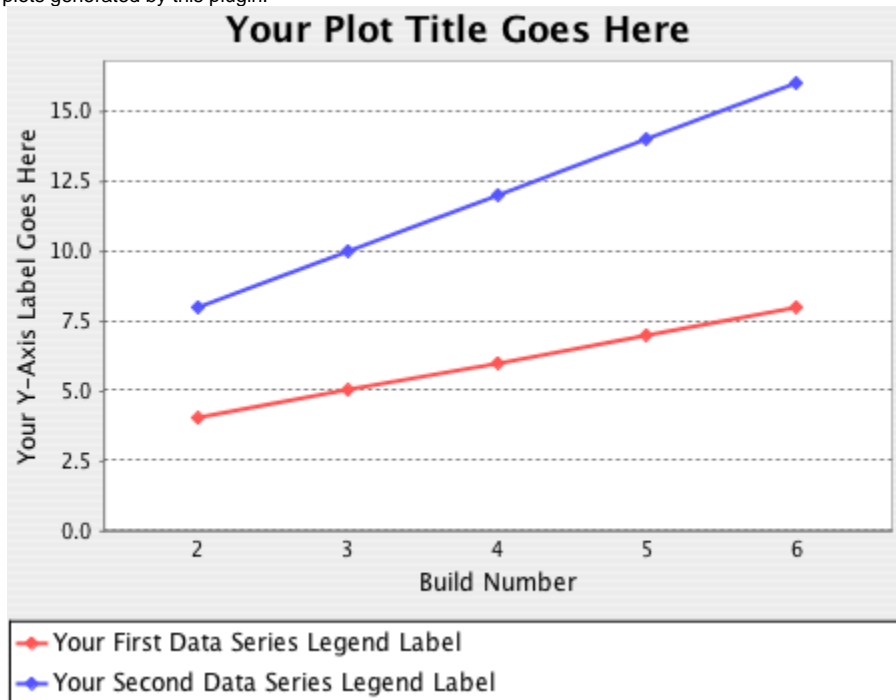
2.0.0 version of the plugin brings Jenkins Pipeline support. It might break compatibility if you update from 1.X versions, as it contains some API changes. Please test in non-production environment before update.

This plugin provides generic plotting (or graphing) capabilities in Jenkins.

This plugin will **plot** one or more **single values variations across builds** in one or more plots. Plots for a particular job (or project) are configured in the job configuration screen, where each field has additional **help information**. Each plot can have one or more lines (called data series). After each build completes the plots' data series latest values are pulled from **Java properties file(s), CSV file(s), or XML file(s)** via an XPath (which you should have generated during the build) somewhere below your workspace. Data for each plot is stored in a CSV file within the job's root project directory.

It can generate various kind of plots, including **Area, Bar, Line, Stacked Bar, Waterfall...**

Here is an example of the plots generated by this plugin:



## Configuration

### Currently supported parameters

The currently supported parameters are:

- **width** (int, default: 750) The width of the plot in pixels.
- **height** (int, default: 750) The height of the plot in pixels.
- **rightBuildNum** (int, default:  $2^{38} - 1$ ) The right-most build number on the plot.
- **hasLegend** (boolean, default: true) Whether or not the plot has a legend.
- **urlNumBuilds** (string, default:  $2^{38} - 1$ ) Number of builds back to show on this plot from URL.
- **urlTitle** (string, default: "") Title of plot from URL.
- **urlStyle** (string, default: "") Style of plot from URL.
- **urlUseDescr** (boolean, default: false) Use description flag from URL.
- **title** (string, default: "") Title of plot.
- **yaxis** (string, default: "") Y-axis label.
- **series** (list) List of data series.
- **group** (string) Group name that this plot belongs to.
- **numBuilds** (string, default: "") Number of builds back to show on this plot. An empty string means all builds. Must not be "0".

- **csvFileName** (string, default: "\$ROOT\_DIR/plot-XXXX.csv") The name of the CSV file that persists the plots data. The CSV file is stored in the projects root directory. This is different from the source CSVle that can be used as a source for the plot.
- **csvLastModification** (long, default: "last modified date") The date of the last change to the CSV file.
- **style** (string, default: "line") Style of plot: line, line3d, stackedArea, stackedBar, etc.
- **useDescr** (boolean, default: false) Whether or not to use build descriptions as X-axis labels.
- **keepRecords** (boolean, default: false) Keep records for builds that were deleted.
- **exclZero** (boolean, default: false) Whether or not to exclude zero as default Y-axis value.
- **logarithmic** (boolean, default: false) Use a logarithmic Y-axis.
- **yaxisMinimum** (string, default: "") Minimum y-axis value.
- **yaxisMaximum** (string, default: "") Maximum y-axis value.

For a full list of parameters the best place to view is [Plot.java](#) class.

## Example Usage to generate detailed PMD reports

Attached is a [Perl script](#) which generates more detailed "summaries" out of PMD report files. We use this for several *code analysis* projects, all named `trunk.codeanalysis.prefix`.

To have all resulting plots on one page, give all Plots the same *plot group*. Because each code quality has its very own range, define each on a separate plot, not as an additional data series.

## Pipeline job configuration

You can generate the required [Scripted Pipeline](#) syntax via the [Snippet Generator](#) by choosing the "plot: Plot build data" step.

Below you can find sample configuration which is auto-generated using [Snippet Generator](#).

```
plot csvFileName: 'plot-8e54e334-ab7b-4c9f-94f7-b9d8965723df.csv',
    csvSeries: [[
        file: 'data.csv',
        exclusionValues: '',
        displayTableFlag: false,
        inclusionFlag: 'OFF',
        url: '' ]],
    group: 'Plot Group',
    title: 'Plot Title',
    style: 'line',
    exclZero: false,
    keepRecords: false,
    logarithmic: false,
    numBuilds: '',
    useDescr: false,
    yaxis: '',
    yaxisMaximum: '',
    yaxisMinimum: ''
```

- **csvFileName** - autogenerated value, but you might want to change it to something more descriptive for your case.
- **file** - source file for plot generation (relative to workspace)

## JIRA issues

If you have any proposals/bug reports, please create an issue on Jenkins JIRA.

Key	Summary	T	Created	Updated	Due	Assignee	Reporter	P	Status	Resolution
JENKIN S-56291	Plot Plugin + Jenkinsfile: New plots will not be displayed in Plot section until the build succeeds		Feb 26, 2019	Feb 27, 2019		Veaceslav Gaidarji	Bharath R		OPEN	Unresolved
JENKIN S-56086	Tabs missing in configuration page after adding plot to freestyle job		Feb 11, 2019	Mar 08, 2019		Veaceslav Gaidarji	Micha Marcinkowski		OPEN	Unresolved
JENKIN S-54745	Specify font size, or automatically scale it as plot size grows		Nov 21, 2018	Nov 21, 2018		Veaceslav Gaidarji	Alberto Mardegan		OPEN	Unresolved
JENKIN	Allow downloading raw		Nov 20,	Jan 15,		Veaceslav	Alberto			Unresolved

S-54714	CSV data for external processing		2018	2019	Gaidarji	Mardegan		<input type="button" value="OPEN"/>	
JENKIN S-54307	Plot plugin is not working for zero values on logarithmic scale		Oct 29, 2018	Oct 30, 2018	Veaceslav Gaidarji	david gomez		<input type="button" value="OPEN"/>	Unresolved
JENKIN S-54017	Plot for Color blind		Oct 11, 2018	Oct 11, 2018	Veaceslav Gaidarji	Tim Schlüter		<input type="button" value="OPEN"/>	Unresolved
JENKIN S-54016	Independent plot data table option		Oct 11, 2018	Oct 11, 2018	Veaceslav Gaidarji	Tim Schlüter		<input type="button" value="OPEN"/>	Unresolved
JENKIN S-53992	Multiple use of xml file in plots		Oct 10, 2018	Oct 10, 2018	Veaceslav Gaidarji	Tim Schlüter		<input type="button" value="OPEN"/>	Unresolved
JENKIN S-53939	Plot plugin configuration in pipeline script - run job on remote node - graph not shown		Oct 08, 2018	Dec 26, 2018	Veaceslav Gaidarji	Lubov Shilin		<input type="button" value="OPEN"/>	Unresolved
JENKIN S-52249	Parallel build led to AIOBE in Plot. savePlotData		Jun 28, 2018	Jan 17, 2019	Veaceslav Gaidarji	Reinhold Füreder		<input type="button" value="OPEN"/>	Unresolved
JENKIN S-52128	NullPointerException in Plot plugin (pipeline)		Jun 21, 2018	Jul 08, 2018	Veaceslav Gaidarji	Torben Thellefsen		<input type="button" value="OPEN"/>	Unresolved
JENKIN S-51547	Plot Plugin fails with number in title of jmx step		May 25, 2018	May 25, 2018	Veaceslav Gaidarji	Rich Peters		<input type="button" value="OPEN"/>	Unresolved
JENKIN S-51532	Plot plugin extreme memory leak with matrix jobs		May 24, 2018	May 24, 2018	Veaceslav Gaidarji	Cameron		<input type="button" value="OPEN"/>	Unresolved
JENKIN S-51200	Plot plugin loses historical data on configuration change (Multi-configuration project)		May 08, 2018	May 08, 2018	Kohsuke Kawaguchi	Lachie Murray		<input type="button" value="OPEN"/>	Unresolved
JENKIN S-50363	Failed to parse Double value from String. Not a problem, result already set		Mar 23, 2018	Aug 17, 2018	Veaceslav Gaidarji	John V		<input type="button" value="REOPENED"/>	Unresolved
JENKIN S-50215	Jenkins Plot Plugin is not plotting data.		Mar 16, 2018	Mar 16, 2018	Veaceslav Gaidarji	gulshan kumar		<input type="button" value="OPEN"/>	Unresolved
JENKIN S-49672	Jenkins plot-plugin issue, graph not getting updated after every build.		Feb 21, 2018	Feb 21, 2018	Veaceslav Gaidarji	gulshan kumar		<input type="button" value="OPEN"/>	Unresolved
JENKIN S-49158	Add plot plugin option "useDescrIn[Value Dot][Tooltip Label]"		Jan 25, 2018	Jan 25, 2018	Veaceslav Gaidarji	Reinhold Füreder		<input type="button" value="OPEN"/>	Unresolved
JENKIN S-48813	Support non-file based plot data series		Jan 05, 2018	Jan 05, 2018	Veaceslav Gaidarji	Reinhold Füreder		<input type="button" value="OPEN"/>	Unresolved
JENKIN S-43708	Plot data truncated after failed build		Apr 20, 2017	Apr 20, 2017	nidaley	David Hows		<input type="button" value="OPEN"/>	Unresolved

Showing 20 out of 57 issues

## Change Log

Version 2.1.0 (Jun 4, 2018)

- Use @DataBoundSetter for optional pipeline parameters ([JENKINS-50636](#), [PR-48](#)).
  - Base Jenkins version was updated to 2.0 version.

- Thanks to [rmstyczula](#)

#### Version 2.0.5 (May 15, 2018)

- Update values table CSS style and number formatting ([PR-47](#)).
  - Thanks to [Radek Doulik](#)

#### Version 2.0.4 (May 5, 2018)

- Fix chart style value comparison, STACKED\_AREA in particular ([JENKINS-50924](#)).

#### Version 2.0.3 (January 24, 2018)

- Pass PlotBuilder CTOR params to Plot ([JENKINS-48887](#)).
  - "useDescr"/"keepRecords"/"exclZero"/"logarithmic" parameters didn't work properly in pipeline.
  - Thanks to [Reinhold Füreder](#)
- Use "regular numeric tick labels" by default for [LogarithmicAxis](#) ([JENKINS-48888](#))
  - Thanks to [Reinhold Füreder](#)

#### Version 2.0.2 (January 3, 2018)

- Fixed ConcurrentModificationException in PlotBuildAction.java ([JENKINS-48465](#))
- Fixed typo's in help files ([JENKINS-48530](#))
- Moved plugin description to wiki ([JENKINS-48537](#))
- Configured Checkstyle and reformatted the project according to the rules

#### Version 2.0.0 (November 2, 2017)

- Added support for [Pipeline Plugin](#) ([JENKINS-35571](#)).
  - **Note:** Might break compatibility if you update from 1.X version. Update carefully!

#### Version 1.11 (April 26, 2017)

- Final Release: includes all PRs and fixes up to now

#### Version 1.9 (Mar 15, 2015)

- Added an option to draw plots using a logarithmic Y-axis.
- Fixed %name% and %index% replacements in the URL for XML files (<http://stackoverflow.com/q/13271710/2654518>).
- Added %build%, build number placeholder.

#### Version 1.8 (Sep 28, 2014)

- Added option to exclude zero as default Y-axis value.
- Added option to keep records for deleted builds ([JENKINS-22575](#)).
- Fixed matrix project support ([JENKINS-24666](#)).
- Fixed %name% and %index% replacements in the URL (<http://stackoverflow.com/q/13271710/2654518>).

#### Version 1.7 (Mar 11, 2014)

- Fixed issues parsing XML files, introduced in version 1.6 ([JENKINS-21493](#)).

#### Version 1.6 (Jan 16, 2014)

- Fixed plot data being retained for deleted builds ([JENKINS-4934](#)).
- Fixed data out of sync with graph ([JENKINS-15358](#)).
- Plugin is now available for maven2 ([JENKINS-8478](#)) and matrix jobs ([JENKINS-15396](#)).
- Improved XPath support.

#### Version 1.5 (Jul 10, 2011)

- Thread safety fix ([JENKINS-9662](#)).
- Japanese localization.

#### Version 1.4 (Nov 21, 2010)

- Use Uri.rawencode instead of URLEncoder.encode for Plot Group ([JENKINS-7245](#), [JENKINS-8143](#)).

#### Version 1.3 (Jul 20, 2010)

- Configurable graph style for each plot.
- Read data from XML files ([JENKINS-2796](#)).
- Read data from CSV files ([JENKINS-2899](#)).
- Update code for more recent Hudson.

