

Config Rotator Plugin

Plugin Information

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

Developed by



Sponsored by



Config Rotator, now with Git support

Introduction

In ClearCase UCM a composite baseline describes dependencies between different baselines of components in a parent/child relation.

This 'dependency graph' in a composite baseline describes a configuration, where one specific baselines defines a relation to other specific baselines – potentially nested in several layers.

But it can also be regarded as a more generic structure that simply describes a hierarchy of components.

When viewed as a hierarchy it's interesting to know, if another (newer) component in the structure would still be compliant with the configuration as a whole. Somebody ought to test that each time a new baseline of a component in the hierarchy is released.

The Config Rotator monitors the SCM for newer versions of components in the structure, and executes this test when necessary. The configuration is only created temporary and only the result of the try-out is stored. The actual tested configuration is not persisted. Component developers can subscribe to test results involving their components through ATOM feeds on the Jenkins job running the Config Rotator.

Supported SCMs

- ClearCase UCM
- Git, from version 1.1.0

Feature highlights

- Try-out new configuration of components, including reset to old configuration to try again
- Be able to subscribe to Atom feeds, by component, with information about new compatible or incompatible configuration with the component

Requirements and recommended setup

ClearCase UCM

1. You need a working ClearCase environment for the user running the Jenkins build on the host (Jenkins master or slave) where the build is executed
2. Plugin is in current version only tested on Windows
3. Freestyle builds must be used

- Jenkins slaves are tested running as a service, or Java Webstart (it's important user running service or Java has a working ClearCase environment)

Future plans might be Linux support or other ways to setup job and master/slave. If you are using the plugin in other setups than the above, kindly let us know if it works or not.

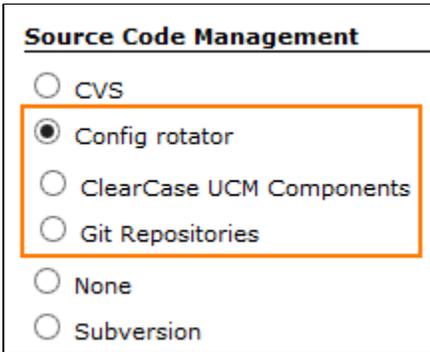
- Issue or inquiry use Jenkins Jira and see [Known Issues](#) below
- Other questions: <http://www.praqma.net/support>

Git

Git requires no special setup.

Getting Started Guide

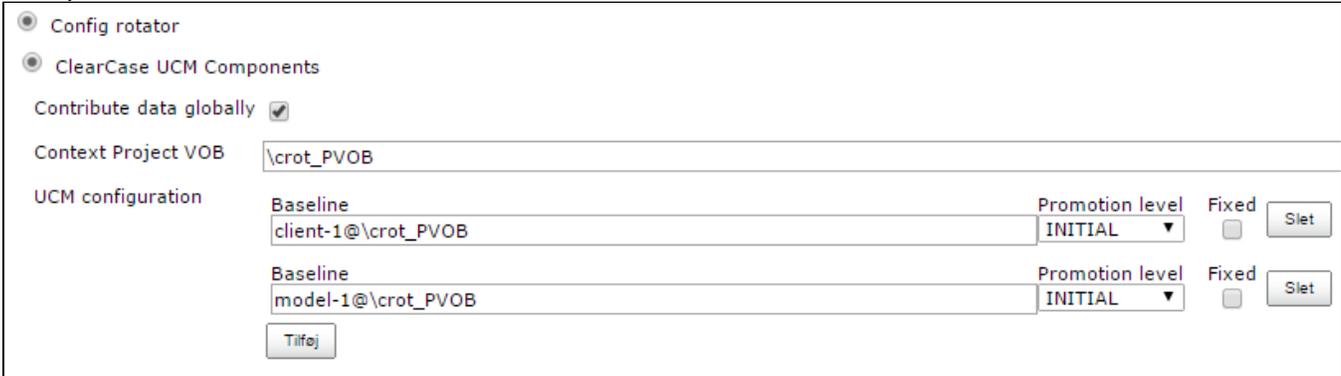
In the Source Code Management section select the Config rotator option



The screenshot shows the 'Source Code Management' section of a Jenkins configuration page. It contains a list of radio button options: CVS, Config rotator, ClearCase UCM Components, Git Repositories, None, and Subversion. The 'Config rotator' option is selected and highlighted with an orange rectangular border.

ClearCase UCM Configuration

The **Context Project VOB** is where the UCM project of the temporary stream is located. In this Project VOB a special UCM Project must be created and named jenkins



The screenshot shows the 'ClearCase UCM Configuration' section. It features two radio button options: 'Config rotator' (selected) and 'ClearCase UCM Components'. Below these is a checked checkbox for 'Contribute data globally'. The 'Context Project VOB' field is set to '\crot_PVOB'. Under the 'UCM configuration' section, there are two rows of configuration for baselines. Each row includes a 'Baseline' text field, a 'Promotion level' dropdown menu set to 'INITIAL', a 'Fixed' checkbox, and a 'Slet' button. The first row has 'client-1@\crot_PVOB' in the baseline field, and the second row has 'model-1@\crot_PVOB'. A 'Tilfej' button is located at the bottom of the configuration area.

Contribute data globally will write the resulting action of a config rotator build to a database specified in global configuration under the global configuration page:

Compatibility Database Configuration:

Database selection: MongoDB

Hostname:

Port:

Username:

Password:

Database:

Collection:

The **UCM configuration** is a series of baselines describing the configurations.

- **Baseline** A baseline describing a component of the configuration
- **Promotion level** The required promotion level for the baseline
- **Fixed** Fixation of configuration component. Can this component be rotated or not.

Git

- **Name** Source location of the workspace. If empty, the name of the repository is used.
- **Repository** The URL of the Git repository.
- **Branch** The branch to rotate. Master is used if empty.
- **Commit** Offset commit to rotate from, either a SHA1 or tag.
- **Fixed** Fixation of configuration component. Can this component be rotated or not.

Config rotator
 ClearCase UCM Components
 Git Repositories

Name	Repository	Branch	Commit	Fixed	Delete
capital	http://github.com/pragma-test/capital-letters.git	master	58cf6a4cce5629dce31821f21d0b0ae7e701de81	<input type="checkbox"/>	<input type="button" value="Delete"/>
lower	http://github.com/pragma-test/lower-letters.git	master	f5c6951271b8bde54073433e6119958b00f210	<input type="checkbox"/>	<input type="button" value="Delete"/>
number	http://github.com/pragma-test/numbers.git	master	cc69882175647f92f7a6b4aa0f1c29a2f7ebd5a9	<input type="checkbox"/>	<input type="button" value="Delete"/>

Feature description

Trying a series of configurations

- Set Your job up to poll the SCM
- When Config Rotator finds new baselines, it starts building

Picture show a series of successful build. The project/job page will show latest result for the configuration. If You click on the a build the tested configuration from the build is shown.

Project PocTestJob5

Config Rotator
Workspace
Revert Changes

Config rotator

Baseline changed from client-1@PocTestJob5_PVOB to client-2@PocTestJob5_PVOB
This configuration was compatible

Component	Stream	Baseline	Level	Fixed
Model@PocTestJob5_PVOB	PocTestJob5_one_int@PocTestJob5_PVOB	model-3@PocTestJob5_PVOB	INITIAL	false
Clientapp@PocTestJob5_PVOB	PocTestJob5_one_int@PocTestJob5_PVOB	client-2@PocTestJob5_PVOB	INITIAL	false

Permalinks

- Last build (#4), 10 sec ago
- Last stable build (#4), 10 sec ago
- Last successful build (#4), 10 sec ago

Click the Config Rotator link in the left menu on the project/job to view all tried configurations

Configurations

Baseline changed from client-1@PocTestJob5_PVOB to client-2@PocTestJob5_PVOB
This configuration is compatible

Component	Stream	Baseline	Level	Fixed
Model@PocTestJob5_PVOB	PocTestJob5_one_int@PocTestJob5_PVOB	model-3@PocTestJob5_PVOB	INITIAL	Done
Clientapp@PocTestJob5_PVOB	PocTestJob5_one_int@PocTestJob5_PVOB	client-2@PocTestJob5_PVOB	INITIAL	Done

Baseline changed from model-3@PocTestJob5_PVOB to model-3@PocTestJob5_PVOB
This configuration is compatible

Component	Stream	Baseline	Level	Fixed
Model@PocTestJob5_PVOB	PocTestJob5_one_int@PocTestJob5_PVOB	model-3@PocTestJob5_PVOB	INITIAL	Done
Clientapp@PocTestJob5_PVOB	PocTestJob5_one_int@PocTestJob5_PVOB	client-1@PocTestJob5_PVOB	INITIAL	Done

Baseline changed from model-3@PocTestJob5_PVOB to model-2@PocTestJob5_PVOB
This configuration is compatible

Component	Stream	Baseline	Level	Fixed
Model@PocTestJob5_PVOB	PocTestJob5_one_int@PocTestJob5_PVOB	model-2@PocTestJob5_PVOB	INITIAL	Done
Clientapp@PocTestJob5_PVOB	PocTestJob5_one_int@PocTestJob5_PVOB	client-1@PocTestJob5_PVOB	INITIAL	Done

New configuration - no changes yet
This configuration is compatible

Component	Stream	Baseline	Level	Fixed
Model@PocTestJob5_PVOB	PocTestJob5_one_int@PocTestJob5_PVOB	model-1@PocTestJob5_PVOB	INITIAL	false
Clientapp@PocTestJob5_PVOB	PocTestJob5_one_int@PocTestJob5_PVOB	client-1@PocTestJob5_PVOB	INITIAL	Done

Using feeds

List of available component feeds

Component vob	Component name	Feed link
ConfigRotatorProofOfConceptJob_PVOB	Clientapp	Clientapp
ConfigRotatorProofOfConceptJob_PVOB	Model	Model

- Main page of Jenkins shows a link to the Config Rotator feed page
- For every component in a build earlier executed, a feed for the component contains information about the outcome of the test showing compatible or incompatible. |
- Use your favorite RSS/Atom feed reader and subscribe the links.

Reset to old configuration

If You want to try a configuration once more, and continue from that time on, go to the job, click a build and on the build page click **Reset to this configuration**



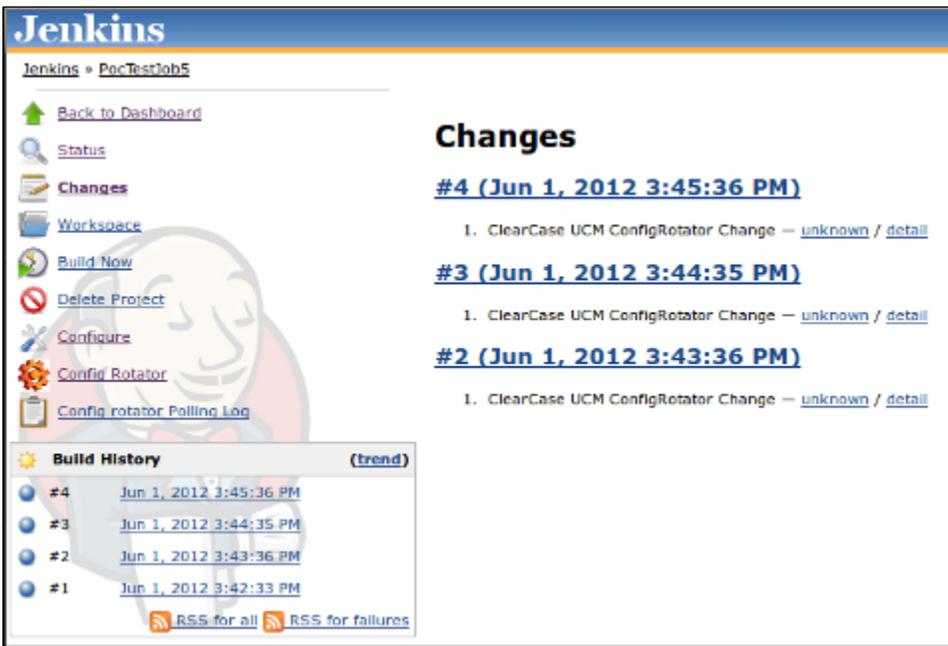
The screenshot shows the Jenkins interface for Build #3 (Jun 1, 2012 3:44:35 PM). It includes a sidebar with navigation links like 'Back to Project', 'Status', 'Changes', 'Workspace', 'Build Now', 'Delete Project', 'Configure', 'Config Rotator', and 'Config rotator Polling Log'. The main content area displays the build details, including a 'Changes' section with a single entry: 'ClearCase UCM ConfigRotator Change'. Below this, it states 'Started by an SCM change' and 'Baseline changed from model-3@PocTestJob5_PV08 to model-3@PocTestJob5_PV08'. A table lists components and their baselines:

Component	Stream	Baseline	Level	Fixed
model-3@PocTestJob5_PV08	PocTestJob5_one_int@PocTestJob5_PV08	model-3@PocTestJob5_PV08	INITIAL	True
Client@PocTestJob5_PV08	PocTestJob5_one_int@PocTestJob5_PV08	client-1@PocTestJob5_PV08	INITIAL	True

- Note that resetting to a configuration applies only on the next build, thus the project/job page is first updated after next build.

Changes link working on component baselines

We have implement the **Changes** feature to show changes between the baselines of the changes component in the configuration.



The screenshot shows the Jenkins 'Changes' page for job 'PocTestJob5'. It displays a list of changes for builds #4, #3, and #2, all occurring on Jun 1, 2012. Each change is 'ClearCase UCM ConfigRotator Change' with a status of 'unknown' and a 'detail' link. A 'Build History' table is visible at the bottom left:

Build	Time
#4	Jun 1, 2012 3:45:36 PM
#3	Jun 1, 2012 3:44:35 PM
#2	Jun 1, 2012 3:43:36 PM
#1	Jun 1, 2012 3:42:33 PM

Known Issues (current version)



If it's broken ...We Can Fix It!

- We've had people reporting issues when trying to copy existing jobs using the config rotator SCM component, where the copied data is different from the target job.
- There are issues with changesets prior to 1.0.1. The changeset would not properly recognize the user of the change. This should be fixed in the most recent version. We've had to change the format of the changes.xml files created by the job, so only changesets generated with 1.0.2 will work as designed, and 1.0.1 changeset will still show the user as 'unknown'.
- "Build has failed" mails are sent even though the build is marked as "nothing to do". Make sure the email plugin is run after the config rotator post build step. Yes, there is such a thing. Normally it is added automatically, inserted at random. It is required and cannot be disabled.

type	key	summary
		<div style="border: 1px solid orange; padding: 10px;"><p> Can't show details. Ask your admin to whitelist this Jira URL.</p><p>View these issues in Jira</p></div>

Changes

Version 2.0.0(August 25, 2016)

- Fixed an issue with the Git implementation not releasing file handles on windows (#10)
- Fixed an issue that prevented job being saved on Jenkins 2.13+ (#9)

Version 1.3.1(October 12, 2015)

- Added support for JobDSL ([JENKINS-30904](#))

Version 1.3.0(August 28, 2015)

- Add 'Use newest' option for Config Rotator when using ClearCase as SCM ([JENKINS-28983](#))

Version 1.2.1(August 18, 2015)

- Fixed an issue with Filters not working properly in ClearCase ([JENKINS-29975](#))

Version 1.2.0(July 6, 2015)

- Introduced the ability to add data for subscription ([JENKINS-27215](#))
- Added the ability to turn this feature on/off ([JENKINS-28065](#))

Version 1.1.8(Januar 29, 2015)

- Fixed an issue with empty dep. components ([JENKINS-26623](#))

Version 1.1.8(November 17, 2014)

- Properly trigger reset, when job altered and saved ([JENKINS-24822](#))

Version 1.1.7(August 16, 2014)

- Improved performance ([JENKINS-23653](#))

Version 1.1.6(June 23, 2014)

- Fixed an issue with clearcase, unable to create workspace when view is deleted ([JENKINS-22832](#))

Version 1.1.5(May 2, 2014)

- Fixed an issue where an invalid configuration could cause an infinite build loop. ([JENKINS-22533](#) and [JENKINS-22842](#))

Version 1.1.4(March 11, 2014)

- Improved the layout in IE9. The layout is now longer garbled when using IE9. ([JENKINS-20981](#))
- Fixed an issue with rebasing, the plugin will now attempt to cancel a rebase if it is underway ([JENKINS-22058](#))

Version 1.1.3(December 20, 2013)

- ClearCase UCM: Clarified error message ([JENKINS-21068](#))
- ClearCase UCM: Improved checkout performance ([JENKINS-21069](#))
- Fixed an issue where polling could result in 'Nothing to do' grey builds ([JENKINS-21066](#))
- ClearCase UCM: Handling hijacked files ([JENKINS-21065](#))

Version 1.1.2(August 26, 2013)

- View tag now uses remote computername as postfix ([JENKINS-18603](#))

Version 1.1.1(June 4, 2013)

- Config Rotator triggers, but nothing new is found ([JENKINS-18194](#))
- Config spec for ClearCase UCM is not created correctly ([JENKINS-17803](#))

Version 1.1.0(April 14, 2013)

- Git for Config Rotator ([JENKINS-17604](#))
- Unload component from Config Rotator job does not work ([JENKINS-17230](#))
- Config Rotator does not trig on new baseline ([JENKINS-17229](#))

Version 1.0.4(April 3, 2013)

- Config Rotator does not trig on new baseline ([JENKINS-17229](#))
- Use nothing to build (grey builds) if there is no new baselines ([JENKINS-14746](#))

Version 1.0.3(April 2, 2013), faulty release

Version 1.0.2

- Changesets are now visualized like they are in the ClearCase UCM Plugin
- Fixed user identity in changeset - [JENKINS-15481](#)

Version 1.0.1

- Fixed missing icon in rotated configuration - [JENKINS-13989](#)
- Fixed incorrect feed urls - [JENKINS-13988](#)

Release note

We have implemented two levels of check of configuration. The first check is if configuration is loadable in ClearCase. The second level of check is if the configuration added make sense in a context of configuration rotation. Eg. config-rotator does not allow the same component more the once.

Polling check the first level, and abort polling if check is not passed.
Builds do both checks and fail if not passed.

Version 1.0.0, initial version