

# Gerrit Trigger

This plugin integrates Jenkins to [Gerrit](#) code review for triggering builds when a "patch set" is created.

## Plugin Information

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



Older versions of this plugin may not be safe to use. Please review the following warnings before using an older version:

- [Unauthorized access to some Gerrit Trigger server configuration](#)
- [CSRF vulnerability and missing permission checks](#)
- [Unauthorized users were able to change Gerrit Trigger server configuration](#)

## Set Up

### Gerrit access rights

1. Create the profile through in *Gerrit web interface* for your Jenkins user, and set up a *SSH key* for that user.
2. Gerrit web interface > Admin > Groups > Non-Interactive Users > Add your jenkins user.
3. Admin > Projects > ... > Access > Edit
  - Reference: `refs/*`
    - **Read:** ALLOW for Non-Interactive Users
  - Reference: `refs/heads/*`
    - **Label Code-Review:** -1, +1 for Non-Interactive Users
    - **Label Verified:** -1, +1 for Non-Interactive Users

Gerrit documentation: [http://gerrit-documentation.googlecode.com/svn/Documentation/2.4.2/access-control.html#examples\\_cisystem](http://gerrit-documentation.googlecode.com/svn/Documentation/2.4.2/access-control.html#examples_cisystem)

**IMPORTANT:** On Gerrit 2.7+, you also need to grant "Stream Events" capability. Without this, the plugin will not work, will try to connect to Gerrit repeatedly, and will eventually cause OutOfMemoryError on Gerrit.

1. Gerrit web interface > People > Create New Group : "Event Streaming Users". Add your jenkins user.
2. Admin > Projects > All-Projects > Access > Edit
  - **Global Capabilities**
    - **Stream Events:** ALLOW for Event Streaming Users

[https://gerrit-documentation.googlecode.com/svn/Documentation/2.7/access-control.html#capability\\_streamEvents](https://gerrit-documentation.googlecode.com/svn/Documentation/2.7/access-control.html#capability_streamEvents)

### Administrative Settings

Specify the Gerrit server settings via "Manage Jenkins > Gerrit Trigger"

Fill in the server settings:

**ENABLE AUTO REFRESH**

---

**Gerrit Server**

Hostname  ?

Frontend URL  ?

SSH Port  ?

Username  ?

SSH Keyfile  ?  
**❌ "/home/hudson/.ssh/id\_rsa" does not exist.**

SSH Keyfile Password

Click "Test Connection" to verify the connection.

When everything seems ok, save your settings and restart the connection in the "Control" section at the bottom of the page:

Unstable

---

**Control**

There are many more settings for your pleasure, look at the individual help sections for information what they are about.

## Trigger Configuration

In the "Build Triggers" section of your Job configuration page; tick "Gerrit event":

**Build Triggers**

Build after other projects are built

Poll SCM

Build periodically

Gerrit event

**Gerrit Trigger**

Advanced...

Silent Mode

Trigger on: **Patchset Created** Delete

Dynamic Trigger Configuration

Add ▼

- Draft Published
- Patchset Created
- Change Merged
- Comment Added
- Ref Updated

Pattern	Branches						
Plain ▼ myproject	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Type</th> <th>Pattern</th> </tr> </thead> <tbody> <tr> <td>Path ▼</td> <td>** <span style="float: right;">Delete</span></td> </tr> <tr> <td colspan="2" style="text-align: center;">Add Branch</td> </tr> </tbody> </table>	Type	Pattern	Path ▼	** <span style="float: right;">Delete</span>	Add Branch	
Type	Pattern						
Path ▼	** <span style="float: right;">Delete</span>						
Add Branch							
Add File path							
Add Project							

**Build Environment**

Specify what type of event(s) to trigger on:

- **Draft Published:** Sent when a change moves from draft state to new. (only available in version 2.5 or higher of Gerrit).
- **Patchset Created:** Sent when a new patchset arrives on a change. Before version 2.6.0, this was the only event you could trigger on.
- **Change Merged:** Sent when a change is merged on the Gerrit server.
- **Comment Added:** Sent when a comment is added to a change. Which category and value to trigger on can be configured. The available categories can be configured in the server settings for the plugin.
- **Ref Updated:** Sent when a ref is updated on the Gerrit server, i.e. someone pushes past code review.

*If you don't specify any event; Patchset Created and Draft Published (if available) will be selected by default.*

**Comment Added**

Verdict Category

Value

Delete

*Comment added configuration.*

Specify what Gerrit project(s) to trigger a build on.

At least one project and branch pattern needs to be specified for a build to be triggered, and you can specify as many gerrit project to trigger on as you want.

Start by specifying the name of the Gerrit project in the left hand text field.

You can specify the name pattern in three different ways, as provided by the "Type" drop-down menu.

- **Plain:** The exact name in Gerrit, case sensitive equality.
- **Path:** ANT style pattern. Ex: "\*\*/base/\*\*"
- **RegExp:** [Regular expression](#).

Then provide the name of the branch(es) to trigger on. The same "pattern types" is available as above.

So for example to trigger on all branches in the project you can specify:

Type: Path

Pattern: \*\*

You can add more branch patterns by clicking on "Add Branch" and more projects by clicking "Add Project".

The same syntax works for specifying which file(s) to trigger on (this is only available in version 2.3 or higher of Gerrit).

**Dynamic triggering**

From version 2.6.0 of the plugin, a new way of configuring what projects, branches and files to trigger on is available.

**Gerrit Trigger** Advanced...

Silent Mode

Trigger on: Add ▼

Dynamic Trigger Configuration

Trigger Configuration URL

**Gerrit Project**

Type	Pattern	Branches				
Plain	<input type="text"/>	<table border="1"> <thead> <tr> <th>Type</th> <th>Pattern</th> </tr> </thead> <tbody> <tr> <td>Plain</td> <td><input type="text"/></td> </tr> </tbody> </table> <span>Delete</span>	Type	Pattern	Plain	<input type="text"/>
Type	Pattern					
Plain	<input type="text"/>					

Add File path Add Project Add Branch

By checking the checkbox "Dynamic Trigger Configuration", the user is asked for the URL to a file.

On a set interval, the plugin fetches and parses this file. The file contents should follow this syntax:

```
p=some/project
b^**/master/*
f~.*\..txt
p=some/other/project
b^**
```

Explanation:

p for project  
b for branch  
f for file  
= for plain syntax  
^ for ANT style syntax  
~ for regexp syntax

Branch and file lines are assumed to be part of the closest preceding project line.

The dynamic triggering can be used in combination with the usual configuration, described above. The gerrit trigger will trigger both for the dynamic and non-dynamic configurations.

The interval on which Jenkins fetches the file is configurable in the administrative pages for the Gerrit trigger, under advanced:

**Misc.**

Nr of Receiving Worker Threads

Nr of Sending Worker Threads

Build Schedule Delay

Dynamic Config Refresh Interval

Note1: anonymous user must have READ permissions to Jobs in order for this feature to work.

Note2: a specific Gerrit server must be selected selecting "any server" will not trigger jobs.

### Use case

The reason for this functionality is that a user would want to update a list of what to trigger on outside of Jenkins.

Another use case is to run a build in Jenkins periodically that creates the list, then have several projects use the same list.

### Gerrit hooks

Gerrit doesn't use the standard repository hooks. To do an automatic update of Jenkins on a patch you'll need to add a hook to the top-level gerrit hook directory (\$site\_path/hooks).

The equivalent of a git 'post-receive' hook for gerrit is a 'patchset-created' handler. More info on gerrit hooks can be found here:

<http://gerrit.googlecode.com/svn/documentation/2.1.2/config-hooks.html>

## Usage with the Git Plugin

To get the Git Plugin to download your change; set Refspec to **\$GERRIT\_REFSPEC** and the Choosing strategy to **Gerrit Trigger**. This may be under "Additional Behaviours/Strategy For Choosing What To Build" rather than directly visible as depicted in the screenshot. You may also need to set 'Branches to build' to **\$GERRIT\_BRANCH**. If this does not work for you set Refspec to **refs/changes/\*:refs/changes/\*** and 'Branches to build' to **\$GERRIT\_REFSPEC**.

**Note:** Be aware that **\$GERRIT\_BRANCH** and **\$GERRIT\_REFSPEC** are not set in the **Ref Updated** case. If you want to trigger a build, you can set Refspec and 'Branches to build' to **\$GERRIT\_REFNAME**.

The screenshot shows the configuration for the Git plugin in Jenkins. It is divided into several sections: 'Repositories', 'Branches to build', 'Merge options', 'Clean after checkout', 'Use commit author in change log', 'Wipe out workspace', and 'Choosing strategy'. The 'URL of repository' is set to 'ssh://hudson@gerrit.mycompany.net:29418/myproject'. The 'Refspec' is set to '\$GERRIT\_REFSPEC'. The 'Branch Specifier' is blank. The 'Merge before build' checkbox is unchecked. The 'Clean after checkout' and 'Use commit author in change log' checkboxes are also unchecked. The 'Wipe out workspace' checkbox is unchecked. The 'Choosing strategy' dropdown is set to 'Gerrit Hudson Trigger'.

## Usage with Repo

If you are using a freestyle project and repo to download your code it would be as "easy" as.

```
repo init -u git://gerrit.mycompany.net/mymanifest.git
repo sync
repo download $GERRIT_PROJECT $GERRIT_CHANGE_NUMBER/$GERRIT_PATCHSET_NUMBER
```

## Missed Events Playback Feature (Available from v. 2.14.0)



### Note

This feature replaces the "Check Non-Reviewed Patchsets" option that was part of a Job's Gerrit Trigger configuration.

If your Jenkins instance has been down for a period of time (upgrade or maintenance), the Missed Events Playback Feature ensures that any missed events are re-played and builds are triggered.

The mechanics are as follows:

- The Playback Manager maintains a last known alive timestamp of events that were received by the Gerrit Server connection.
- Upon re-connect, a request is made to the Gerrit Events-Log plugin installed on the Gerrit Server to determine which events may have been missed while the connection was down.
- The events are then added to the Gerrit Trigger event queue to be processed.

## Setup Requirements

The Playback Manager requires:

- The REST api to be configured for the Gerrit Server Connection.

- The Gerrit Events-log plugin must be installed on the Gerrit Server (Please see <https://gerrit.googleusercontent.com/plugins/events-log/>)

### Setting up the REST api

- To setup the REST api for the Gerrit Server Connection, navigate to **Manage Jenkins > Gerrit Trigger** and click on the **Edit** icon for the Server Connection.
- Click on **Advanced**, and enter the **Gerrit HTTP User** and **Gerrit HTTP Password** values as shown below.

- Click on **Test REST Connection** to verify the user and password settings.
- Click on **Save**
- Restart the connection using the **Status** icon in the Server Table shown below:

### Gerrit Server Events-Log plugin

**Gerrit Server Events-Log plugin**

Please note that if the Gerrit Server Events-Log plugin is not installed on the **Gerrit Server**, then the Playback Manager will be disabled.

- Please see <https://gerrit.googleusercontent.com/plugins/events-log/> for installation details.

### Verifying functionality

- Once you have restarted the connection, click on the **Edit** icon in the Server Table. If there is a problem with the Playback Manager's configuration, you will see this:

**Gerrit Missed Events Playback is not supported. Verify if the connection has the REST API enabled and that the Gerrit Events-log plugin is installed and configured on the Gerrit Server.**

**Gerrit Connection Setting**

Name: defaultServer

- If the Playback Manager is correctly setup, you will see the following in the Jenkins log file when the Gerrit Server Connection is started:

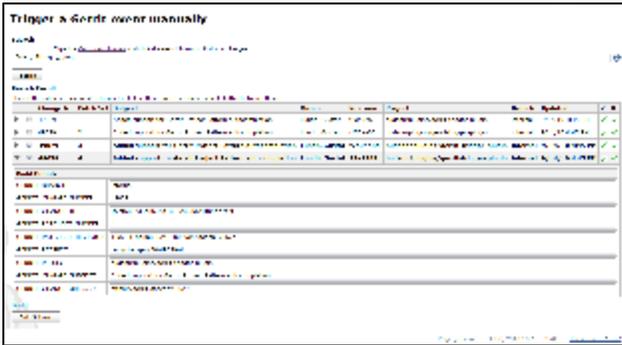
```
INFO: (8) missed events to process for server: defaultServer ...
```

### Skip Vote

"Skipping" the vote means that if more than one build is triggered by a Gerrit event the outcome of this build that "skips its vote" won't be counted when the final vote is sent to Gerrit. If this is the only build that is triggered then the vote will be 0.

This can be useful if you have one job that triggers on all patch set created events that just checks that the commit message is correctly formatted, so it should only deny merging if it is a bad commit message but also not allow the merge just because the message was ok. In that scenario you could configure the "check commit message" job to skip voting on Successful.

## Additional Screenshots



## Pipeline Jobs

Version 2.15.0 of the Gerrit Trigger plugin supports Jenkins Pipeline job types. So as with the traditional job types, this plugin supports:

1. Triggering of Pipeline Jobs based on Gerrit Event notifications e.g. the Patchset Created event.
2. Checkout of the change-set revision from the Gerrit Git repository. See example below.
3. Sending of the "build completed" command to Gerrit (with Verified label etc).

The plugin doesn't currently offer a dedicated DSL syntax for performing the change-set checkout. However, it's very easy to perform the checkout using the Gerrit parameters provided to the build, along with the existing Workflow step for Git (or other supported SCM) e.g.

```
node {
  // Checkout the Gerrit git repository using the existing
  // workflow git step...
  git url: '<gerrit-git-repo-url>'

  // Fetch the changeset to a local branch using the build parameters provided to the
  // build by the Gerrit plugin...
  def changeBranch = "change-${GERRIT_CHANGE_NUMBER}-${GERRIT_PATCHSET_NUMBER}"
  sh "git fetch origin ${GERRIT_REFSPEC}:${changeBranch}"
  sh "git checkout ${changeBranch}"

  // Build the changeset rev source etc...
}
```

Note though that with this approach the changelog will not show correctly.

## Tips & Tricks

This section contains some useful tips and tricks that users has come up with. Feel free to add your own.

## Using "Build Now"

Normally when you have configured a job to be triggered by Gerrit you can't use the "Build Now" link anymore since your builds are dependent on information from Gerrit, especially if you are using the Git plugin to checkout your code in the workspace.

You can get around this limitation if you for example want to use the same job to build the master branch at some point. If you are using the Git plugin do the following

```
Add a String parameter called GERRIT_REFSPEC with the default value refs/heads/master
```

Using this trick will enable you to build, but no results will be sent to Gerrit since it is not triggered by it.

## Multiple jobs review the same changeset (possibly giving different answers)

That's possible, see <http://strongspace.com/rtyler/public/gerrit-jenkins-notes.pdf>

## Reduce number of notification emails

Since the trigger adds a comment in Gerrit for each build start and end, usually all the reviewers get a notification email. This can get quite annoying. However, it's possible to configure Gerrit so that only the change owner and people who starred the change get a notification email. To do this DENY the 'Email Reviewers' capability for the Gerrit user that is used by Jenkins. See [https://gerrit-review.googlesource.com/Documentation/access-control.html#capability\\_emailReviewers](https://gerrit-review.googlesource.com/Documentation/access-control.html#capability_emailReviewers).

## Note to Gerrit > 2.6 Users

The verdict category key values has changed in 2.6 from CDRV, VRIF to Code-Review and Verified. So in order to be able to trigger on comment added you need to change the settings on the "Manage Jenkins/Gerrit Trigger" page (it's hidden behind the advanced button) and reconfigure all your jobs so they can pick up the new values.

Also note that the Verified flag is no longer in Gerrit by default, see <http://gerrit-documentation.googlecode.com/svn/Documentation/2.6/cmd-review.html> so you'll need to add it to Gerrit for new installs. This can [easily be added back to all projects](#). Otherwise the Gerrit Trigger will fail to submit votes for jobs, due to the invalid label.

Alternately, you can remove the verified flag from the command used to submit votes for changes, and simply have the trigger submit code review votes:

1. Go to "Manage Jenkins" and click the "Gerrit Trigger" link
2. Under "Gerrit Servers" next to your server(s) click the "Edit" button (looks like a gear, other icons may overlap it)
3. Under "Gerrit Reporting Values" click the Advanced button at the bottom
4. Under "Gerrit Verified Commands" remove the '--verified <VERIFIED>' sections from each command, see screenshot



As of version 2.17.0 the verified "vote" is not sent at all to Gerrit (*removed from the command line/rest call*) unless there is an actual value to be sent. So if you change the configuration to contain only values for code review and empty strings for verified you won't get the error.

## Change Log

### Version 2.30.0 (released Aug 02 2019)

- [JENKINS-54509](#) - Add check description is null then set description to "" ([#399](#))
- [EventFilter](#) - Add capability to modify which events are interesting ([#397](#))
- [PlaybackManager](#) - Persist to XML in a thread ([#398](#))

### Version 2.29.0 (released Feb 15 2019)

- Java 8 and Jenkins 1.121 ([#389](#), [#390](#))
- Support triggering for wip-state-changed and private-state-changed ([#383](#))
- Start the trigger in a known state when using a dynamic configuration URL ([#350](#))
- [JENKINS-55262](#) - Missing content-type on serverStatuses REST API ([#388](#))

### Version 2.28.0 (released Dec 19 2018)

- Make filtering out gerrit user's comments configurable ([#384](#))
- Clean up some eclipse warnings ([#386](#))
- Fix the synchronisation block in gerritEvent() ([#382](#))
- Fix problem with static access to SimpleDateFormat ([#381](#))
- skip updating the dynamic configuration if jobs are disabled ([#380](#))

- Update documentation to link to latest major Gerrit release (#379)
- Improve logging in GerritPluginChecker (#378)

### Version 2.27.7 (released Sep 3 2018)

- Assure the connection get closed after check. (#375)
- Upgrade animal-maven-sniffer-plugin to 1.17 (#377)
- Diagnostics: Remove redundant 'unused' suppressions (#376)

### Version 2.27.6 (released Aug 24 2018)

- Fix typo in javadoc (#371)
- Null check getConfigXml() (#369)
- Also specify a tag when using the SSH API (#368)
- Add autogenerated prefix to the jenkins-gerrit-trigger tag (#366)
- Fix race condition in ssh key generation (#362)
- Remove jobs from all memory entities (#352)
- JENKINS-49813 - RunningJobs: Remove extra shouldCancelPatchsetNumber check (#356)
- Clean runningJob class from stupid mistakes (#357)
- Add proxy to avoid too much connections (#353)

### Version 2.27.5 (released Feb 26 2018)

- Fix security issue

### Version 2.27.4 (released Feb 20 2018)

- Bumped Gerrit Events library to 2.12.0 to fix a json-lib version conflict with Jenkins core
- Optimized event processing a bit (#355)
-  **JENKINS-39498** - Missed Events Playback Feature fails at Jenkins restart OPEN Stop panicking about "eventCreatedOn" and losing my position (#346)
-  **JENKINS-48622** - Relentless log spam with GerritMissedEventsPlaybackEnabledChecker RESOLVED Reduced logging spam from GerritMissedEventsPlaybackEnabledChecker (#349)

### Version 2.27.3 (released Jan 26 2018)

- Fixed some NullPointerExceptions and other code fixes (#342, #344, #345)
- Fixed a race condition (#340)
- UI Fixes and tweaks (#341, #347)
- JENKINS-49163 Create correct url in Diagnostic Event Listeners report for jobs located in folders (#348)

### Version 2.27.2 (released Jan 15 2018)

- JENKINS-48943 Whitelist gerrit-events and workaround missing collections whitelisting in core for Jenkins 2.102+ (93a7719, pull #343)
- Fix loose forbidden file (pull #339)

### Version 2.27.1 (released Dec 06 2017)

- Fixed JENKINS-39498 (pull #335)
- Fixed JENKINS-48155 (pull #336)
- Reduce memory usage (pull #337)

### Version 2.27.0 (released Dec 01 2017)

- Provide the data about parent builds as environment variable to the dependent build (pull #319)
- Fixed a race condition with dynamic config refresh interval (pull #334)
- Fix the deadlock in RunningJobs (pull #333)

### Version 2.26.2 (released Oct 30 2017)

- Expand parameters in build messages (pull #331)
- Reduced item lookup calls to save memory and performance (pull #332)

### Version 2.26.1 (released Oct 12 2017)

- Abort ongoing builds of topic if new change to the same topic was submitted (pull #326, #328)
- Fixed a ConcurrentModificationException in TriggerContextConverter (pull #327)
- Fixed JENKINS-20808 (pull #307)
- Fixed link to the job in memory report (pull #329)
- JENKINS-39132 No comments to Gerrit 2.13.1 for Change Merged trigger (pull #330)

### Version 2.26.0 (released Sep 13 2017)

- Added support for Topic Changed event ([pull #324](#))
- Fixed a deadlock in `DependencyQueueTaskDispatcher` ([pull #325](#))

### Version 2.25.0 (released Aug 11 2017)

- Support sending multi-line comments ([pull #316](#))
- [JENKINS-45095](#) Fix ([pull #320](#))
- Added extra help text for regular expression matching ([pull #321](#))
- [JENKINS-44568](#), [JENKINS-44414](#) Fix (g-e [pull #68](#), [pull #67](#))

### Version 2.24.0 (released Jul 3 2017)

- [JENKINS-43904](#) Set tag for review comments on REST ([pull #317](#))
- Fixed some logging in `GerritDynamicUrlProcessor` ([pull #315](#))

### Version 2.23.3 (released Jun 9 2017)

- [JENKINS-39010](#) Interpret the incoming comment message as multi-line text ([pull #312](#))
- [JENKINS-40965](#) Get out of gerrit event stream loop in illegal state (g-e [pull #62](#))
- [JENKINS-38542](#) NPE when canceling a task when no job ([pull #314](#))

### Version 2.23.2 (released Apr 19 2017)

- Update Gerrit documentation links to latest major release ([pull #311](#))
- Fix `CommentAdded` event for Gerrit snapshot version < 2.13 ([pull #310](#))

### Version 2.23.1 (released Apr 11 2017)

- [JENKINS-40059](#) - `CommentAdded` trigger firing on every comment ([pull #302](#), [pull #309](#))
- Display full commit message in tooltip ([pull #306](#))
- Change `Nr.` is a link to review detail ([pull #305](#))
- Prevent double HTML escaping of subject in search results ([pull #304](#))
- [#59](#) Bumped Gerrit Events to version 2.10.1 to fix an buffer issue for incoming JSON.

### Version 2.23.0 (released Nov 25 2016)

- [JENKINS-38675](#) Use `refspec` instead of branch name for the revision ([pull #299](#))
- Diagnostics pages: Management pages to get some diagnostics views into the internals of the trigger. Usable to troubleshoot why some strange behaviours are happening, with [Support Core Plugin](#) reports. ([pull #275](#))
- [JENKINS-38974](#) fill in `commentTextParameterMode` if it's missing ([pull #301](#))

### Version 2.22.0 (released Aug 17 2016)

*This version does not contain the changes in 2.22.0-beta-1, they will be incorporated at a later date*

- Prepare for git client plugin 2.0.0 coexistence with 1.x ([pull #296](#))
- Operator `^` for dynamic trigger must be escaped in regex ([pull #294](#))
- [JENKINS-30821](#) - Add `comment-added` comment as job parameter ([pull #295](#))

### Version 2.22.0-beta-1 (released Jul 06 2016)

- [JENKINS-36139](#) Adapt `Git BuildChooser` to `JGit4`, introduced in `Git Plugin 3.0.0-beta1` ([pull #291](#))

### Version 2.21.1 (released Jun 07 2016)

- [JENKINS-35364](#) Fixed a `ClassNotFoundException` due to the use of wrong `StringUtil` ([pull #286](#))
- [JENKINS-35389](#) Fixed Jenkins getting wrong certificate if Gerrit is running with `nginx` reverse proxy and `nginx` configured to run multiple https sites. ([pull #287](#))

### Version 2.21.0 (released May 30 2016)

- [JENKINS-34753](#) - Provide safe parameters to `ParametersAction` to fix regression from [SECURITY-170](#), requires Jenkins `>= 2.6` or equivalent ([pull #285](#))
- [JENKINS-23873](#) - Provide `GERRIT_MERGED_REVISION` after change-merged event ([pull #284](#))
- Changed to new plugin parent pom structure ([pull #281](#))
- Set Notification level on the build started trigger as well to silence some of the output ([pull #282](#))

### Version 2.20.0 (released Apr 12 2016)

- Added [Structs plugin](#) Symbol annotations for concise DSL syntax ([pull #280](#))
- Fixed the "updated" check on `Comment-added` events introduced in 2.17.0 to look at the correct "oldValue" property instead ([pull #279](#))

### Version 2.19.0 (released Mar 31 2016)

- [Partial JENKINS-26103 Pipeline](#) step to customise the post back data. ([pull #274](#))

- Guard against potential crash on core versions where [JENKINS-33467](#) is fixed, i.e.  $\geq 1.653$  ([pull #274](#))

### Version 2.18.4 (released Mar 09 2016)

- [JENKINS-30857](#) Fixed Java 1.6 compatibility issue due to introduction of ReflectiveOperationException. ([pull #276](#))
- Also added animal sniffer to the plugin's build test phase to try to avoid the above problem in the future. (*But you shouldn't be running Java 1.6 anyway, we will soon move away from it...*)

### Version 2.18.3 (released Jan 05 2016)

- [JENKINS-31800](#) Fixed projectListRefreshInterval zero value after upgrade from 2.13.0 to 2.14.0. ([pull #273](#))

### Version 2.18.2 (released Dec 11 2015)

- Renamed review category deprecated default names CRVW and VRIF for new server configs (should have been done 2 years ago). ([pull #270](#))
- [JENKINS-31894](#) Fixed problem where approvals were not displayed in Query and Trigger search results. ([pull #272](#))

### Version 2.18.1 (released Dec 3 2015)

- [JENKINS-31858](#) Fixed "Enable project Auto Completion" checkbox save. ([pull #268](#))

### Version 2.18.0 (released Dec 1 2015)

- Changed the way "compound name and email" and GERRIT\_CHANGE\_COMMIT\_MESSAGE (a.k.a "Readable message") parameters are configured. Users can now select between three modes: "Human readable", Encoded and "Do not add". With the same defaults as the old checkboxes. ([pull #258](#))
- Added the same mode configuration for the GERRIT\_CHANGE\_SUBJECT parameter. ([pull #265](#))

### Version 2.17.5 (released Nov 30 2015)

- [JENKINS-30370](#) Fixed Config Page Auth validation ([pull #263](#))
- Limit maximum tryLoadProjectList wait time to 64 seconds ([pull #264](#))

### Version 2.17.4 (released Nov 27 2015)

- [JENKINS-31473](#) Project list is not updating in desired interval ([pull #260](#))
- [JENKINS-30975](#) Protect PlaybackManager from null EventCreatedOn ([pull #261](#))
- [JENKINS-31781](#) build completed for RefUpdated events with REST ([pull #262](#))

### Version 2.17.3 (released Nov 26 2015)

- [JENKINS-31439](#) Correct Missed Events Playback manager initialisation ([pull #259](#))

### Version 2.17.2 (released Oct 29 2015)

- Fix NPE involving null server CR/Ver labels ([pull #257](#))

### Version 2.17.1 (released Oct 28 2015)

- [JENKINS-31199](#) Fix for REST API Build Completed with Locked Down instance ([pull #256](#))

### Version 2.17.0 (released Oct 26 2015)

- Update for upcoming change to Gerrit stream events in regards to **updated** attribute in Approval for responding to Comment Added events ([pull #253](#))
- [JENKINS-30367](#), [JENKINS-30393](#) Allow override of code-review/verified value from job ([pull #255](#))  
*This change also makes it so Jenkins doesn't send --verified at all for the review ssh command, if there is no value calculated, so if you change the defaults you shouldn't need to add the Verified label in Gerrit.*

### Version 2.16.0 (released Oct 02 2015)

- [JENKINS-30620](#) Option to permit disable Strict Forbidden files ([pull #252](#))

### Version 2.15.2 (released Sept 30 2015)

- Fix to permit use of Forbidden files without File Paths ([pull #251](#))

### Version 2.15.1 (released Sept 14 2015)

- Some Code clean-up ([pull #242](#), [pull #243](#), [pull #244](#), [pull #245](#), [pull #246](#), [pull #248](#))
- Added Backwards compatibility tests for updated RefUpdated event in Gerrit 2.12 ([pull #249](#))
- [JENKINS-12690](#) Fix Issue with AES pass phrase encryption of keys ([pull #250](#))

## Version 2.15.0 (released Aug 31 2015)

2.15.0-beta-1 promoted to stable

## Version 2.15.0-beta-1 (released Aug 17 2015)

- [JENKINS-26010](#) Added support for triggering [Workflow Jobs](#). ([pull #240](#))

## Version 2.14.0 (released Jun 05 2015)

2.14.0-beta-3 promoted to stable

## Version 2.14.0-beta-3 (released May 27 2015)

- Correct Typo in Messages for Playback Warning ([pull #237](#))
- [JENKINS-28583](#) Improve backwards compatibility of Project Lister ([pull #239](#))

## Version 2.14.0-beta-2 (released May 26 2015)

- Correct default values for Build Current Patchsets ([pull #236](#))

## Version 2.14.0-beta-1 (released May 20 2015)

- Fixed the BRANCH build parameter and added TOPIC ([pull #205](#))
- Always trigger upon manually triggered build ([pull #216](#))
- Support configuration of when and how the project list for auto completion is fetched ([pull #220](#), [pull #225](#))
- Added incremental update of project list for users of Gerrit 2.12 ([pull #227](#))
- Cleaned up some code ([pull #207](#), [pull #221](#), [pull #222](#), [pull #223](#), [pull #232](#))
- Fix for "Build Current Patches Only" ([pull #215](#))
- Workaround for [JENKINS-17116](#) ([pull #224](#))
- Superficial fix for [JENKINS-28161](#) ([pull #226](#))
- [JENKINS-23871](#) Removed Unreviewed Patches feature in favour of Missed Events Playback on re-connect ([pull #213](#), [pull #228](#), [pull #229](#))

## Version 2.13.0 (released Apr 24 2015)

2.13.0-beta-6 promoted to stable.

## Version 2.13.0-beta-6 (released Apr 7 2015)

- [JENKINS-27651](#) Rename issue. ([pull #218](#))

## Version 2.13.0-beta-5 (released Feb 23 2015)

- Another regression from [JENKINS-23152](#). The correct event handling methods wasn't called for some event types causing weird loop-triggering behavior. ([pull #204](#))

## Version 2.13.0-beta-4 (released Feb 16 2015)

- Another regression from [JENKINS-23152](#) fix; Gerrit notifier threads should impersonate SYSTEM ([pull #202](#))
- Regression from previous Base64EncodedString parameter fix ([pull #203](#))
- Updated com.jcraft.jsch to 0.1.51 ([gerrit-events pull #32](#))

## Version 2.13.0-beta-3 (released Feb 6 2015)

- Enabled Base64EncodedString parameter to be used with Rebuild plugin ([pull #199](#))
- Regression from [JENKINS-23152](#) fix; Running event threads as SYSTEM user ([pull #200](#))

## Version 2.13.0-beta-2 (released Jan 15 2015)

*/ Botched the beta-1 release.*

- Silent Start ([Commit #a50dbd5](#))
- [JENKINS-23152](#) Reload fixes. ([pull #193](#))
- Build completed message builds sorted worse first. ([pull #192](#))
- [JENKINS-26323](#) Fix "Build Current Patches Only" by scanning for event. ([pull #195](#))
- Removed unnecessary select server description. ([pull #196](#))
- Findbugs: null pointer dereference fixes. ([pull #197](#))

## Version 2.12.0 (released Nov 14 2014)

- 2.12.0-beta-5 promoted to stable
- Added Japanese translations ([pull #190](#))

## Version 2.12.0-beta-5 (released Oct 30 2014)

Final rc for 2.12

- [JENKINS-24445](#) Don't trigger builds triggered by the same event ([pull #172](#))
- [JENKINS-24575](#) Don't keep Extension instances ([pull #175](#))
- [JENKINS-19013](#) Fix session management in manual trigger page ([pull #176](#))
- Provide notification level to gerrit command ([pull #177](#))
- [JENKINS-24295](#) Add one-off executor to search list for cancel job ([pull #178](#))
- Fix topic rule for empty topic ([pull #179](#))
- [JENKINS-21407](#) Change manual trigger button to floating button ([pull #180](#))
- [JENKINS-21064](#) Include the latest patchset only in manual trigger page ([pull #182](#))
- [JENKINS-21064](#) Only send selected change data back to the server ([pull #183](#))
- Use newRev for building on RefUpdated event ([pull #184](#))
- [JENKINS-25047](#) Fix DraftPublished and ChangeMerged -> Replication ([pull #185](#))
- [JENKINS-25047](#) Reschedule inflight pushes and help improvements for draft published ([pull #188](#))
- Add support for remote API ([pull #186](#))

## Version 2.12.0-beta-4 (released Aug 28 2014)

- Fixed disabled features not showing ([pull #164](#))
- [JENKINS-24012](#) Fixed an issue with RabbitMQ ([pull #166](#))
- Added No connection on startup ([pull #168](#))
- Added selection for what labels to use for the REST API ([pull #169](#))
- Default "status:open" filled in on the search page ([pull #163](#))
- Added a trigger for comment added containing a specified RegEx ([pull #170](#))

## Version 2.12.0-beta-3 (released Jun 30 2014)

Still calling it beta since I haven't had time to test it in a staging environment yet.

### Features and Fixes

- Added option to exclude drafts when triggering on patchset created event ([pull #153](#))
- Permit the setting of Build Schedule Delay to "0". *Delay not needed with Replication Events* ([pull #143](#))
- Bug: Copy REST API settings when creating new server ([pull #156](#))
- Bug: Password for SSH authentication file is now encrypted ([pull #157](#))
- [JENKINS-23165](#) Don't send plain text password to browser ([pull #158](#))
- [JENKINS-23421](#) Add custom parameter type for Base64 encoded value ([pull #160](#))
- Filter on change-kind in patchset-created *REWORK, TRIVIAL\_REBASE, NO\_CODE\_CHANGE* ([pull #159](#))
- Removed delayed approval feature [JENKINS-11409](#) ([commit 48311](#))

## Version 2.12.0-beta-2 (released Apr 28 2014)

### Features and Fixes

- Lowered logging level when builds are completed ([pull #147](#))
- [JENKINS-22813](#) Git plugin is now optional in practice ([pull #148](#))
- [JENKINS-22814](#) Lowered a startup log message ([pull #149](#))
- Support for receiving Gerrit events from RabbitMQ via [RabbitMQ Consumer Plugin](#) ([pull #151](#))
- Fix for non negative replication cache timeout ([pull #150](#))
- Support for review notification levels ([pull #152](#))

## Version 2.12.0-beta-1 (released Apr 28 2014)

Bumped core dependency to 1.509.3

### Features and Fixes

- Code refactoring to "break out" the gerrit-events module into its own [separate project](#).
- Added a "Forbidden Files" optional parameter to Gerrit Projects ([commit 43372](#))
- [JENKINS-11409](#) Delayed approval mechanism ([commit 5f672](#))
- Add Pseudo Mode to server configuration ([commit 0e735](#))
- NPE Fix in the connection watchdog
- Fixed log annotator when "Any Server" was used. ([commit f8e50](#))
- Moved "Server Control Panel" to main Management page
- Feature to block build until Gerrit replication is completed. ([commit ab429](#))
- [JENKINS-21547](#) Add information to console log
- New functionality allowing one project's trigger to depend on others'. ([commit 08fb5](#))
- Various doc and help fixes
- Add option for selecting non-encoded string for multiline text parameters. ([commit cb285](#))

## Version 2.11.1 (released Mar 21 2014)

- Fixed [JENKINS-22155](#)

## Version 2.11.0 (released Jan 14 2014)

2.11.0-beta-4 promoted to "stable".

## Version 2.11.0-beta-4 (released Dec 18 2013)

*Last release for the year.*

### Fixes

- [JENKINS-21067](#) New server config not reachable if using a prefix in URL

## Version 2.11.0-beta-3 (released Dec 16 2013)

### Fixes

- One more "Any Server" fix.
- small jelly fix to make the trigger work like before with the templates plugin.

## Version 2.11.0-beta-2 (released Dec 9 2013)

### Fixes

- URL encoding for project and branch when calling the REST Api
- Updated the Gerrit documentation link on the query page to point to 2.8
- Various fixes for using the "Any Server" trigger option.

## Version 2.11.0-beta-2 (released Dec 9 2013)

### Fixes

- URL encoding for project and branch when calling the REST Api
- Updated the Gerrit documentation link on the query page to point to 2.8
- Various fixes for using the "Any Server" trigger option.

## Version 2.11.0-beta-1 (released Nov 26 2013)

This version contains a lot of refactoring under the hood to make some of the features and future work possible.

### Features

- [JENKINS-17850](#) Multiple Gerrit server support
- Option to use REST Api for submitting review
  - Allowing other plugins to provide line comments via extension point
- Option to check changes from Gerrit and trigger missed patchsets.
- The change's full commit message is available in triggered jobs, if Gerrit provides it.
- New build parameter: GERRIT\_TOPIC.

### Fixes

- Replaced deprecated `gerrit approve` with `gerrit review` as default command.
- [JENKINS-10709](#) Multiple builds are triggered for one change in Gerrit.
- Fixed an NPE in Watchdog causing the days not to show in the config UI
- Git choosing strategy no longer uses FETCH\_HEAD but the actual revision instead
- [JENKINS-20098](#) When computing the changelog in the [Git Plugin](#) using GerritTriggerBuildChooser an UnsupportedOperationException is thrown

## Version 2.10.1 (released June 17, 2013)

### Fixes

- Fixed NPE on "Query and Trigger Gerrit Patches".
- Connection to Gerrit is delayed during startup until all jobs are loaded.

## Version 2.10.0 (released May 30, 2013)

### Features and Fixes

- Added Retrigger permission.
  - Anyone with Build permission will also have Retrigger so you won't need to change the authorization config.
  - Gives you the ability to deny people to build a job but retrigger it if for example some environment issue broke the build.
- Japanese translations for the things added in 2.9.0

## Version 2.9.0 (released Mar 12, 2013)

## Features and Fixes

- Added a watchdog that can restart the Gerrit connection if nothing has happened for x minutes
- Fixed so that a reconnect is attempted if connection gets broken before stream-events is fully initiated.
- SOCS5 and HTTP proxy support for connecting to Gerrit
- Added new parameters:
  - GERRIT\_EVENT\_TYPE - states what type of event that triggered the build
  - GERRIT\_CHANGE\_ABANDONER\_NAME, GERRIT\_CHANGE\_ABANDONER\_EMAIL
  - GERRIT\_CHANGE\_RESTORER\_NAME, GERRIT\_CHANGE\_RESTORER\_EMAIL

## Version 2.8.0 (released Feb 21, 2013)

### Features and Fixes

- Trigger on change-abandoned and change-restored events.
- Configuration to turn off the compound email parameter - workaround for parameter issues on Windows.
- URLConnection to the dynamic trigger config should now be properly closed.
- Removed use of deprecated APIs in git-plugin's BuildChooser; follow up fix to [JENKINS-16851](#), new dependency to git-plugin 1.2.0.

## Version 2.7.0 (released Dec 5, 2012)

### Features and Fixes

- Custom messages from plugins takes into account all builds for an event
- Custom messages from plugins moved from CUSTOM\_MESSAGE into BUILD\_STATS variable, added a checkbox to turn on/off plugin messages.
- Ability to "skip voting" for a specific build result.
- Fixed a circularity bug in Comment Added event, so Jenkins won't trigger on comments from itself.
- Upgraded jsch to 0.1.49
- Build current patchsets only is no longer experimental
- More Japanese translations
- Fixes and additions to help files
- Added a timeout when fetching dynamic configuration files
- Bumped Jenkins core dependency to 1.424

### Dev related

- GerritCause is now a sub class of SCMTriggerCause
- Done some cleanups in the gerrit-event module
- checkstyle:check is executed in the maven test phase, so the build will fail if you have checkstyle warnings.
- ToGerritRunListener now has an ordinal of 10 003

## Version 2.6.0 (released Sep 19, 2012)

### Features and Fixes

- Dynamic Gerrit triggering.
- Triggering on comment-added, change-merged, ref-updated and draft-published now possible.
- Refactorization of GerritTriggeredEvents and hashCode method implementation for events.
- Fixed a double-triggering when a project is renamed.
- New extension point for plugins to add custom messages to Gerrit at beginning/end of build.
- [JENKINS-11726](#)
- [JENKINS-11582](#)
- [JENKINS-10055](#)

## Version 2.5.2 (released May 7, 2012)

### Features and Fixes

- Corrected Gerrit version requirements for the "trigger on files" feature, it is now set to 2.3.
- No quiet period when triggering builds manually (*Retrigger and "Query and Trigger Gerrit Patches"*)
- Fixed a deadlock when a job is saved at the same time as its being triggered.
- More Japanese translations.

## Version 2.5.1 (released Mar 13, 2012)

### Features and Fixes

- JENKINS-12836 Follow-up from previous version.

## Version 2.5.0 (released Mar 8, 2012)

### Features and Fixes

- Gerrit version checking.
  - *The plugin fetches the version of Gerrit each time the connection to Gerrit is started.*
  - *This will be used to filter out functionality that is not available in all Gerrit versions.*
  - *If a snapshot of Gerrit is used, all functionality will be enabled (as of today, only the file path triggering below uses the version check).*
- JENKINS-12836 Add a Descriptor for the Branch to avoid a warning in the logs.
- Quiet Period. If a job has a configured quiet period; the trigger will use that if it is larger than the global configuration for the trigger.
- File path triggering.
  - *One or more file paths can now be entered in the config of a Jenkins project, in the same way as Gerrit project/branch.*
  - *The build will only trigger if the path is found in the patch set for this project/branch.*
  - *Useful for big gits with lots of smaller modules beneath it.*
- Custom message from workspace file.
  - *A workspace file can now be updated with information that will be sent in the message from the trigger to Gerrit.*

## Version 2.4.0 (released Feb 17, 2012)

### Features and Fixes

- Custom URL per project. Each project can define what URL should be provided in the <BUILD\_STATS> information that is sent to Gerrit.
- JENKINS-11009 Silent Triggered builds now show up in the Manual Trigger monitor panel.
- EXPERIMENTAL: Cancel old running jobs when a new Patch Set is uploaded on the same change.
  - *This feature is set as experimental due to problems we've found during testing.*
  - *You can enable the feature from the Manage Jenkins/Gerrit Trigger page.*
  - *All help in debugging the problems we've found is appreciated, that's why it is in this release. (The problems are described in the comment section on GitHub [here](#)).*

## Version 2.3.1 (released Sep 14, 2011)

### Features and Fixes

- Change owner and patch-set uploader as build parameters.
- [JENKINS-7067](#) Does not attempt to connect to Gerrit if there is no configuration (first start up)
- Compatible with git plug-in >= 1.1.10
- Reload from disk and other duplication related bug-fixes.

## Version 2.3.0 (released Mar 31, 2011)

This is built against Jenkins 1.400 to have an easier release process, but it should still be binary compatible with Hudson 1.362+

### Features and Fixes

- [JENKINS-7053](#) Escape quotes in build parameters
- [JENKINS-8578](#) Added permission-setting to perform "Query and Trigger Gerrit Patches"
- [JENKINS-8799](#) Administrator check for start/stop the Gerrit connection
- Ant pattern matching on Windows
- Allow custom build messages per job
- [JENKINS-7207](#) Teach the trigger to understand merge commits.

## Version 2.2.0 (released Oct 7, 2010)

### New Features

- Allow for searching and manual triggering of Gerrit Patches - **the feature requires Gerrit version 2.1.4 or later, but can be disabled.**
  - **Known bug:** *when upgrading from previous release, the manual trigger page is disabled by default. Goto the Gerrit Management page and enable it under the advanced section.*
- Gerrit/GIT Project-name Autocompletion on trigger-config page.
- Multiple build's results are reported on separate lines to Gerrit instead of "tab separated".
- Approve commands are queued on a separate thread-pool instead of running on the last build's thread.

## Version 2.1.0 (released July 26, 2010)

### New Features

- [JENKINS-6818](#) Retrigger builds. The users has the ability to retrigger a build. A new build with the same change info as the original build will be scheduled.

### Bugs fixed

- [JENKINS-6967](#) Missing default parameters.
- [JENKINS-6977](#) Images and help don't load when Hudson isn't running on the root URL.
- Fixed some Leaking threads
- Japanese translation

## Version 2.0 (released July 5, 2010)

- First release.