Instant Messaging Plugin

Plugin Information
View instant-messaging [on the plugin site](#) for more information.

This plugin provides generic support for build notifications and a 'bot' via instant messaging protocols.This plugin itself is of no use for end users. Please use one of the derived plugins like the [Jabber](#) or the [IRC](#) plugin!

Plugins that Use Instant Messaging Plugin

- [IRC Plugin](#) — This plugin enables Jenkins to send build notifications via IRC and lets you interact with Jenkins via an IRC bot. Note that you also need to install the [instant-messaging plugin](#) .
- [Skype Plugin](#) — Integrates Jenkins with Skype for instant messaging. Requires extra manual installation steps!!!
  Note that you also need to install the [instant-messaging plugin](#).
- [Jabber Plugin](#) — Integrates Jenkins with the Jabber/XMPP instant messaging protocol. Note that you also need to install the [instant-messaging plugin](#).
- [GCM Notification Plugin](#) — Sends build notifications to Android devices using the Google Cloud Messaging (GCM) service.

Features

Build Notifications

You can configure *per job* to get notifications for finished or started builds (optional). Notifications can be send to chatrooms or individual users (aka. private messages in IRC).

You can choose from a number of *strategies* for which build outcomes notification will be send:

- **all**
- **failure** - notifications for failed and unstable builds
- **failure and fixed** - notifications for failed, unstable builds and the first fixed build after that
- **change** - sends notification every time the build outcome changes (e.g. from stable to unstable)

Notify culprits and fixers

If your job is build from a SCM, you can choose to notify:

- users who **broke** the build i.e. commiters to the first failed or unstable build
- **culprits** from a previous build i.e. commiters to a previous failed/unstable build and the current build is still failing/unstable
- **fixers** i.e. commiters to the first stable build after a failed/unstable build
- **upstream committers**: see below

Notifying upstream committers

For this feature to work you need to *fingerprint* your build artifacts. For Maven jobs this should work out-of-the-box. For other job types see the [Blame Upstream Committers plugin](#) for how to configure it (haven't tried it myself yet, though)

The following happens if this option is enabled:

If a build fails and there are no committers to the job itself the IM plugin looks for committers to upstream builds. If there are any, all of them are notified. If there are no committers to the immediate upstream builds, the plugin looks one level higher and notifies possible committers there. And so on, if needed.

Notify about build start

In freestyle and similar legacy jobs, the post-build action from a protocol plugin such as an "IRC Notification" has a checkbox to also "Notify on build starts".

Equivalent effect can be achieved in a pipeline with an explicit step at an early stage, e.g. `ircNotify notifyOnStart:true` - this may be changed in the future.

Manage jobs via a 'bot'

You can control various features of jobs via a *bot*. To do so you can send *commands* to it within a chatroom (or as private messages).

To execute a *command* send the command and its parameters send it to the bot in chatroom (or as a private message) and prefix it with the *command prefix* which is configured in the global configuration.

For example to schedule a build for the *My project* job if the prefix is **!** send:

```
!build 'My project'
```

Most commands can be invoked on a single job, all jobs in a view or all configured jobs. Notable commands are:

- **status:** displays the status of the build i.e. last build result and last successful build
- **health:** displays the build health as computed from the last build results, test results, (compiler warnings, findbugs warnings, ...)
- **build:** schedules a new build of a job
- **abort:** aborts a currently running build
- **currentlyBuilding** (or **cb**): list the jobs that are actively in progress, with optional regex filtering of output; you can also pass a @ argument to get URLs to the build's console log in the chat
- **queue** (or **q**): list the jobs that are actively in progress, with optional regex filtering of output
- **help:** gets a list of all available commands

Regex support in bot commands

The `currentlyBuilding` (cb) and `queue` (q) commands now support an optional argument to apply regular expression filters to the lines they would output, and count and report hits compared to the full job lists.

The key argument for this is ~ and the rest of the argument string is assumed to be the regular expression (note however that whitespace between tokens of the argument string is converted during argument processing; for clarity it would be preferable to pass a single-token argument with `\s+` in positions where whitespace matches are expected).

For example, to see any "OVA"-related builds in IRC I would type:

```
(15:07:34) developer: jenkins: cb @ ~ OVA
(15:07:34) jenkins: (notice) Currently building (10 items total, of which 1 items matched the filter):
(15:07:34) jenkins: (notice) - NOTE: got @ argument for currentlyBuilding: will add URLs to reported strings
(15:07:35) jenkins: (notice) - NOTE: got ~ filtering argument for currentlyBuilding: applying regex filter to
reported strings: OVA
(15:07:35) jenkins: (notice) - ova-build-machine-1#0: build-OVA-image #5939 @ https://jenkins.localdomain/job
/build-OVA-image/5939/console (Elapsed time: 1 min 0 sec, Estimated remaining time: 3 min 58 sec)
```

Beside ordinarily matching what is *present* in a line, this can be used with "negative lookups" for matching lines that *do not contain* certain patterns. Certain know-how applies to such expressions:

- To negative-match the whole string from start, use a caret, e.g.:

```
cb ~ ^(?!master)
```

to skip jobs running on nodes whose name starts with (or equals) `master`. Without the caret it did not work.

- For matching inside a job name, the `.*` must be also inside the lookahead pattern:

```
cb ~ ^(?!.*rescan)
```

would list only jobs whose IM report line does NOT include `rescan`.

Issues/Gotchas

- This plugin serializes all builds for a job which is configured with the *Execute concurrent builds* option. Means: build n will never finish before build n+1. Build n+1 will wait until n finishes - even if n+1 would have finished long before n. This is required because the plugin needs to determine the build result trend (e.g. for FIXED, STILL FAILING, STILL UNSTABLE) for the notifications.
- Pipeline support for start-of-build notifications currently requires a special syntax, detailed elsewhere in this article.

Changelog

Version 1.38 (2019-08-09)

https://github.com/jenkinsci/instant-messaging-plugin/compare/instant-messaging-1.37...jenkinsci:instant-messaging-1.38

- Updated the POM for Java 8 requirement and workflow-job build dependency
- Lots of cleanup for "checkstyle" warnings, and a few other cleanups, to ease the codebase maintenance and make future PRs cleaner on CI
- Updated the README (CI build badge, description, nuances on regex in bot commands)
- Ported optional regular expression filtering of output into the `queue` bot command
- Shorter outputs when `currentlyBuilding` and `queue` commands have nothing to filter and show (less spam on IM channel)
- Added support for a `customMessage` (primarily intended to be used from pipeline steps in protocol plugins like IRCbot) that sends out to specified (or default) targets the provided custom message, instead of build started/completed notifications

- Added support for build-start notifications from a pipeline step (e.g. `ircNotify notifyOnStart:true`) which is intended as a **temporary** solution to the problem of not having support for an IM-specific `options{...}` setting in pipelines yet, and so reporting "NOT BUILT" (completion-notification mode) if there was no verdict yet

Version 1.37 (2019-08-06)

https://github.com/jenkinsci/instant-messaging-plugin/compare/instant-messaging-1.36...jenkinsci:instant-messaging-1.37

- Updated instant-messaging-parent-plugin version needed for this plugin (refers to modern versions of maven repository, etc.)
- Clean up of complaints from findbugs to make the code better and releasing possible
- (Note: there are still some checkstyle warnings to be fixed later, they were not blockers for a release procedure)

Version 1.36 (2019-08-02)

https://github.com/jenkinsci/instant-messaging-plugin/compare/instant-messaging-1.35...jenkinsci:instant-messaging-1.36

- (Not really released all the way to Update center, just tagged)
- Lots of style (whitespace consistency, some javadoc markup) cleanup in the source code
- Updated Jenkins core version needed for the plugin
- Added foundations for pipeline support (for ability to add steps implementations in protocol plugins like Jabber and IRC):
  - https://github.com/jenkinsci/instant-messaging-plugin/pull/16

    JENKINS 36826 - Support Jenkins Pipeline for Jabber notifications `RESOLVED`

- Added a Jenkinsfile to build the plugin itself on CI
- Extended the `cb` (`currentlyBuilding`) bot command with:
  - a counter of running jobs: part of https://github.com/jenkinsci/instant-messaging-plugin/pull/18

    JENKINS 55538 - Instant messaging queue and currentlyBuilding commands should report a count of items `RESOLVED`

  - optional abilities to filter the reported lines by a regular expression: part of https://github.com/jenkinsci/instant-messaging-plugin/pull/20

    JENKINS 55755 - When looking at current builds in IM (IRC) I want to optionally filter the results, see build numbers and URLs `RESOLVED`

  - optional abilities to display an URL to the running build's console log: part of https://github.com/jenkinsci/instant-messaging-plugin/pull/20 and https://github.com/jenkinsci/instant-messaging-plugin/pull/23
- Extended the `build` bot command with better integration of IM username and the Jenkins username, permissions check, etc.:
  - https://github.com/jenkinsci/instant-messaging-plugin/pull/19

    JENKINS 55757 - When a build command is rejected, I want to make sure the IRC Nickname is matched to correct Jenkins user ID `RESOLVED`

  - https://github.com/jenkinsci/instant-messaging-plugin/pull/21

    JENKINS 55760 - IRC nick is configurable but does not map to Jenkins ID of sender in the "build" command `RESOLVED`

- Extended the `queue` bot command with a counter of waiting jobs: part of https://github.com/jenkinsci/instant-messaging-plugin/pull/18

Version 1.35 (2015-05-12)

https://github.com/jenkinsci/instant-messaging-plugin/compare/instant-messaging-1.34...jenkinsci:instant-messaging-1.35

- Internal optimizations and improvements
- De-facto the last release for 4 further years...

Version 1.34 (2015-03-14)

- **Require Java 7**. From this version on Java 7 is required to run the plugin. This is in line with Jenkins requiring Java 7 in newer versions, too.
- Fixed: plugin prevents proper shutdown of Jenkins (JENKINS-27359)

Version 1.30 (August 30th, 2014)

- Fixed incompability with Jenkins 1.577+

Version 1.29 (June 8th, 2014)

- Fix spurious NPE if previous build is still running (JENKINS-23315)

Version 1.28 (October 17th 2013)

- Links to failed tests need to be URL encoded (JENKINS-19944)

Version 1.26 (August, 10th 2013)

- Added support to address jobs by display name in bot commands (JENKINS-17565)
- Support default values of parameters (JENKINS-19140)

- Support all 'simple' parameter types (boolean, string password, run, ...)

Version 1.25 (January, 1st 2013)

- Added missing permission checks for abort and comment bot commands (JENKINS-16232)

Version 1.23, 1.24

No user visible changes.

Version 1.22

- Fixed an incompatibility between Jabber and IRC plugin (JENKINS-10589)
- Store passwords scrambled in config files to prevent accidental exposure (JENKINS-13607)

Version 1.21

- Support authentication in Jenkins with non-password credentials JENKINS-11562
- New configuration option to disable all commands for the bot in chat rooms JENKINS-11606

Version 1.20

- Support custom build names like those set via the Build Name Setter plugin. JENKINS-11419

Version 1.19

- fixed: number of notifications for Matrix jobs doesn't work JENKINS-8923

Version 1.18

- new chat notifier to print summary + build parameters
- other minor changes

Version 1.17

- Fixed: permissions didn't apply for the build and userstat bot commands JENKINS-9694

Version 1.16

- added new bot command to show the currently building jobs JENKINS-9560

Version 1.15

- added option to configure the number of notifications for Matrix jobs: only for parent, only for configurations, both JENKINS-8923

Version 1.14

- improvement: don't send 'oh no, you've broken ...' notifications for builds which have improved from FAILURE to UNSTABLE JENKINS-9942
- improved notification of upstream committers - i.e. notifies all upstream committers since the previous successful build
- fixed other minor issues

Version 1.13

- fixed: NoSuchMethodError when running with newer Hudson versions (>= 1.343) JENKINS-8113

Version 1.12

- ~~fixed: NoSuchMethodError when running with newer Hudson versions (>> 1.327) JENKINS-8113~~ (didn't work)

Versions 1.11

- new feature: new chat notifier which prints the failing tests, too JENKINS-7035

Version 1.10

- improvement: bot commands are now extensible and open for other plugins (see class BotCommand).
- improvement: added an extension point to customize the message the bot sends to chats for notification (see class BuildToChatNotifier).

Version 1.9

- fixed: disconnects (and no reconnects) when changing the global config (JENKINS-6993)
- improved behaviour when plugin is disabled. I.e. doesn't log unnecessary stuff.
- fixed: plugins configure option not visible JENKINS-5978 JENKINS-5233

Version 1.8

- fixed: *notify upstream commiter* would have notified committers of 'old' builds (JENKINS-6712)
- improvement: print useful project names for matrix jobs (JENKINS-6560)
- fixed: don't delay Hudson startup (JENKINS-4346)
- feature: *userstat* command for bot (JENKINS-6147)
- fixed: don't count offline computer for the executors count (JENKINS-6387)

Version 1.7

- allow to pass build parameters with the *build* command (JENKINS-5058)

Version 1.5

- internal restructuring to support password-protected chatrooms in ircbot

Version 1.4

- new option to inform upstream committers (JENKINS-4629)