

Gerrit Code Review v3.13

what's new

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 OpenInfra
SUMMIT > EUROPE'25



GerritForge

Engineering
Git and Gerrit
for Enterprise Velocity



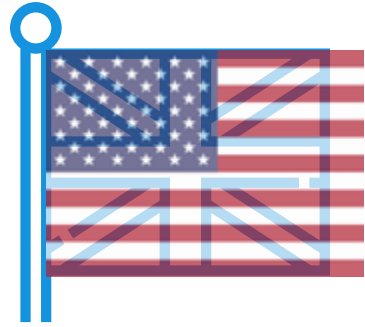
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PARIS, FRANCE

About GerritForge Inc.

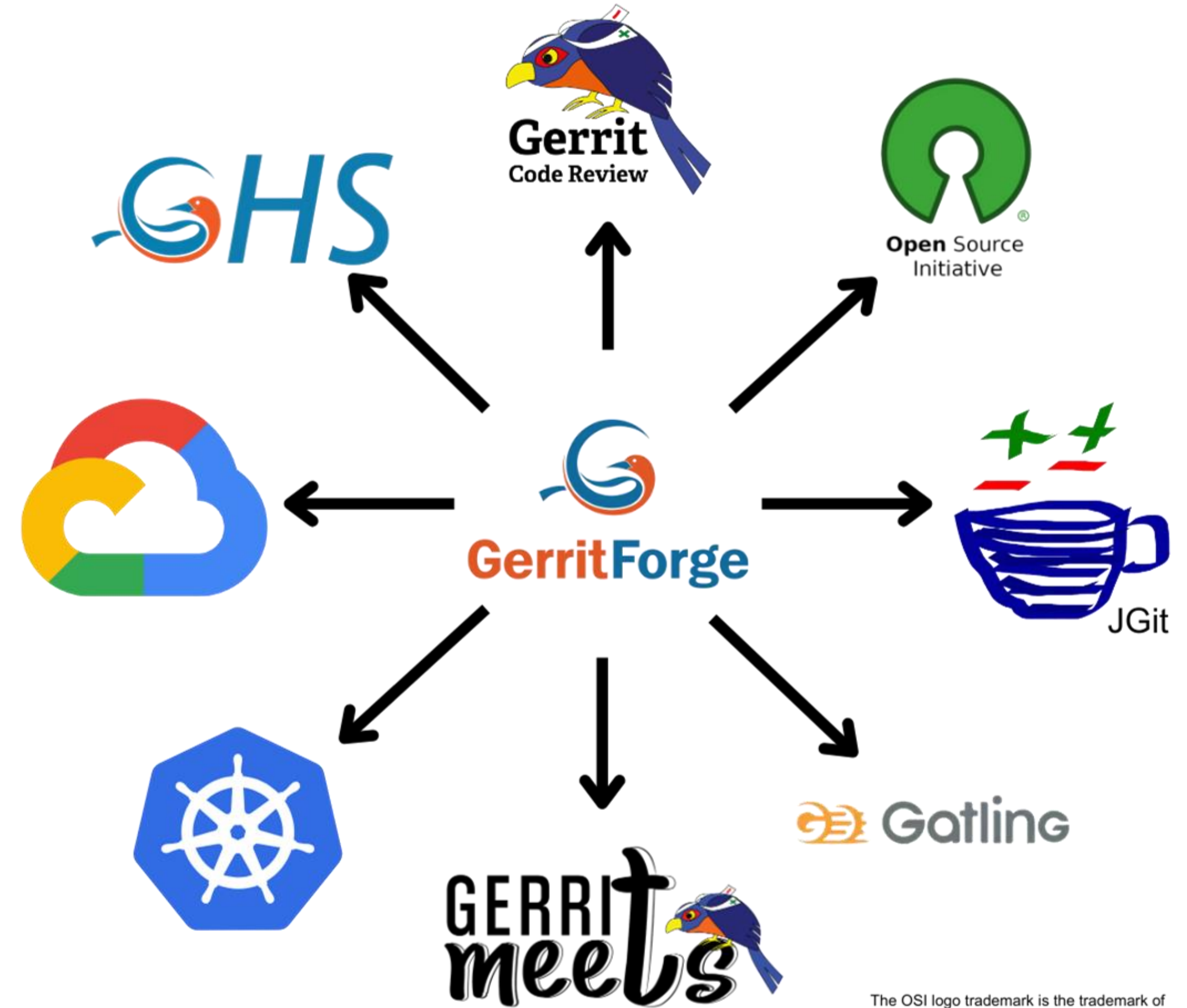


US Corporation
Coming from UK
and EU heritage



HQ in Sunnyvale CA
since 2019

Committed to Open Source
and to
Git and Gerrit Code Review
since 2009



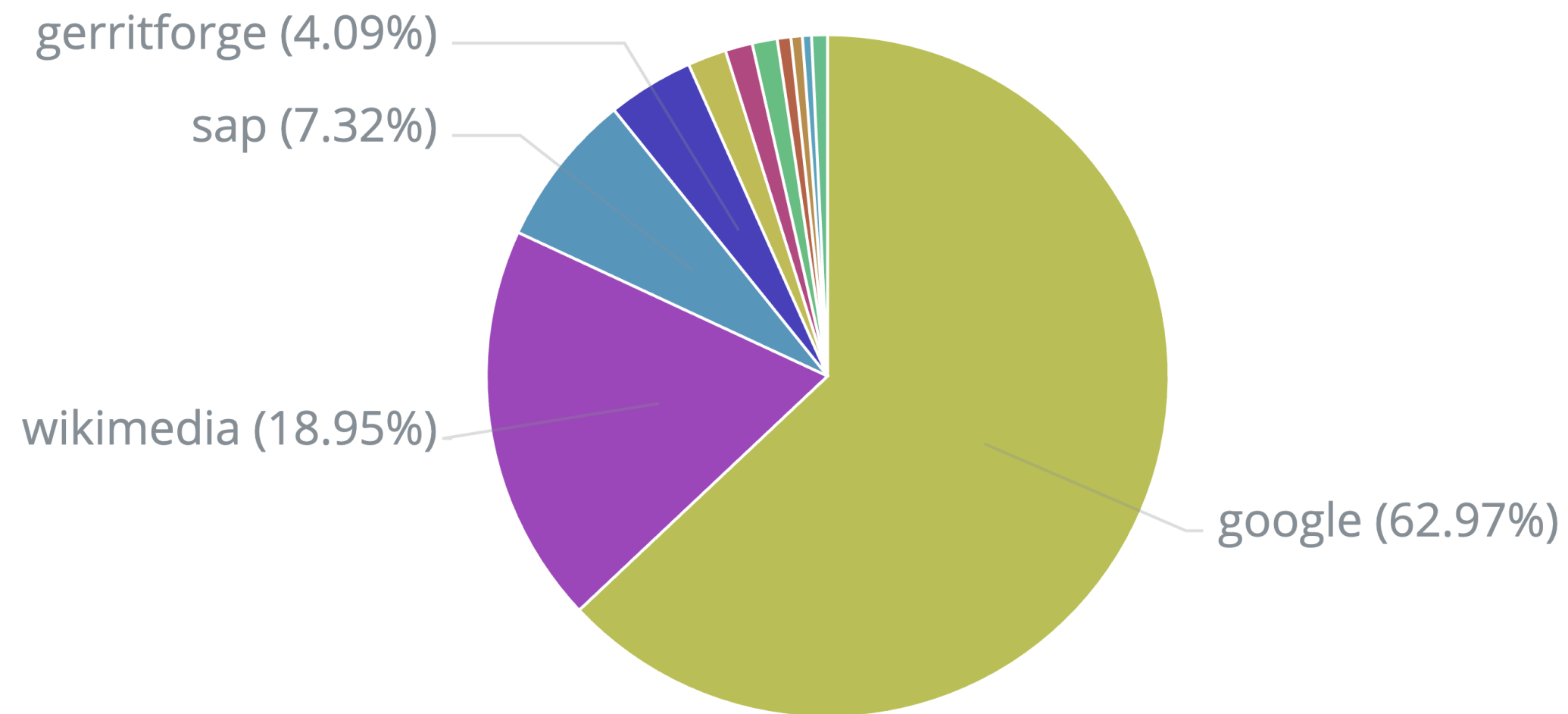
The OSI logo trademark is the trademark of
Open Source Initiative.

Gerrit v3.13 agenda

- Gerrit v3.13 numbers and contributions
- Upgrade path + DEMO
- User experience improvements
- New features and performance improvements
- Breaking changes
- Introducing Gerrit Flows
- Q&A

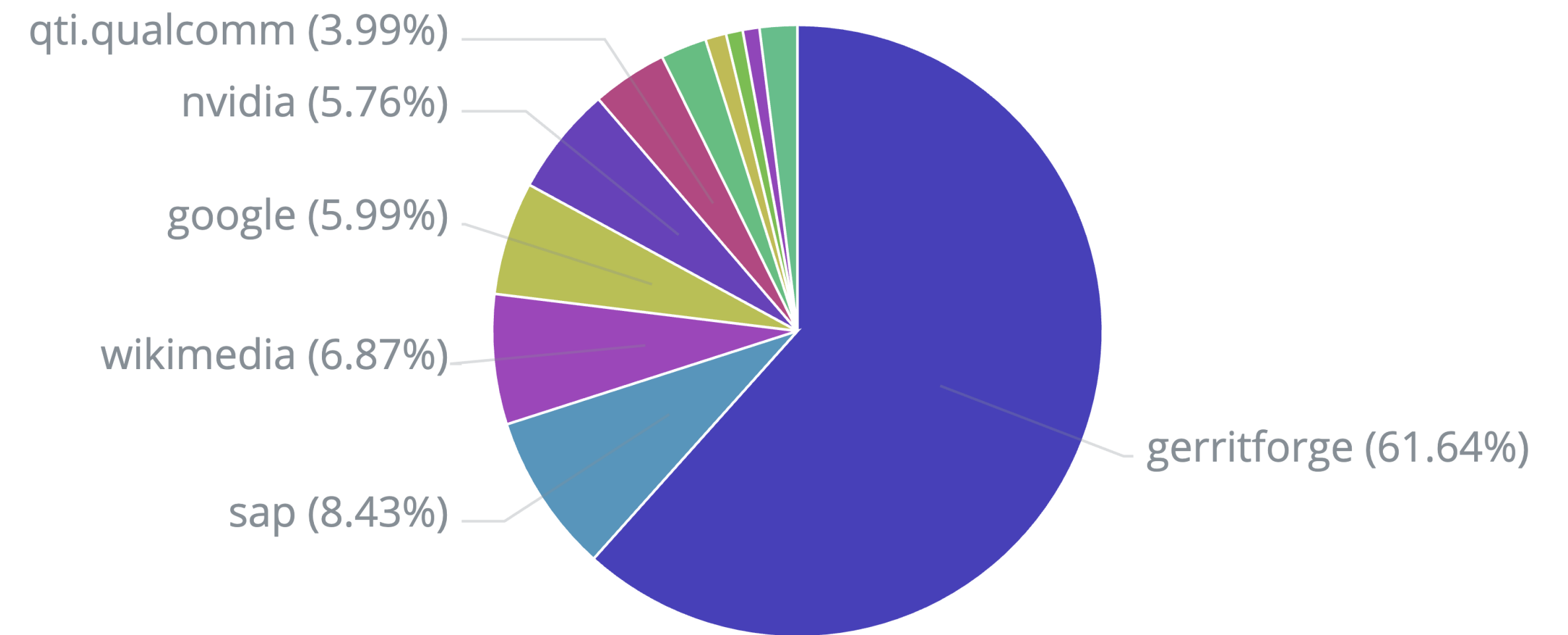


Gerit v3.13 in numbers



Gerrit core

929 **1** **46** **13**
#Commits #Projects #Authors #Organizations



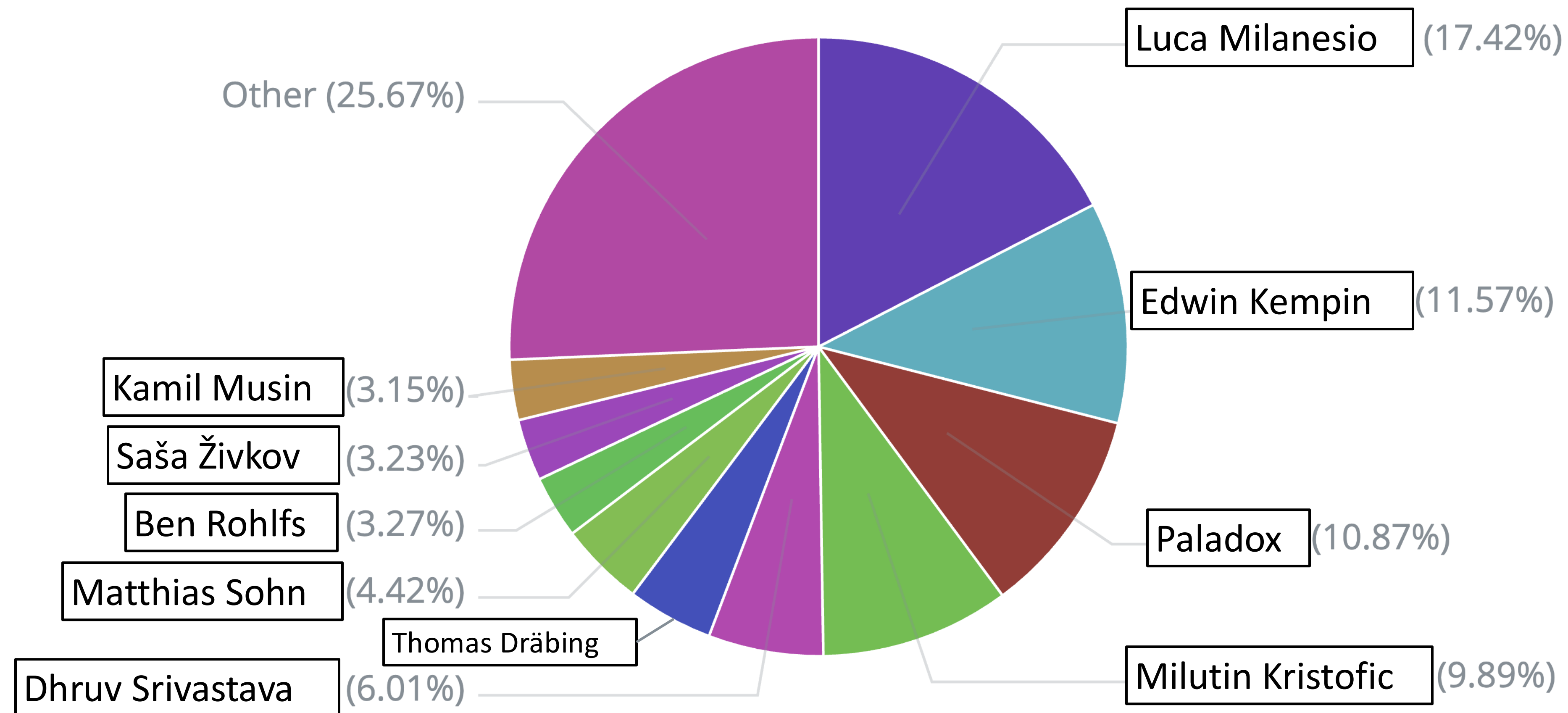
Gerrit plugins

451 **61** **32** **15**
#Commits #Projects #Authors #Organizations

Source: analytics.gerrithub.io

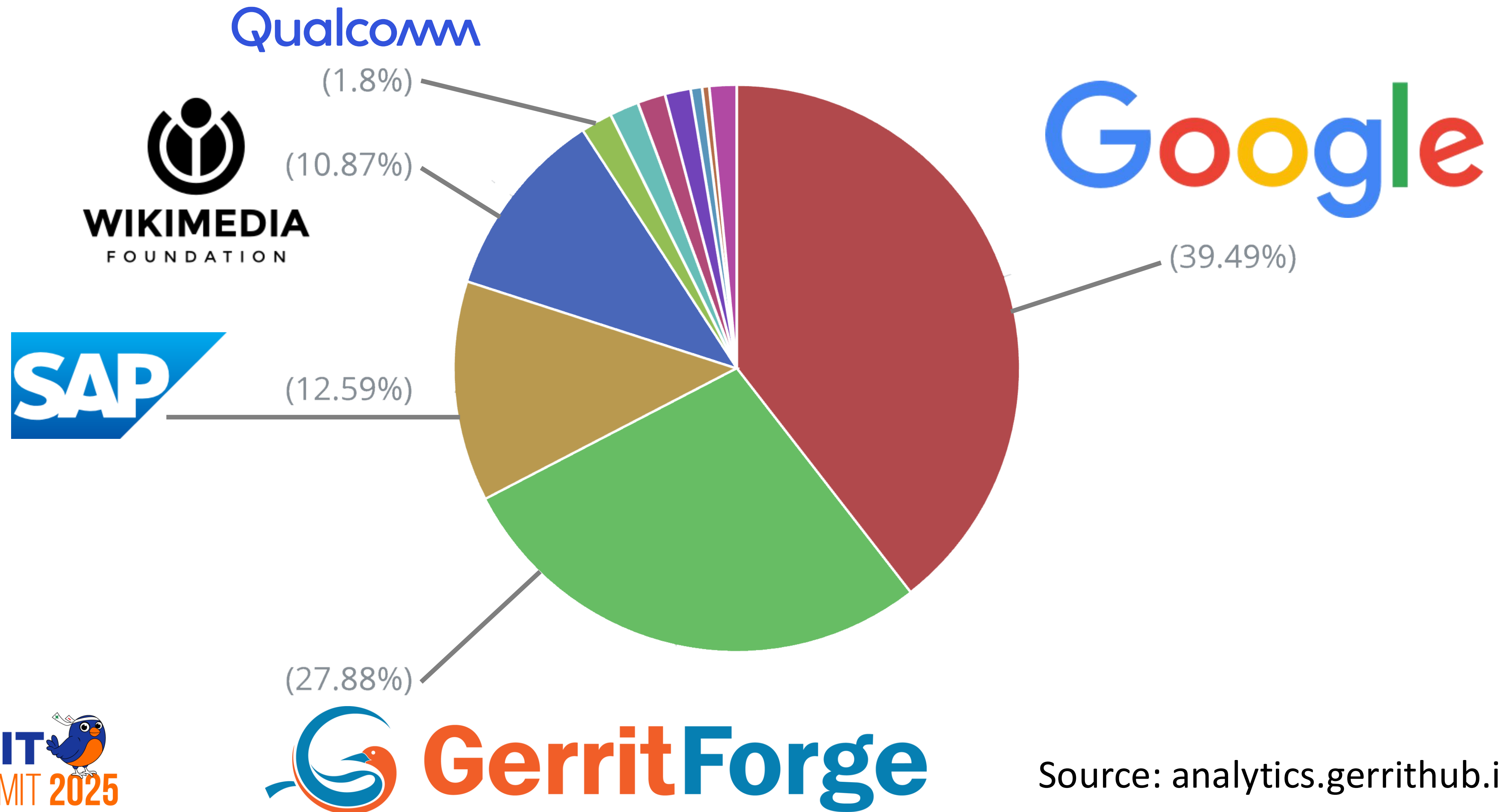


❏ Last 12 months TOP10 individual contributors



Source: analytics.gerrithub.io

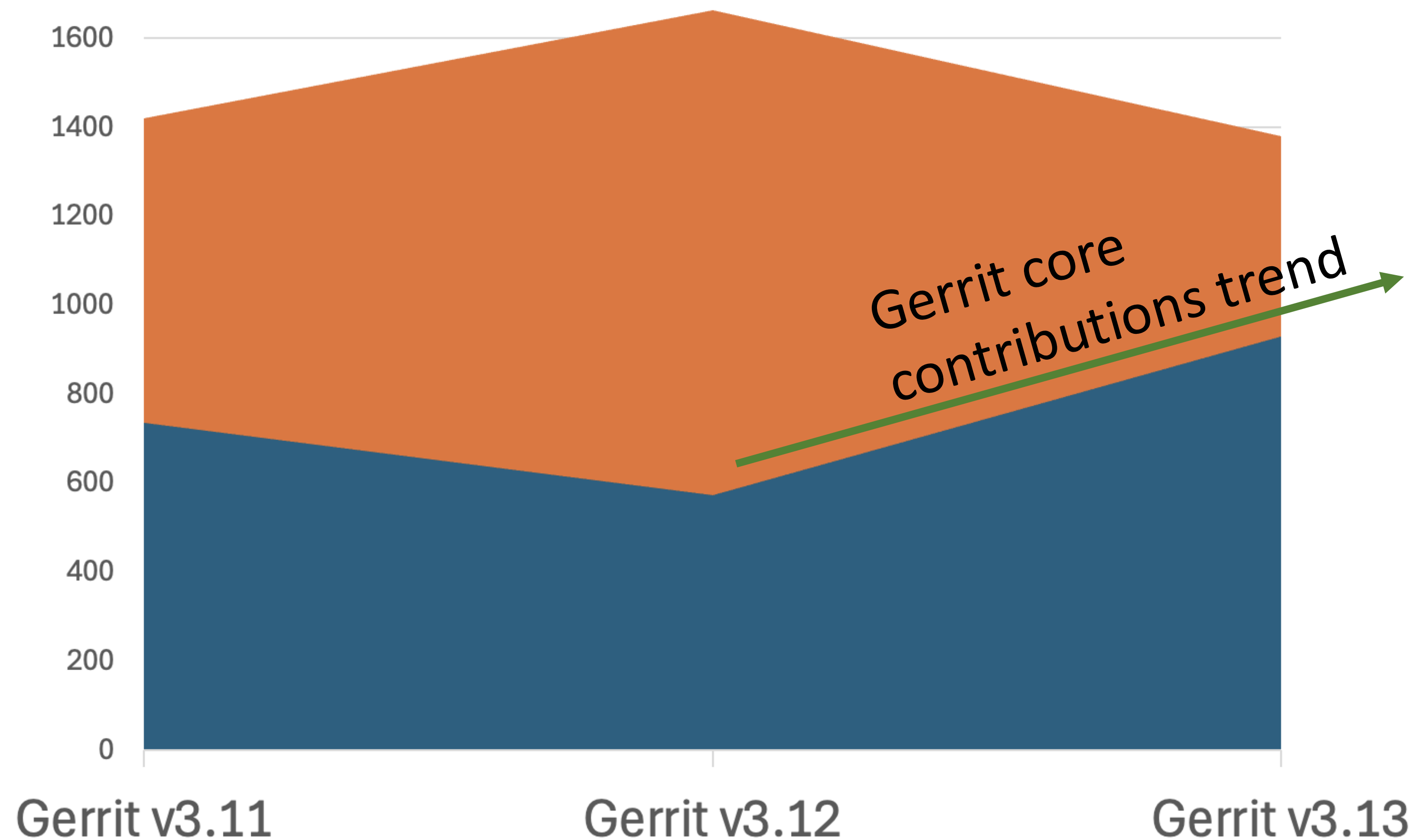
❖ Last 12 months TOP10 organisations



Source: analytics.gerrithub.io

❑ Gerrit v3.13 compared to v3.12/v3.11

Gerrit & Plugin Changes



❖ Upgrading to Gerrit v3.13

Upgrade with zero-downtime (with high-availability or multi-site)

- Possible from v3.11 or later
- No schema changes when upgrading from v3.12
- No reindex needed

Upgrade with downtime

- Directly from v3.11 or later version on Java 21
- Upgrade to v3.5 directly
- Run the copy-approvals utility (offline)
- Move to Java 21
- Upgrade to v3.13 directly + off-line reindex



❖ Downgrading to Gerrit v3.12

Downtime NOT required
(with high-availability or multi-site)

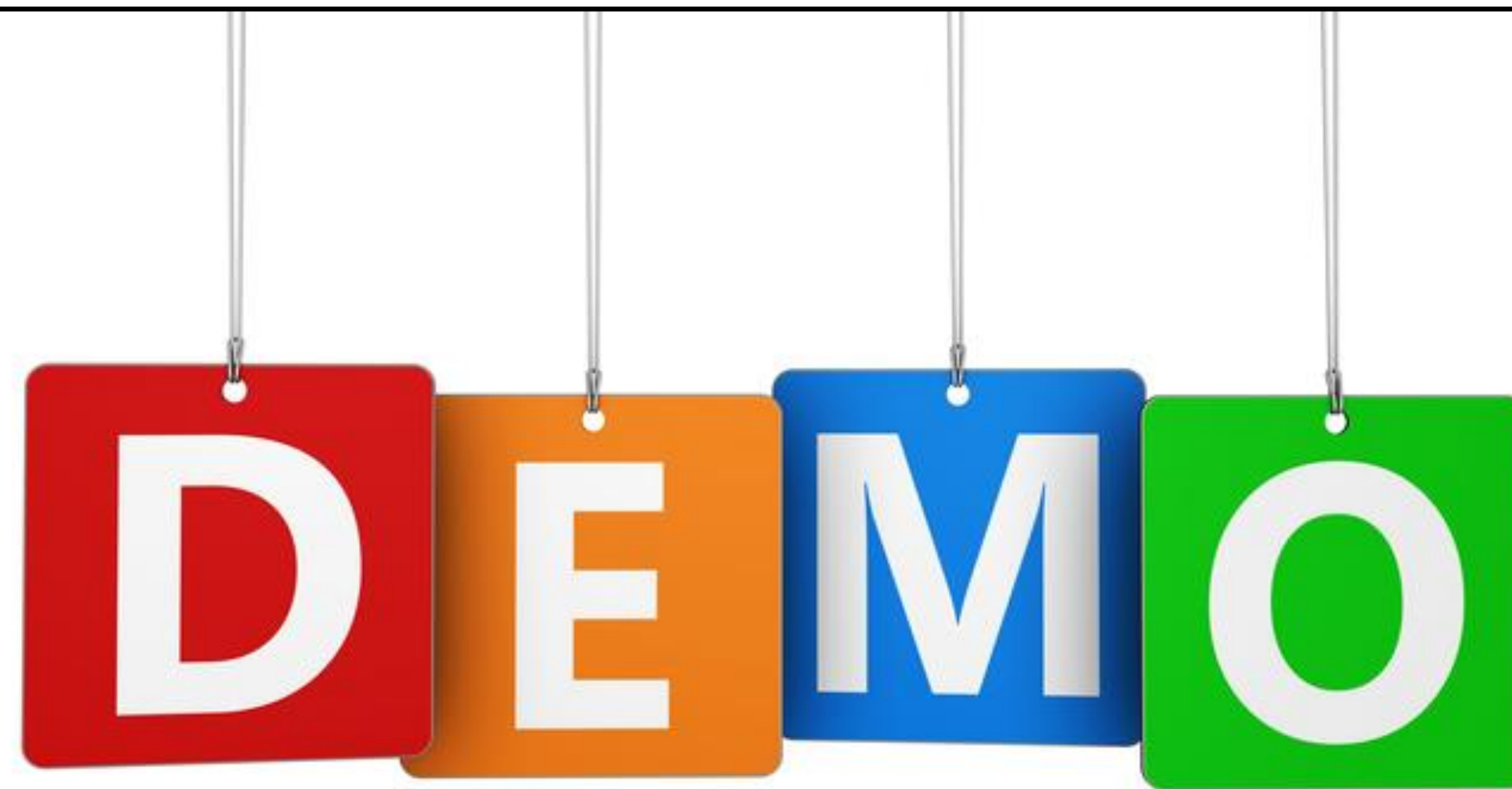
- Shutdown Gerrit v3.13 (one node at a time)
- Downgrade the gerrit.war + plugins
- Startup Gerrit v3.12

Canary deployment
Is possible
Run v3.12 and v3.13
side-by-side

❖ Zero-downtime upgrade from v3.12 to v3.13

Using high-availability test environment:

<https://gerrit.googlesource.com/plugins/high-availability/+/stable-3.12/src/test/docker/>



❖ Gerrit 3.12: Native Docker Images

AlmaLinux

- Upgraded to v9.6

Ubuntu Linux

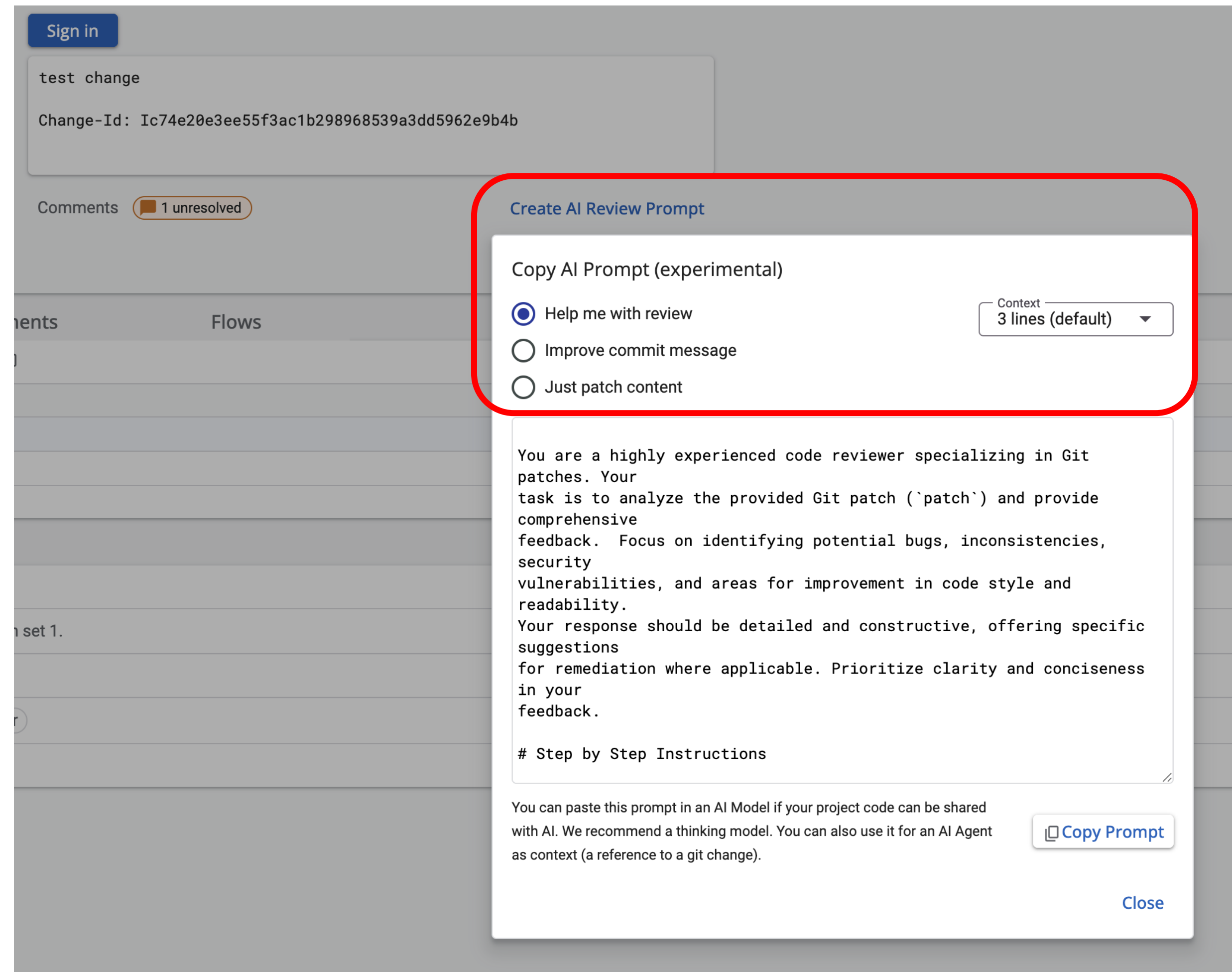
- Upgraded to 24.04.3 LTS
(Eclipse Temurin 21.0.8_9-jdk-noble)



UI: Reviewers Drag & Drop to CC

- Already in v3.12 as “Help me review” experiment
- Rich prompt for any AI model
- Works very well with Google Gemini and ChatGTP

NOTE: Requires Copy & Paste to AI chat





UI: Reviewers Drag & Drop to CC

The screenshot shows the Gerrit web interface for a code review. A red rectangle highlights the 'Reviewers' section, which contains a list of reviewers. One reviewer, 'John Doe', is being moved to the 'CC' (Change Comments) section. A context menu is open over the 'John Doe' reviewer, showing options: 'Remove Reviewer' and 'Move Reviewer to CC'. The 'Move Reviewer to CC' option is highlighted. Below the reviewers, there is a 'Code-Review' section with a 'Voteable: Code-Review: +1' and a 'Remove Reviewer' button. A text input field for 'Say something nice...' is also visible. At the bottom, there is a 'Resolved' checkbox (checked), a 'Preview' button, and a 'No changes to the attention set.' message. The bottom right corner has 'Cancel' and 'Send' buttons.



UI: Create Project Labels

project.config

```
[label "Verified"]
→ description = Works on CI
→ function = NoBlock
→ defaultValue = 0
→ allowPostSubmit = false
→ value = -2 This shall not be submitted
→ value = -1 I would prefer this is not submitted as is
→ value = 0 No score
→ value = +1 Looks good to me, but someone else must approve
→ value = +2 Looks good to me, approved
```



Create Label

Name	Verified
Description	Works on CI
Function	NoBlock ▾
Default Value	0
Copy Condition	
Can Override	☒
Allow Post Submit	☐
Ignore Self Approval	☐
Branches	
Values	{ "0": "No score", "-1": "I would prefer this is not submitted"

Cancel Create Save for review

Function is deprecated
Use NoBlock

Configure
Submit Requirements



UI: Create Submit Requirements

project.config

```
[submit-requirement "Verified"]  
→ description = Verified by CI  
→ submittableIf = label:Verified+1  
→ canOverrideInChildProjects = false
```



Create Submit Requirement

Name

Verified

Description

Verified by CI

Applicability Expression

Optional

Submittability Expression

label:Verified+1

Override Expression

Optional

Allow Override in Child Projects

☐

Cancel

Create

Save for review

Gerrit

CHANGES ▾

YOUR ▾

DOCUMENTATION ▾

BROWSE ▾

MO

Active

☆ 330 ▾

I <3 Gerrit User Summit 2025 at 1760553889

Change Info

Show All ▾

Reply

Owner

Administrator

Author

Luca Milanesio

Committer

Luca Milanesio

Reviewers

John Doe

Repo | Branch

gus-2025-repo | master

Topic

Submit Requirements

Code-Review

No votes

Verified

+1

Files

Base ▾

→

Patchset 1 ▾

File

Commit message

A

source-file-89

Verified

Status SATISFIED

Administrator +1

John Doe Can vote -1/+1

Verified by CI

Hide Conditions ^

Submit condition:
label:Verified+1



Feature: Delete Groups

gerrit.config

```
[groups]
  enableDeleteGroup = true
```

All-Projects / project.config

```
[capability]
→ deleteGroup = group Administrators
```



GUS2025-demo-group > Home ▾

GUS2025-demo-group

General

Group UUID

669f9d5c246025273712acd6feb141f0071b7591

Group Name

GUS2025-demo-group

Rename Group

Owners

GUS2025-demo-group

Change Owners

Description

<Insert group description here>

Save Description

Group Options

Make group visible to all
registered users



Save Group Options

Delete Group

Delete Group

Works only if group
is NOT referenced in
ACLs



Feature: Consistent Search Results - The Problem

Gerrit										
CHANGES ▾ YOUR ▾ DOCUMENTATION ▾ BROWSE ▾ MONITORING ▾										
reviewer:"John Doe"		Administrator								
☐	Subject	Owner	Reviewers	Repo	Branch	Updated	Size	Status	CR	
☐	I <3 Gerrit User Summit 2025 at 1760553889	Administrator	► John	gus-2025-repo	master	9:25 PM	XS	1 missing		



An error occurred

You might have not enough privileges.

Error 404 (Not Found): Not found: gus-2025-repo~330

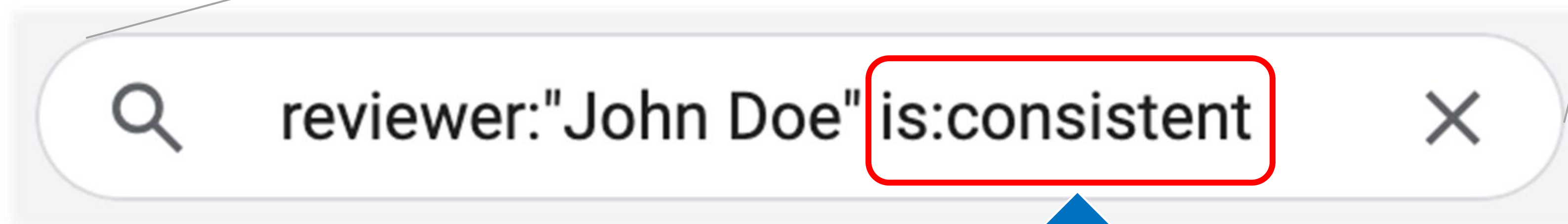
Endpoint: /changes/*~/revisions/*/drafts

Trace Id: 1760560517234-677d544e

Dismiss



Feature: Consistent Search Results – is:consistent



Performance warning due to NoteDb
consistency check



Deprecation: HTTP Authentication Credentials

HTTP Credentials

Username admin

This account only has a legacy HTTP password configured. The legacy HTTP password will be accepted until the first authentication token has been created. At this point the HTTP password will be removed from the account.

ID Expiration Date

legacy

Delete

New Token ID

Lifetime (e.g. 30d)

Generate

Max. allowed lifetime: unlimited. Leave empty to use maximum allowed lifetime.

Gerrit HTTP password
is deprecated

Replaced by
Auth Tokens



Feature: HTTP Tokens Generation

HTTP Credentials

Username	admin
ID	gus2025-auth-key
Expiration Date	Oct 16 9:47 PM

New Token ID

Lifetime (e.g. 30d)
Max. allowed lifetime: unlimited. Leave empty to use maximum allowed lifetime.

Delete

Generate

New Token: jxoKU1uGcTklohlf18APHi++Epyfdc9WM8JJMzLFmA

This token will be valid until Oct 16 9:47 PM.

This token will not be displayed again.

If you lose it, you will need to generate a new one.

Close

Add New SSH Key

Users can have multiple HTTP Auth Tokens

Tokens are automatically expired



Performance: Offline Reindex

```
java -jar $GERRIT_SITE/bin/gerrit.war reindex --read-only-disk-cache
```

- Avoids updating H2 caches during reindex
- H2 caches are used in read-only
- In-memory caches are updated
- Avoids H2 write-locking and write slowdowns



Breaking: Farewell to Prolog

[rules]

allowNewRules = false



New Prolog rules
rejected by default

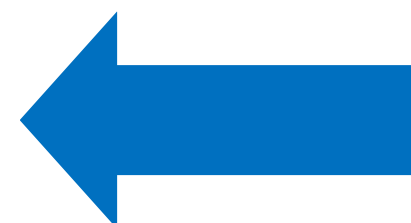
- Prolog deprecated for **7 releases**: time to say “*goodbye*”
- Support for old-style Prolog submit record was limited
- Submit Requirements are mature and should be used instead



Breaking: Farewell to Robot Comments

[change]

enableRobotComments = false



Robot comments are
rejected by default

- RobotComments deprecated for **5 releases**: time to say “goodbye”
- Configuration removed from Gerrit docs
- UI rendering of RobotComments removed
- Checks API provides equivalent functionality without the NoteDb burden



Breaking: New Defaults Timeouts

[ldap]

connectTimeout = 10s

readTimeout = 1m

[transfer]

timeout = 1m

[sendemail]

connectTimeout = 10s

socketTimeout = 10s

- Previous timeouts = ∞
- Check if the defaults are suitable
- Set explicit values before migrating to v3.13



Experiment: Gerrit Flows

Files Comments **Flows**

Create new flow

Stage	Condition	Action	Parameters	
1	http://localhost:8080/c/repo1/+1 is foo bar	do something	a,b,c	🗑️

Gerrit ▼ Create condition (?) -> Action Parameters Add Stage

Create Flow

- Automation rule on a change
- Triggers actions when conditions are met
- Example: *“Add reviewer when the change is ready”, “Close the issue when the change is merged”*
- FlowService @ExtensionPoint must be implemented by plugins
- Require UiFeature__show_flows_tab experiment



Experiment: Asynchronous Submit Requirements

Change Info [Show All](#) ▾

Submitted Sep 29

Owner Kamil Musin

Reviewers Dhruv +2 Ben GerritCI

LUCI

Repo | Branch [gerrit](#) | [master](#)

Submit Requirements

- ✓ Code-Review +2
- ✓ Frontend-Verified +1

- Submit requirements are slow to fetch
- Can be fetched asynchronously
- Faster change details page
- Require `UiFeature__async_submit_requirements` experiment



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gerritforge.com/contact

Questions?