



Faster from idea to production



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Developer, GitLab

- Milestone 8: From version control to covering the entire software development lifecycle
- GitLab 9.0 Highlights
- Sidestep: GitLab CI/CD
- Questions



Milestone 8



What was GitLab at 8.0?



Code hosting platform



Distributed version control



Supports massive teams



Easily propose changes



Code and commit offline

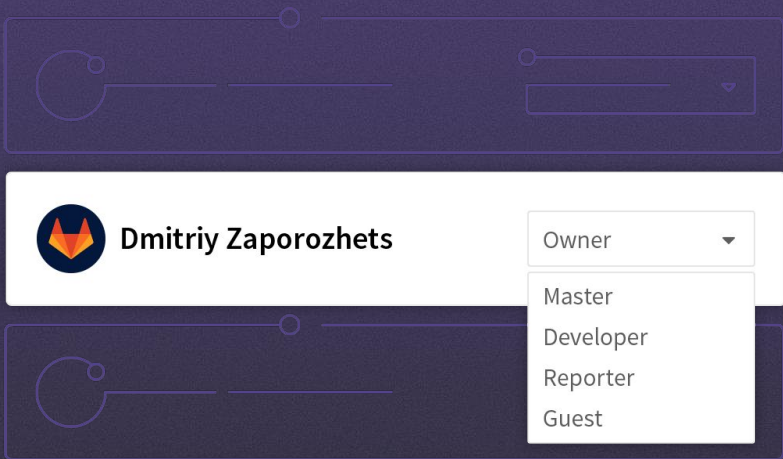


Innersourcing

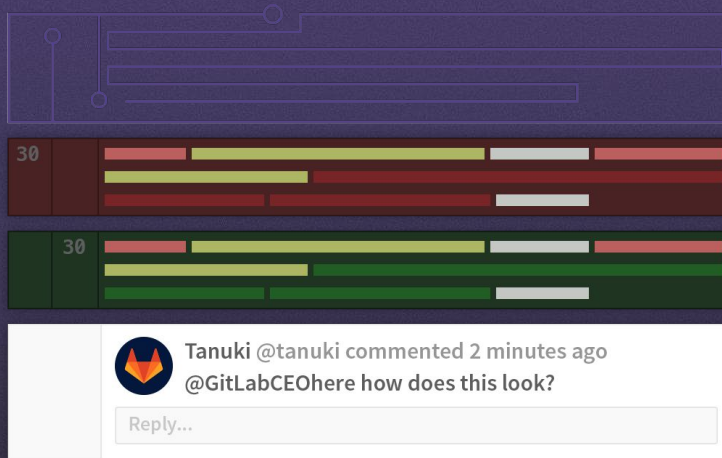


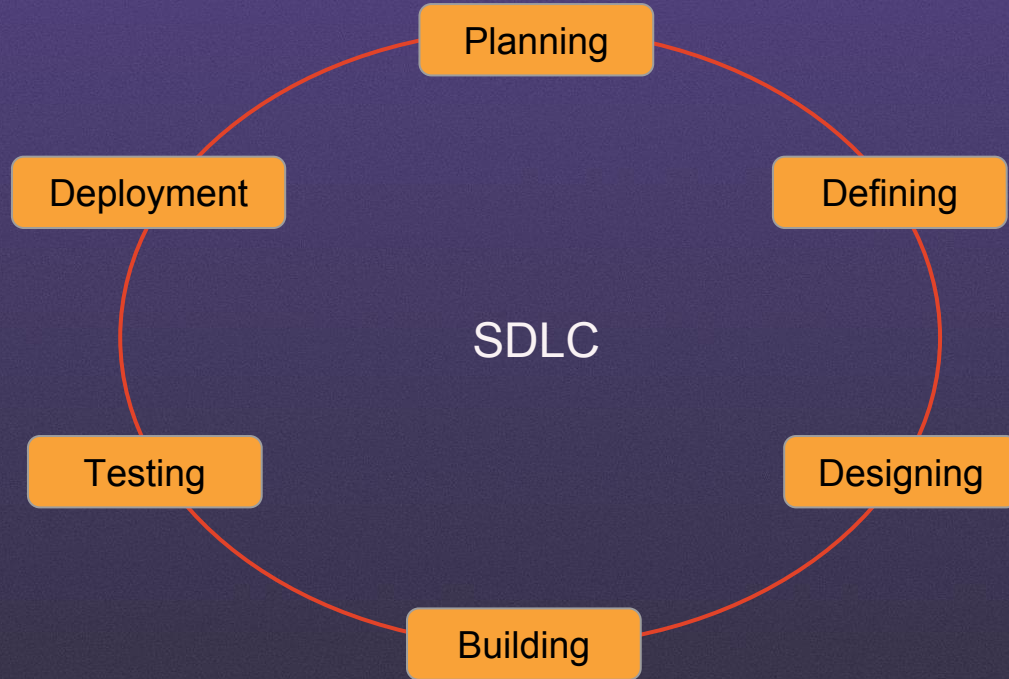
In the beginning...

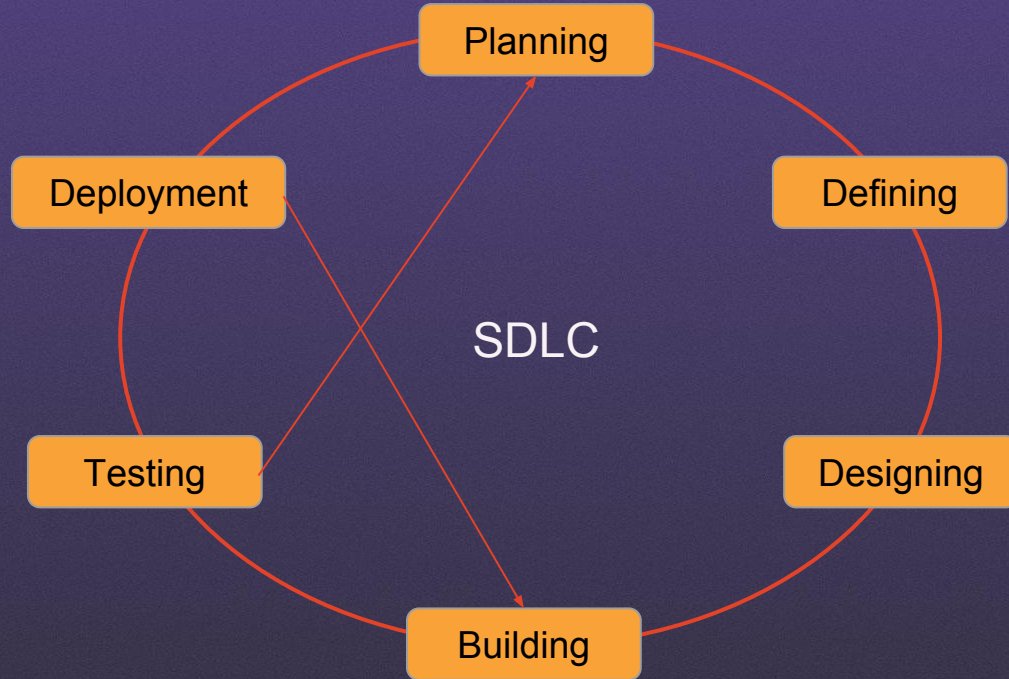
- Repository Management
- Access Control



- Code Review
- Issue Tracker and Wiki









Now: End-to-end software development platform



DEVELOPMENT

DELIVERY

PLAN

- Chat
- Issue Tracker
- Issue Weights
- Issue Board
- Time Tracking

CODE

- Repository Management
- Merge Requests
- Code Review
- Diff Tools

TEST

- GitLab CI
- Autoscale Runners
- Review Apps

DEPLOY

- CI/CD Pipelines
- Auto or Manual Deploy
- Container Registry
- Chat Ops

ANALYZE

- Contributor Analytics
- Release Cycle Analytics
- Prometheus Monitoring

Beginning of ACME CRM Project

This is the start of the ACME CRM Project channel, created by pedro on November 21, 2016. Any member can join and read this channel.

 Invite others to this channel  Set a Header



ISSUE



PLAN



CODE



COMMIT



TEST



REVIEW



STAGING



PRODUCTION



FEEDBACK



GitLab Issues

[List](#) [Board](#) [Labels](#) [Milestones](#)

Open 6,442 **Closed** 13,474 **All** 19,916

Last created ▾

'Access denied' when cloning a wiki
#29815 · opened 21 minutes ago by Adele Scott
0 comments updated 21 minutes ago

Increased incidents of ActiveRecord::MissingAttributeError
#29814 · opened about an hour ago by Stan Hu Platform regression
1 comment updated 55 minutes ago

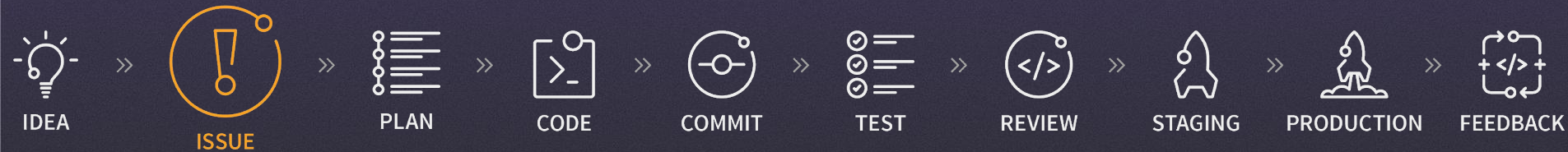
Rename or omit gl_project_id from import_export.yml
#29813 · opened about an hour ago by Stan Hu Platform import
0 comments updated about an hour ago

Updating a name of a project appears to generate a lot of unnecessary queries
#29812 · opened about 2 hours ago by Stan Hu Platform performance repository
0 comments updated about 2 hours ago

Line numbers do not align with code
#29811 · opened about 3 hours ago by Andrew Myers
0 comments updated about 3 hours ago

Persistent tokens are stored in the database in plain-text (without hashing)
#29810 · opened about 4 hours ago by Mateusz Platform security
1 comment updated about 2 hours ago

Theme contrast is way too low (especially layout separation lines) making the site unnecessarily messy to look at
1 comment





GitLab Issue Board

Issues Board Labels Milestones

Author Assignee Milestone Label Create new list

Backlog 20

Search issues

Reducing load times of https://gitlab.com/gitlab-com/operations/issues/42
#19273 P1 Performance

Improve performance of Projects::IssuesController#show so it's not terribly slow
#15607 P1 Performance

"Source branch does not exist"/"Target branch does not exist"
#15392 P1 bug reproduced on GitLab.com repository

UX 20

When creating a project, show generators for README, .gitlab-ci.yml, LICENSE and .gitignore
#19468 P3 feature proposal

Global Pipelines List + Filters for pipelines
#18054 CI Documentation P3 direction

Summary of current filter
#19342 P3 feature proposal

'New branch unavailable' button is green in 8.11 RC
#21006 Frontend bug regression

Why don't images in comments flow with the words?
#20890 bug issues regression

Frontend 20

GL Dropdown specs
#20754 P1 technical debt

Multiple Issue templates
#18656 P1 direction feature proposal issues

Make Move Project Dropdown Performant
#17932 P1 Performance customer+ database

Issue Boards
#17907 P1 direction feature proposal

Pre-load diff when viewing a MR
#19052 P1 Performance customer+

Backend

Add line c
#19055

[Meta] Co
#19049 meta

Cache ren
of in Redi
#18337 banzai d

Add multi
#4143 P needs we

Expand d



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Code Review

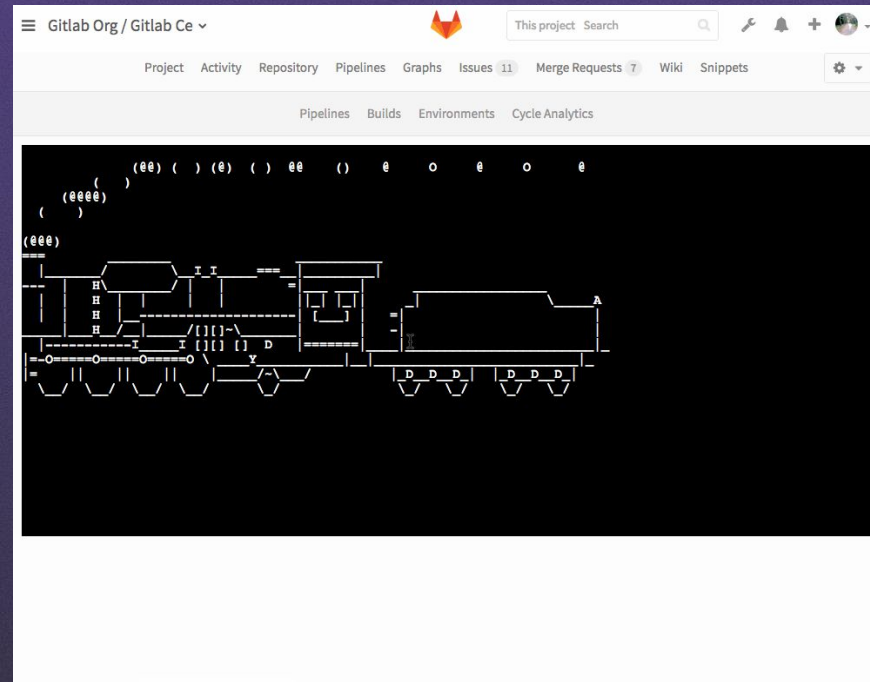
Edit File Preview Changes

master app/controllers/project

```
1- module Projects
2-   module Boards
3-     class IssuesController < Boards::ApplicationController
4-       before_action :authorize_read_issue!, only: [:index]
5-       before_action :authorize_create_issue!, only: [:create]
6-       before_action :authorize_update_issue!, only: [:update]
7-
8-       def index
9-         issues = ::Boards::Issues::ListService.new(project, current_user, filter_params).execute
10-        issues = issues.page(params[:page]).per(params[:per] || 20)
11-        make_sure_position_is_set(issues)
12-
13-        render json: {
14-          issues: serialize_as_json(issues),
15-          size: issues.total_count
16-        }
17-      end
18-
19-      def create
20-        service = ::Boards::Issues::CreateService.new(project, current_user, issue_params)
21-        issue = service.execute
22-
23-        if issue.valid?
24-          render json: serialize_as_json(issue)
25-        else
26-          render json: issue.errors, status: :unprocessable_entity
27-        end
28-      end
29-
30-      def update
```

Commit message Update issues_controller.rb

Commit Changes A new branch will be created in your fork and a new merge request will be started. Cancel



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GitLab Repositories

master

gitlab-ce

Filter by commit message

22 Mar, 2017 2 commits

Merge branch 'cleaner-additional-award-emoji-button' into 'master' ...
Annabel Dunstone Gray committed about 5 hours ago

57f79da9

Browse Files

Removed unnecessary 'add' text in additional award emoji button
Dimitrie Hoekstra committed about 5 hours ago

b2c2cd28

Browse Files

21 Mar, 2017 38 commits

Merge branch 'resolve-global-vue' into 'master' ...
Filipa Lacerda committed about 6 hours ago

77eda528

Browse Files

Merge branch 'dm-fix-vue-cant-compile-some-discussions' into 'master' ...
Robert Speicher committed about 8 hours ago

9ba5f10f

Browse Files

Merge branch 'fix-routes-index-migration' into 'master' ...
Douwe Maan committed about 9 hours ago

6cc88580

Browse Files

Escape values passed from Rails to Vue to make sure the template can be compiled
Douwe Maan committed about 10 hours ago

a3111e14

Browse Files

Fix routes index migration ...
Sean McGivern committed about 11 hours ago

844142e9

Browse Files

Merge branch 'revert-37328406' into 'master' ...
Rémy Coutable committed about 12 hours ago

45a2f900

Browse Files

Merge branch '29583-routes-like-fix' into 'master' ...
Sean McGivern committed about 12 hours ago

50d9204f

Browse Files

Merge branch 'replace_closing_mr_icon' into 'master' ...
Annabel Dunstone Gray committed about 13 hours ago

5f729268

Browse Files

Merge branch 'je-j-backport-authorless-fix' into 'master' ...
Douwe Maan committed about 13 hours ago

0b71dbcc

Browse Files



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Continuous Integration and Container Registry

All 42,100 Pending 0 Running 1 Finished 40,079 Branches Tags					
Status	Pipeline	Commit	Stages		
failed	#7164356 by latest	mr-widget-redes- 6ef0080 Add basic MergeRequest se...	✓ ✗ ➔	02:04:49 2 hours ago	⬇
passed	#7164106 by latest	29043-upgrade-v- 22856474 move common vue script to...	✓ ✓ ✓	02:23:39 1 hour ago	⬇
passed	#7163983 by latest	fix-multiple-fi- 2886f1d4 Reset dropdown list when c...	✓ ✓ ✓	01:49:52 2 hours ago	⬇
failed	#7163920 by latest	master 57f79da9 Merge branch 'cleaner-addi...	✓ ✗ ➔ ➔	01:34:22 3 hours ago	⬇
passed	#7163302 by latest	award-emoji-but- 313bd185 improved colors	✓ ✓ ✓	01:45:06 4 hours ago	⬇
passed	#7163266 by latest	29729-terminal- 14730d11 Adds target blank to enviro...	✓ ✓ ✓	01:05:12 5 hours ago	⬇
canceled	#7163177 by latest	award-emoji-but- c4d79b7c hide other icon, while positl...	✓ ⌛ ⌛	00:17:19 6 hours ago	⬇
failed	#7163127 by latest	award-emoji-but- a7bb55e5 Added award emoji animati...	✓ ✗ ⌛	00:23:45 6 hours ago	⬇
passed	#7163041 by latest	rs-notify-maile- a6e43aa2 Combine redundant 'it' blo...	✓ ✓ ✓	01:24:19 5 hours ago	⬇



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Continuous Integration and Container Registry

GitLab.com / www-gitlab-com - Pipelines

Pipeline #3368501 with 3 builds for master in 6 minutes 24 seconds
Authorized by Ernst van Nierop a day ago
Commit 3e1e2bfa013651d28f60609ae4e8d2c855d2cd74

Merge branch 'patch-23' into 'master'
Grammar fix: monotize -> monetize
Minor typo on homepage
See merge request !2133

Builds

Status	ID	Job	Duration	When	Actions
passed	#1461394	build	5 minutes 4 seconds	a day ago	Share, Clone

Tests

Status	ID	Job	Duration	When	Actions
passed	#1461405	lint	42 seconds	a day ago	Share

Deploys

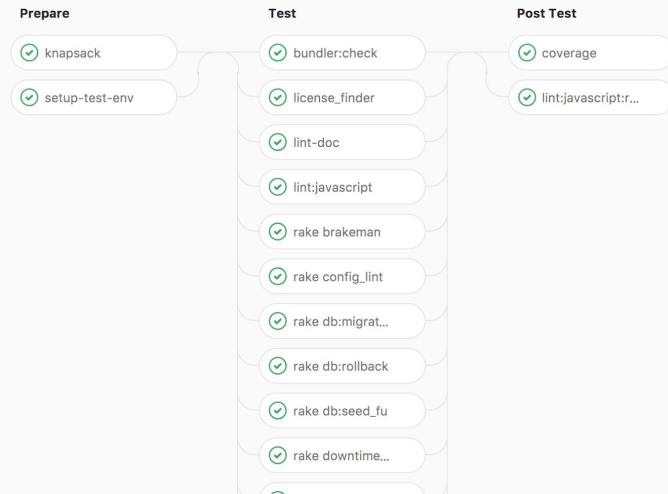
Status	ID	Job	Duration	When	Actions
passed	#1461406	deploy	39 seconds	a day ago	Share

Add tooltip to user's calendar activities

50 jobs from calendar-tooltips in 87 minutes 8 seconds (queued for 12 seconds)

5c31dcaf ...

Pipeline Jobs 50



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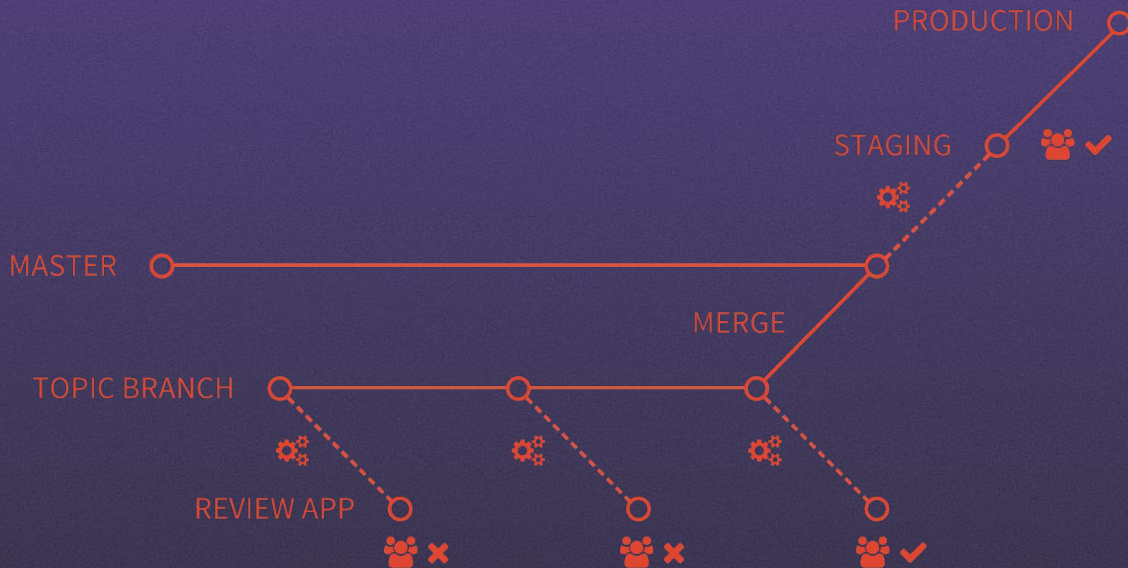
PRODUCTION



FEEDBACK



Review Apps and Continuous Deployment



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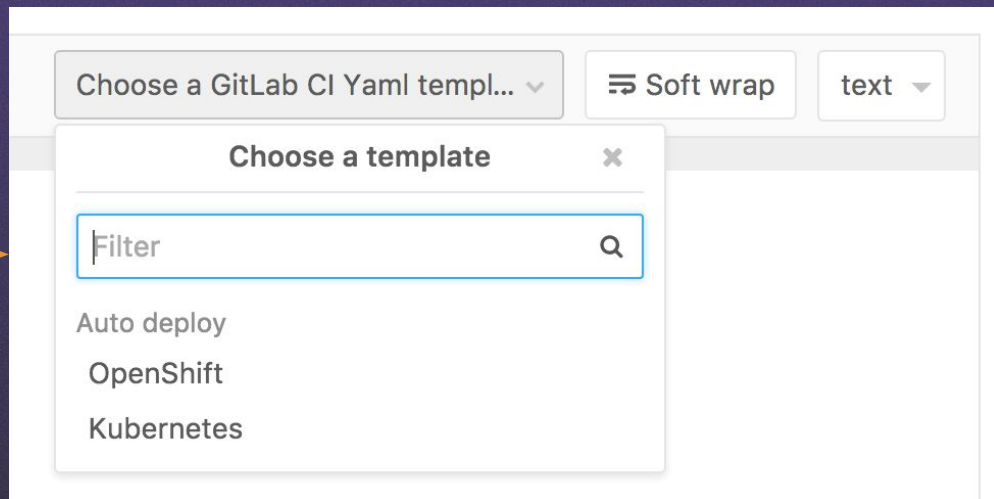
Auto Deploy

Single button to get started quickly

Fully functioning CI/CD pipeline

Openshift or Kubernetes

Set up auto deploy





Release Cycle Analytics

Stage ?	Median ?	Relative Builds Trigger by Commits ?	Total Time ?
Issue	5 minutes	Total test time for all commits/merges	
Plan	7 days	rake karma · #12719289 29043-upgrade-vue-and-r.. 22856474 about 2 hours ago	29 mins
Code	Not enough data	lint:javascript:report · #12716079 29043-upgrade-vue-and-r.. 22856474 about 2 hours ago	1 mins
Test	about 3 hours	coverage · #12716075 29043-upgrade-vue-and-r.. 22856474 about 2 hours ago	18 mins
Review	3 days	lint:javascript · #12716074 29043-upgrade-vue-and-r.. 22856474 about 5 hours ago	1 mins
Staging	Not enough data		
Production	Not enough data	bundler:check · #12716071 29043-upgrade-vue-and-r.. 22856474 about 5 hours ago	1 mins



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GitLab 9.0: Your DevOps Toolchain



Subgroups Groups

Groups

Search

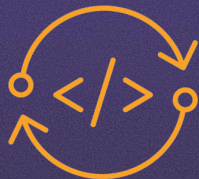
Your Groups Explore Groups [New Group](#)

	gitlab-nested / design / marketing as Owner	0	13			
	gitlab-nested / design / ux as Owner	0	8			
	gitlab-nested / design as Owner	0	24			
	gitlab-nested / backend / CI as Owner	0	32			
	gitlab-nested / backend / platform as Owner	0	28			
	gitlab-nested / backend / build as Owner	0	14			
	gitlab-nested / backend / discussion as Owner	0	44			
	gitlab-nested / backend as Owner	0	68			
	gitlab-nested / frontend as Owner	0	112			
	gitlab-nested as Owner	0	156			



GitLab Deploy Board

EE Premium



Track health and progress of deploys on Kubernetes

Project Repository Registry Issues 0 Merge Requests 1 Pipelines Wiki Settings

Pipelines Jobs Environments Charts

Available 3 Stopped 1 New environment

Environment	Last deployment	Job	Commit	Updated	
production	#3 by	production #12342187	5da5c440 Merge branch 'auto-deploy' ...	17 minutes ago	Re-deploy
23% Complete Instances					
review	#4 by	review #12343014	30b81923 Update server.rb	7 minutes ago	Re-deploy
100% Complete Instance					
staging	#2 by	staging #12342186	5da5c440 Merge branch 'auto-deploy' ...	17 minutes ago	Re-deploy
100% Complete Instances					

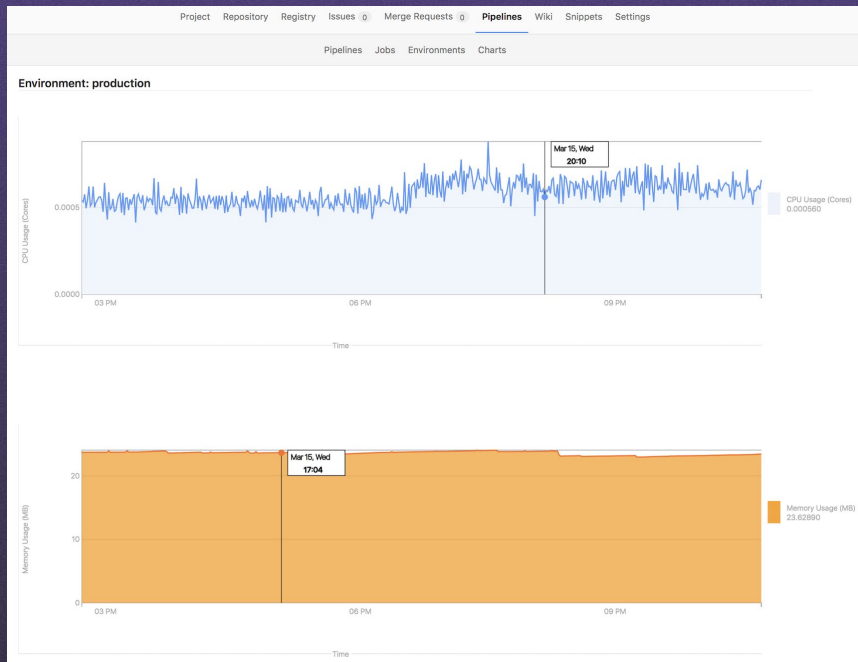
https://docs.gitlab.com/ee/user/project/deploy_boards.html



Monitoring Deployments with Prometheus



Track CPU & Memory usage of
all CI/CD environments



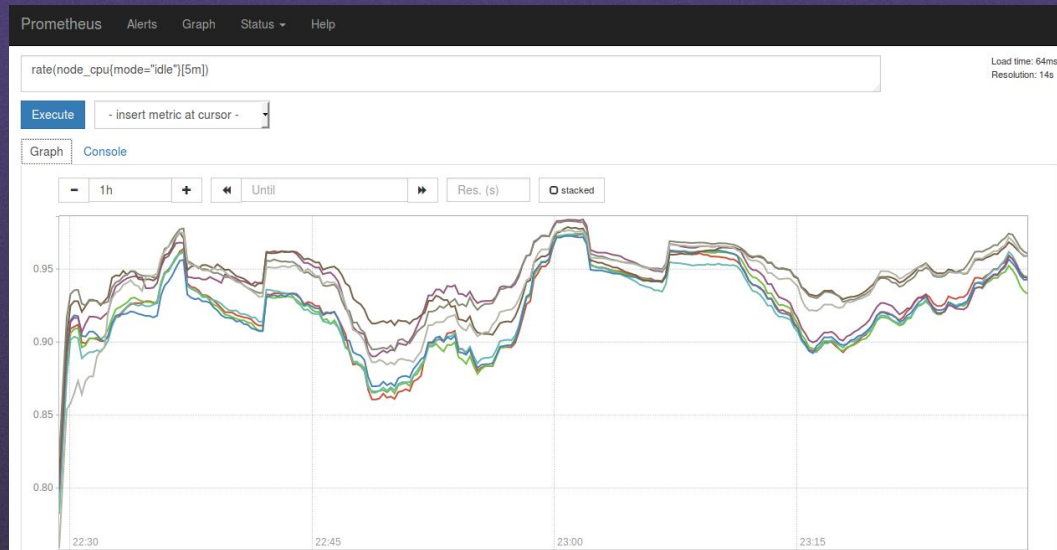
<https://prometheus.io/>
<https://docs.gitlab.com/ce/user/project/integrations/prometheus.html>



Monitoring GitLab with Prometheus



100+ GitLab service metrics
available for monitoring



<https://prometheus.io/>

<https://docs.gitlab.com/ce/administration/monitoring/performance/prometheus.html>



What's Next? Our vision for 2017

<https://about.gitlab.com/direction/#2017-goals>



Cloud Native & Container Schedulers

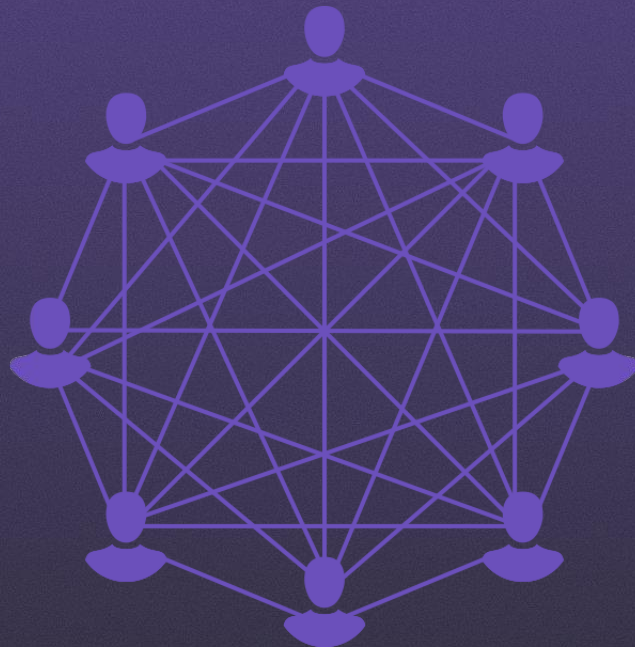


- Idea to Production on GKE
- Support app + database deployments
- Support large-scale projects



(Also) Made for Enterprise

- Cross-project pipelines
- Group-level issue boards
- Reporting (Auditing)
- Disaster Recovery
- High Availability





DevOps at Scale

- Monitoring of apps deployed with CI/CD
- Improve ChatOps integrations
- Bring real time to GitLab





Demo



<https://about.gitlab.com/installation/>



Questions?

