



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



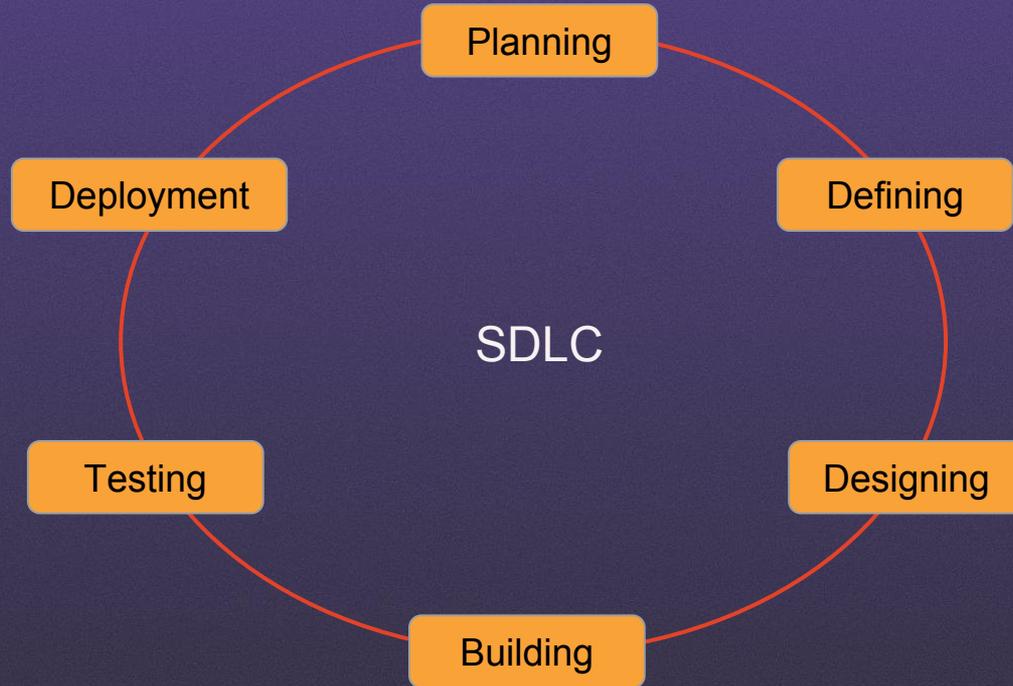
In the beginning...

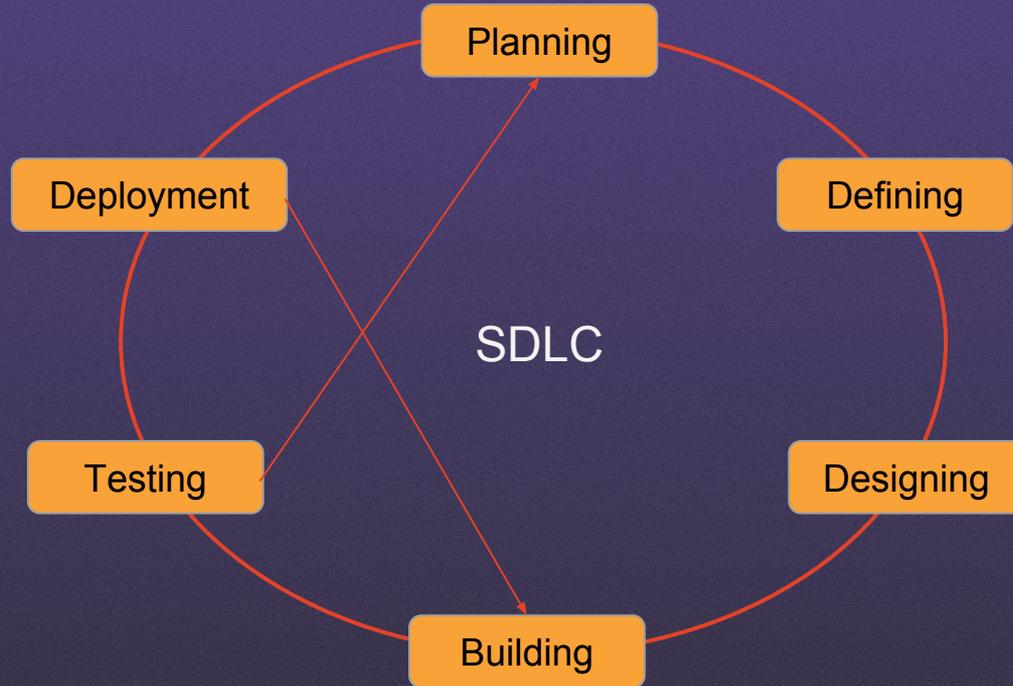
- Repository Management
- Access Control

A screenshot of the GitLab repository management interface. At the top, there is a header with the GitLab logo and the name "Dmitriy Zaporozhets". Below this, there is a dropdown menu with the following options: Owner, Master, Developer, Reporter, and Guest. The "Owner" option is currently selected. The interface is overlaid with a faint purple wireframe grid.

- Code Review
- Issue Tracker and Wiki

A screenshot of the GitLab code review interface. It shows a commit with a diff view. The diff is highlighted in green and red. Below the diff, there is a comment from "Tanuki @tanuki" that says "@GitLabCEOhere how does this look?". The comment is timestamped "2 minutes ago". There is a "Reply..." button below the comment. The interface is overlaid with a faint purple wireframe grid.







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



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COMMIT



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GitLab Issues

List Board Labels Milestones

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

Search or filter results... Last created

- 'Access denied' when cloning a wiki #29815 · opened 21 minutes ago by Adele Scott updated 21 minutes ago
- Increased incidents of ActiveRecord::MissingAttributeError #29814 · opened about an hour ago by Stan Hu Platform regression 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 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 updated about 2 hours ago
- Line numbers do not align with code #29811 · opened about 3 hours ago by Andrew Myers 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 updated about 2 hours ago
- Theme contrast is way too low (especially layout separation lines) making the site unnecessarily messy to look at updated about 2 hours ago





GitLab Issue Board

The screenshot shows the GitLab Issue Board interface. At the top, there are navigation tabs for "Issues", "Board", "Labels", and "Milestones". Below the tabs are filter dropdowns for "Author", "Assignee", "Milestone", and "Label", along with a "Create new list" button. The main area displays a Kanban board with four columns: "Backlog", "UX", "Frontend", and "Backend". Each column contains a list of issue cards. The "UX" column is currently active and shows several issue cards with titles, IDs, and labels. The "Frontend" column also shows several issue cards. The "Backend" column is partially visible on the right. Each issue card includes a title, an ID, and one or more labels indicating priority, type, or category.



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Code Review

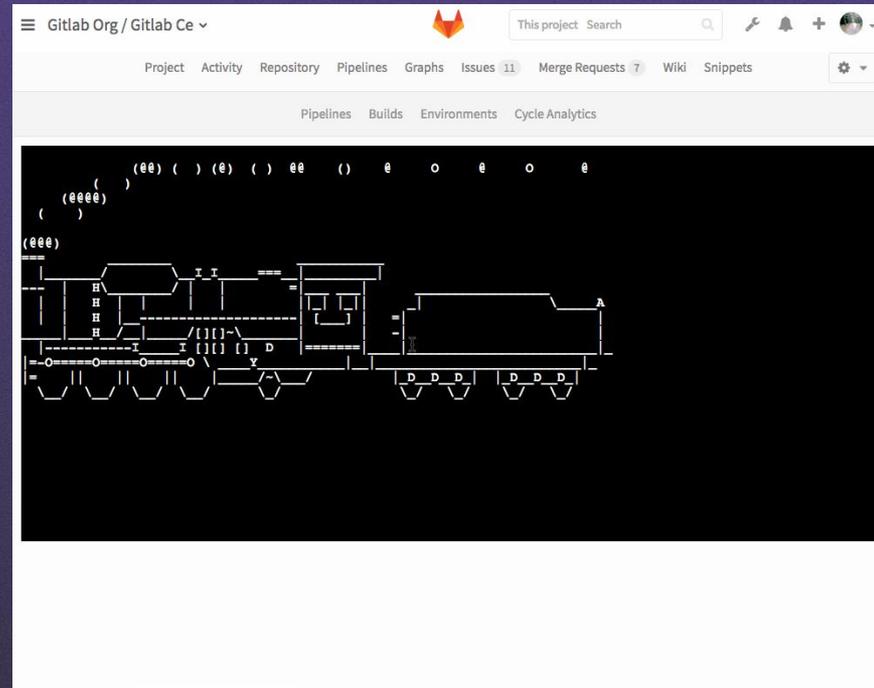
Edit File Preview Changes

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 'ej-backport-authorless-fix' into 'master' ...
Douwe Maan committed about 13 hours ago 0b71dbcc [Browse Files](#)



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Continuous Integration and Container Registry

Status	Pipeline	Commit	Stages	
failed	#7164356 by latest	✓ mr-widget-redes... <small>6ef00880</small> ○ Add basic MergeRequest se...	✓ ✗ →	🕒 02:04:49 📅 2 hours ago
passed	#7164106 by latest	✓ 29043-upgrade-v... <small>22856474</small> ○ move common vue script to...	✓ ✓ ✓	🕒 02:23:39 📅 1 hour ago
passed	#7163983 by latest	✓ fix-multiple-fi... <small>2886f1d4</small> ○ Reset dropdown list when c...	✓ ✓ ✓	🕒 01:49:52 📅 2 hours ago
failed	#7163920 by latest	✓ master <small>57f79da9</small> ○ Merge branch 'cleaner-addi...	✓ ✗ ✓ →	🕒 01:34:22 📅 3 hours ago
passed	#7163302 by latest	✓ award-emoji-but... <small>313bd185</small> ○ improved colors	✓ ✓ ✓	🕒 01:45:06 📅 4 hours ago
passed	#7163266 by latest	✓ 29729-terminal... <small>14730d11</small> ○ Adds target blank to enviro...	✓ ✓ ✓	🕒 01:05:12 📅 5 hours ago
canceled	#7163177 by latest	✓ award-emoji-but... <small>c4d79b7c</small> ○ hide other icon, while posit...	✓ 🕒 🕒	🕒 00:17:19 📅 6 hours ago
failed	#7163127 by latest	✓ award-emoji-but... <small>a7bb55e5</small> ○ Added award emoji animati...	✓ ✗ 🕒	🕒 00:23:45 📅 6 hours ago
passed	#7163041 by latest	✓ rs-notify-maile... <small>a6e43aa2</small> ○ 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
Author: Ernst van Nierop a day ago
Commit 3e1e2bf013651d28f60609ae4e8d2c855d2cd74

Merge branch 'patch-23' into 'master'

Grammar fix: monetize -> monetize
Minor typo on homepage
See merge request !2133

Builds
passed #1461394 build 5 minutes 4 seconds a day ago
passed #1461405 lint 42 seconds a day ago
passed #1461406 deploy 39 seconds a day ago

Add tooltip to user's calendar activities

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

5c31dcdf

Pipeline Jobs 50

Prepare	Test	Post Test
knapsack	bundler:check	coverage
setup-test-env	license_finder	lint:javascript:r...
	lint-doc	
	lint:javascript	
	rake brakeman	
	rake config_lint	
	rake db:migrat...	
	rake db:rollback	
	rake db:seed_fu	
	rake downtime...	



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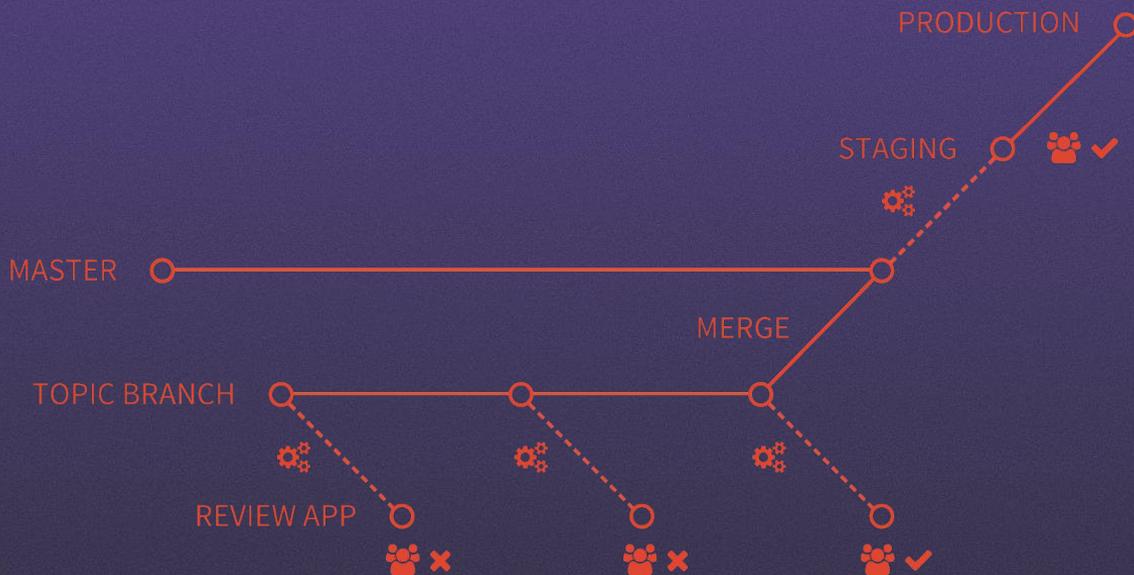
PRODUCTION



FEEDBACK



Review Apps and Continuous Deployment



IDEA



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PLAN



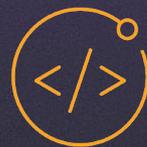
CODE



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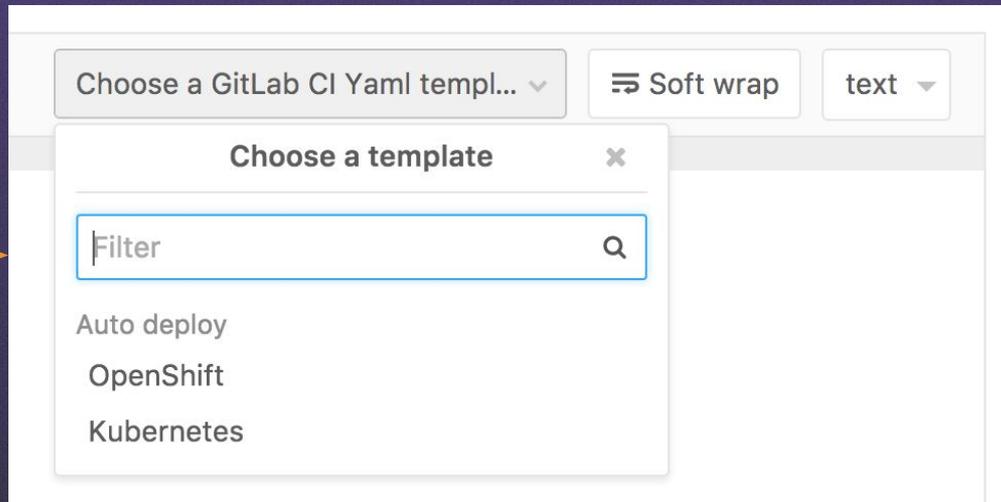
Auto Deploy

Single button to get started quickly

Fully functioning CI/CD pipeline

Openshift or Kubernetes

Set up auto deploy



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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

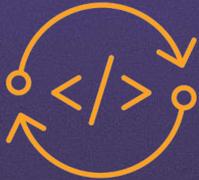
Groups

Your Groups [Explore Groups](#) [New Group](#)

	gitlab-nested / design / marketing as Owner					
	gitlab-nested / design / ux as Owner					
	gitlab-nested / design as Owner					
	gitlab-nested / backend / CI as Owner					
	gitlab-nested / backend / platform as Owner					
	gitlab-nested / backend / build as Owner					
	gitlab-nested / backend / discussion as Owner					
	gitlab-nested / backend as Owner					
	gitlab-nested / frontend as Owner					
	gitlab-nested as Owner					



GitLab Deploy Board



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

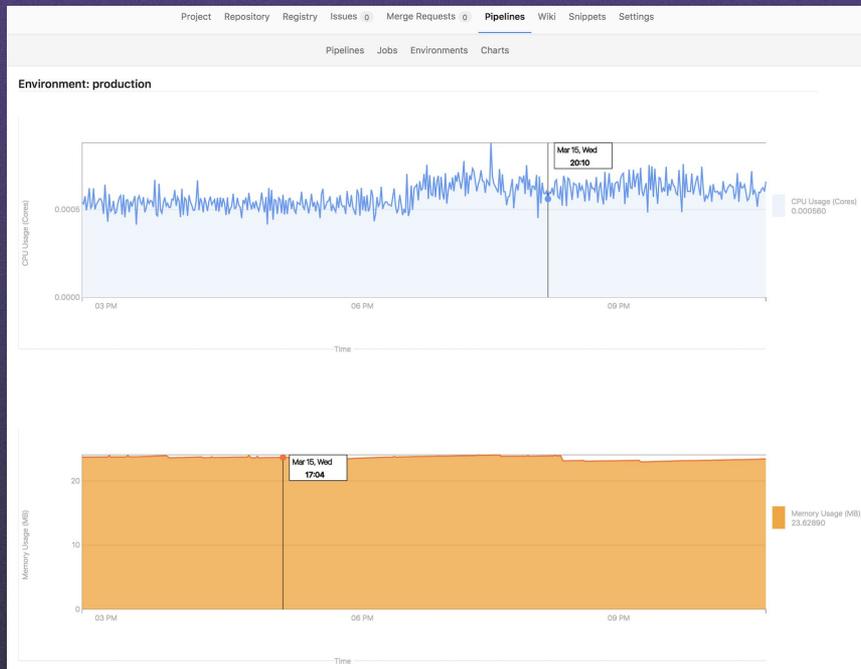
Environment	Last deployment	Job	Commit	Updated	
production	#3 by	production #12342187	5da5c440 Merge branch 'auto-deploy' ...	17 minutes ago	Re-deploy
23% Complete		Instances			
review	#4 by	review #12343014	30b81923 Update server.rb	7 minutes ago	Re-deploy
100% Complete		Instance			
staging	#2 by	staging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



Monitoring Deployments with Prometheus



Track CPU & Memory usage of all CI/CD environments



<https://prometheus.io/>

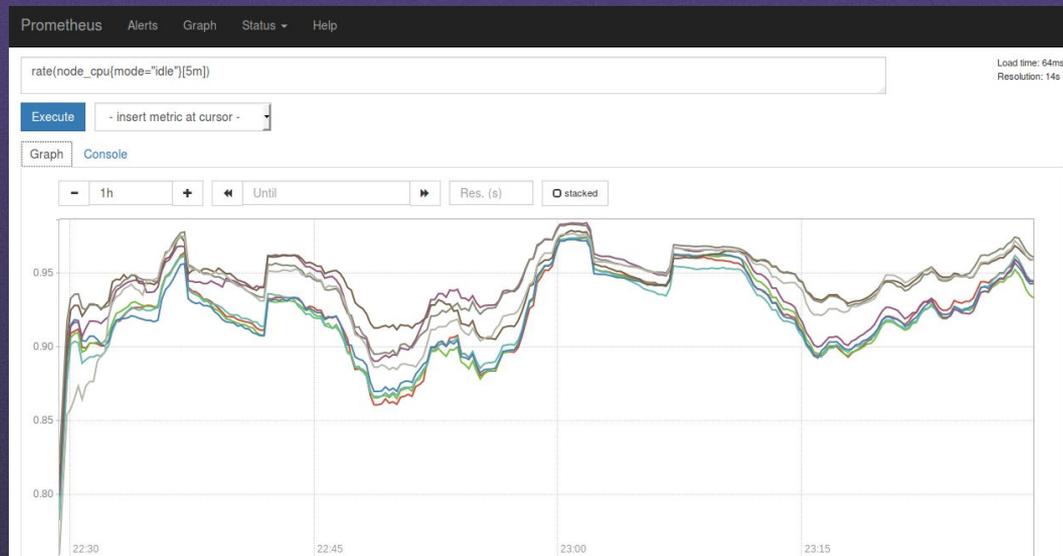
<https://docs.gitlab.com/ce/user/project/integrations/prometheus.html>



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

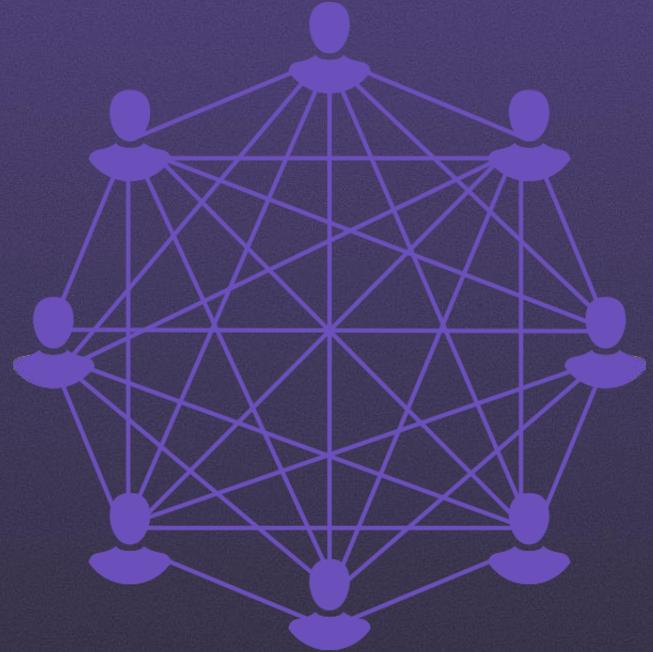


- Idea to Production on GKE
- Support app + database deployments
- Support large-scale projects



(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?

