**GITLAB**

**COMMUNITY EDITION**

Feature rich: Git repository management, code reviews, issue tracking, activity feeds and wikis. It comes with GitLab CI for continuous integration and delivery.

Open Source: MIT licensed, community driven, 700+ contributors, inspect and modify the source, easy to integrate into your infrastructure

Scalable: support 25,000 users on one server or a highly available active/active cluster

**SetUP:**

**Installation:**

GitLab Installation on Ubuntu 16.04

Install Postfix to send mail communications.

#sudo apt-get install curl openssh-server ca-certificates postfix

Add GitLab packages and install Gitlab CE.

#curl -sS https://packages.gitlab.com/install/repositories/gitlab/gitlab-ce/script.deb.sh | sudo bash

#sudo apt-get install gitlab-ce

Edit file /etc/gitlab/gitlab.rb and change your URL.

#vim /etc/gitlab/gitlab.rb

external\_url 'http://bcause-gitlab.openshift.loc'

Configure and start GitLab

#sudo gitlab-ctl reconfigure

**LDAP Integration:**

Add the following 2 Lines to /etc/gitlab/gitlab.rb

gitlab\_rails['ldap\_enabled'] = true

gitlab\_rails['ldap\_servers'] = YAML.load\_file('/etc/gitlab/ldap\_settings.yml')

Note: Instead of a here document fed into the Ruby Hash variable I split the YAML settings into a YAML file.

**Create below file:**

/etc/gitlab/ldap\_settings.yml

main:

label: 'LDAP'

host: '10.172.112.3'

port: 389

uid: 'sAMAccountName'

method: 'plain'

bind\_dn: 'administrator@bcauseind.loc'

password: 'Bc@use#123$%^'

active\_directory: true

allow\_username\_or\_email\_login: false

base: 'dc=bcauseind,dc=loc'

#user\_filter: '(memberOf:1.2.840.113556.1.4.1941:=CN=gitlab User,OU=Groups,DC=mydomain,DC=com)'

**Reconfigure your GitLab:**

#sudo gitlab-ctl reconfigure

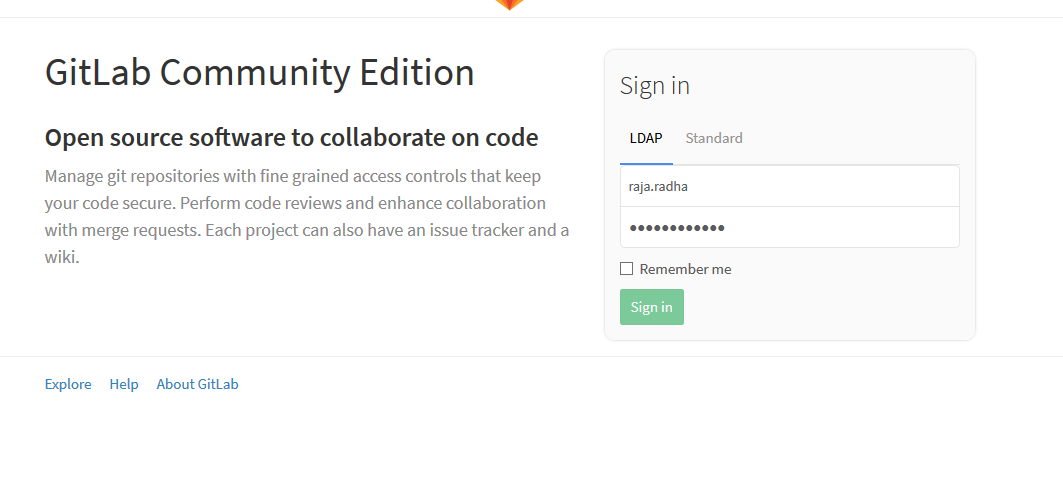
**Check your LDAP Connection:**

sudo gitlab-rake gitlab:ldap:check

To login GitLab with LDAP credential

Note: Use only username to login GitLab in LDAP section. PFB

URL: <http://bcause-gitlab.openshift.loc/users/sign_in>



**Update & Patching:**

Take backup before update

Sudo apt-get update

Sudo apt-get install gitlab-ce

And check your application if everything working good.

**Troubleshooting:**

Various logs available in GitLab:

* production.log
* application.log
* githost.log
* sidekiq.log

**Production.log:**

This file lives in /var/log/gitlab/gitlab-rails/production.log

It contains information about all performed requests. You can see the URL and type of request, IP address and what exactly parts of code were involved to service this particular request.

**Ex:**

Started GET "/gitlabhq/yaml\_db/tree/master" for 168.111.56.1 at 2015-02-12 19:34:53 +0200

Processing by Projects::TreeController#show as HTML

Parameters: {"project\_id"=>"gitlabhq/yaml\_db", "id"=>"master"}

... [CUT OUT]

Namespaces"."created\_at" DESC, "namespaces"."id" DESC LIMIT 1 [["id", 26]]

CACHE (0.0ms) SELECT "members".\* FROM "members" WHERE "members"."source\_type" = 'Project' AND "members"."type" IN ('ProjectMember') AND "members"."source\_id" = $1 AND "members"."source\_type" = $2 AND "members"."user\_id" = 1 ORDER BY "members"."created\_at" DESC, "members"."id" DESC LIMIT 1 [["source\_id", 18], ["source\_type", "Project"]]

CACHE (0.0ms) SELECT "members".\* FROM "members" WHERE "members"."source\_type" = 'Project' AND "members".

(1.4ms) SELECT COUNT(\*) FROM "merge\_requests" WHERE "merge\_requests"."target\_project\_id" = $1 AND ("merge\_requests"."state" IN ('opened','reopened')) [["target\_project\_id", 18]]

Rendered layouts/nav/\_project.html.haml (28.0ms)

Rendered layouts/\_collapse\_button.html.haml (0.2ms)

Rendered layouts/\_flash.html.haml (0.1ms)

Rendered layouts/\_page.html.haml (32.9ms)

Completed 200 OK in 166ms (Views: 117.4ms | ActiveRecord: 27.2ms)

In this example we can see that server processed an HTTP request with URL /gitlabhq/yaml\_db/tree/master from IP 168.111.56.1 at 2015-02-12 19:34:53 +0200. Also we can see that request was processed by Projects::TreeController.

**Application.log**

This file lives in /var/log/gitlab/gitlab-rails/application.log

It helps you discover events happening in your instance such as user creation, project removing and so on. For example:

**For Ex:**

September 15, 2016 10:05: Repository "pod\_zynq/mb-firmware" moved to "pod\_zynq/mb-firmware+36+deleted"

September 15, 2016 10:05: Repository "pod\_zynq/mb-firmware.wiki" moved to "pod\_zynq/mb-firmware.wiki+36+deleted"

September 15, 2016 10:05: Project "pod\_zynq/mb-firmware" was removed

September 15, 2016 10:06: pod\_zynq created a new project "pod\_zynq / mb-firmware"

September 15, 2016 10:56: (LDAP) saving user nitin.aggarwal@bcause.in from login with extern\_uid => CN=Nitin Aggarwal,OU=NOIDA,OU=IDIE LAB,OU=Bcause,DC=bcauseind,DC=loc

September 15, 2016 11:41: yocto created a new project "yocto / Documentation"

September 15, 2016 11:47: Project was renamed: yocto/fsl-community-bsp-platform -> yocto/bcause\_imx\_repo

**githost.log**

This file lives in /var/log/gitlab/gitlab-rails/githost.log

GitLab has to interact with Git repositories but in some rare cases something can go wrong and in this case you will know what exactly happened. This log file contains all failed requests from GitLab to Git repositories.

**Ex:**

December 03, 2014 13:20 -> ERROR -> Command failed [1]: /usr/bin/git --git-dir=/Users/vsizov/gitlab-development-kit/gitlab/tmp/tests/gitlab-satellites/group184/gitlabhq/.git --work-tree=/Users/vsizov/gitlab-development-kit/gitlab/tmp/tests/gitlab-satellites/group184/gitlabhq merge --no-ff -mMerge branch 'feature\_conflict' into 'feature' source/feature\_conflict

error: failed to push some refs to '/Users/vsizov/gitlab-development-kit/repositories/gitlabhq/gitlab\_git.git'

**sidekiq.log**

This file lives in /var/log/gitlab/gitlab-rails/sidekiq.log

GitLab uses background jobs for processing tasks which can take a long time. All information about processing these jobs are written down to this file. For example:

**For Ex:**

2016-09-15\_06:06:36.85706 2016-09-15T06:06:36.856Z 11615 TID-osuxvx5jc ActionMailer::DeliveryJob JID-c05aab3cb4d6d8dcf843b93c INFO: start

2016-09-15\_06:06:37.03649 2016-09-15T06:06:37.036Z 11615 TID-osuxvx5jc ActionMailer::DeliveryJob JID-c05aab3cb4d6d8dcf843b93c INFO: done: 0.18 sec

2016-09-15\_06:06:44.72829 2016-09-15T06:06:44.727Z 11615 TID-zot9s ActionMailer::DeliveryJob JID-34deb6990cd805093159bc9c INFO: start

2016-09-15\_06:06:44.92535 2016-09-15T06:06:44.925Z 11615 TID-zot9s ActionMailer::DeliveryJob JID-34deb6990cd805093159bc9c INFO: done: 0.197 sec

2016-09-15\_06:12:17.33111 2016-09-15T06:12:17.330Z 11615 TID-xalxs PostReceive JID-75f591d928f9b778eca66068 INFO: start

2016-09-15\_06:12:17.76019 2016-09-15T06:12:17.760Z 11615 TID-osuxvx5jc ProjectCacheWorker JID-c60b9a6b9efb3f7fc4e06d13 INFO: start

**In Gitlab server:**

GitLab Repositories: /var/opt/gitlab/git-data/repositories

Ref: <https://about.gitlab.com/downloads/#ubuntu1604>

Ref: <http://www.bonusbits.com/wiki/HowTo:Setup_LDAP_on_Gitlab>

Ref: <https://docs.gitlab.com/ee/administration/logs.html>