# GitLab Runner CI/CD

> “ GitLab Runner CI/CD

`GitLab Runner` `CI/CD`

## Runner

`.gitlab-ci.yml` Runner Runner GitLab.

Runner GitLab

Runner Runner.

GitLab

## RHEL/CentOS/Fedora

```
# For RHEL/CentOS/Fedora
curl -L https://packages.gitlab.com/install/repositories/runner/gitlab-runner/script.rpm.sh |
sudo bash

# For RHEL/CentOS/Fedora
sudo yum install gitlab-runner
```

Runner Shared Runners ( Runner, GitLab ), Specific Runners ( Runner, ), Group

Shared Runners GitLab Specific Runners Group Runners.

## Step1: (token)

Specific Runners GitLab » CI/CD Runner Runner CI/

vue-element-admin

# Step2: Executors

## Shell

Shell

## Docker

Docker

# Step3:

Executors, Runner

## Linux

```
sudo gitlab-runner register
```

2. GitLab instance URL, URL

```
Please enter the gitlab-ci coordinator URL (e.g. https://gitlab.com/):
https://gitlab.eaglesoftware.cn/
```

```
Please enter the gitlab-ci token for this runner:
xxxxxxxxxxxxxxxxxxx
```

4. Runner CI/CD

```
Please enter the gitlab-ci description for this runner:
[localhost.localdomain]: vm-wuzhuangzhuang
```

5. Runner Runner, CI/CD

```
Please enter the gitlab-ci tags for this runner (comma separated):
vm-wzz,centos
```

6. Runner Executors

```
Please enter the executor: docker+machine, docker-ssh+machine, kubernetes, virtualbox,
```

```
docker, docker-ssh, parallels, shell, ssh, custom:
shell
```

7. Docker executor, .gitlab-ci.yml

vue-element-admin CI/CD

CI/CD (stages)

CI/CD

vue-element-admin npm CentOS

# Version 1: Shell

## Step1: Runner

## Step2:

README.md, node 12.16.1, Development Tools. ( .travis.yml

```
#       nodejs
sudo yum remove nodejs
#
sudo yum clean all
#      https://github.com/nodesource/distributions/blob/master/README.md#debinstall
curl -sL https://rpm.nodesource.com/setup_10.x |  sudo bash -
#    nodejs
sudo yum install -y nodejs
#
yum install gcc-c++ make
#
# yum groupinstall 'Development Tools'
#
npm version
```

:

```
{ npm: '6.13.4',
  ares: '1.15.0',
```

```
  brotli: '1.0.7',
  cldr: '35.1',
  http_parser: '2.9.3',
  icu: '64.2',
  modules: '64',
  napi: '5',
  nghttp2: '1.39.2',
  node: '10.19.0',
  openssl: '1.1.1d',
  tz: '2019c',
  unicode: '12.1',
  uv: '1.28.0',
  v8: '6.8.275.32-node.55',
  zlib: '1.2.11' }
```

# Step3:

gitlab-runner docker gitlab-runner docker

```
sudo usermod -aG docker gitlab-runner
sudo -u gitlab-runner -H docker info
```

# Step4: .gitlab-ci.yml

`.gitlab-ci.yml` GitLab CI/CD Pipeline Configuration Reference.

## v1.1 -

1 `.gitlab-ci.yml`

```
stages:
  - build
  - deploy

#   stage
before_script:
  - pwd
  - npm set registry https://mirrors.huaweicloud.com/repository/npm/

cache:
```

```
  paths:
    - node_modules/
    - dist

build_job:
  stage: build
  tags:
    - centos
    - vm-wzz
  script:
    - echo '  '
    - npm install
    - rm -rf ./dist
    - npm run build

deploy_job:
  stage: deploy
  tags:
    - centos
    - vm-wzz
  script:
    - echo '  '
    - cd docker-compose
    - docker-compose stop
    - docker-compose up -d
```

, 03:06, build_job 02:03, deploy_job 01:02, deploy_job

deploy_job GitLab build_job node_modules/ dist/

```
116     ./public
1184    ./.git
44      ./plop-templates
9324    ./dist
8       ./build
12      ./docker-compose
84      ./mock
450948  ./node_modules
2868    ./src
40      ./tests
```

```
465488  .
```

# v1.2 -

`.gitlab-ci.yml`

```
stages:
  - build

#   stage
before_script:
  - pwd
  - npm set registry https://mirrors.huaweicloud.com/repository/npm/

cache:
  paths:
    - node_modules/
    - dist

build_job:
  stage:  build
  tags:
    - shell
    - vm-wzz
  script:
    - echo '  + '
    - npm install
    - npm run build
    - cd docker-compose
    - docker-compose stop
    - docker-compose up -d
```

`package.json` `npm install`

# v1.3 - npm install

`.gitlab-ci.yml` `package.json` `npm install`.

01:23

```
stages:
```

```
  - npm_install
  - build

#   stage
before_script:
  - pwd
  - npm set registry https://mirrors.huaweicloud.com/repository/npm/

cache:
  paths:
    - node_modules/

npm_install_job:
  stage: npm_install
  tags:
    - shell
    - vm-wzz
  script:
    - npm install
  only:
    changes:
      - package.json

build_job:
  stage: build
  tags:
    - shell
    - vm-wzz
  script:
    - npm run build
    - cd docker-compose
    - docker-compose stop
    - docker-compose up -d
```

docker-compose/ Docker

## Git ?

Runner

:

1. The remote end hung up unexpectedly

```
        Git     /home/gitlab-runner/builds/z5U7Uaf7/0/opd/vue-element-admin/.git/
 error: RPC failed; result=6, HTTP code = 0
 fatal: The remote end hung up unexpectedly
 ERROR: Job failed: exit status 1
```

2. Could not resolve host: gitlab.eaglesoftware.cn

```
Fetching changes with git depth set to 50...
00:01
         Git     /home/gitlab-runner/builds/z5U7Uaf7/0/opd/vue-element-admin/.git/
 fatal: unable to access 'https://gitlab-ci-token:[MASKED]@gitlab.eaglesoftware.cn/opd/vue-
element-admin.git/': Could not resolve host: gitlab.eaglesoftware.cn; Unknown error
 ERROR: Job failed: exit status 1
```

3. Could not resolve host: github.com (npm install )

```
npm ERR! Error while executing:
npm ERR! /usr/bin/git ls-remote -h -t https://github.com/nhn/raphael.git
npm ERR!
npm ERR! fatal: unable to access 'https://github.com/nhn/raphael.git/': Could not resolve
host: github.com; Unknown error
npm ERR!
npm ERR! exited with error code: 128
npm ERR! A complete log of this run can be found in:
npm ERR!     /home/gitlab-runner/.npm/_logs/2020-03-09T07_25_38_871Z-debug.log
ERROR: Job failed: exit status 1
```

4. git fetch-pack: expected shallow list

```
Running on localhost.localdomain...
00:00
Fetching changes with git depth set to 50...
00:03
         Git     /home/gitlab-runner/builds/z5U7Uaf7/0/opd/vue-element-admin/.git/
 fatal: git fetch-pack: expected shallow list
 fatal: The remote end hung up unexpectedly
 ERROR: Job failed: exit status 1
```

3 4 CentOS 7 Runner Git (git version 1.8.3.1), G

CentOS 7 Git ius.io :

```
yum install \
https://repo.ius.io/ius-release-el7.rpm \
https://dl.fedoraproject.org/pub/epel/epel-release-latest-7.noarch.rpm
yum repolist
yum remove git
yum provides git
yum install git222
git --version
#    git         git   gitlab-runner,
yum install gitlab-runner
```

# node

node node 12.16.1,

Docker,

# Docker Engine

```
$ docker-compose stop
 Couldn't connect to Docker daemon at http+docker://localhost - is it running?
 If it's at a non-standard location, specify the URL with the DOCKER_HOST environment
variable.
 ERROR: Job failed: exit status 1
```

Docker Engine

```
```

```
systemctl start docker
systemctl enable docker
```

# Version 2: Docker

## Why

docker ssh

runner IP

## Step1: Runner

:

- gitlab-ci tags: vm-wzz, docker
- executor: docker
- default Docker image: node:10.19.0-buster ( )

## Step2: GitLab

passphrase,

```
$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/c/Users/96129/.ssh/id_rsa): id_rsa_ci_test
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in id_rsa_ci_test.
Your public key has been saved in id_rsa_ci_test.pub.
$ ssh-copy-id -i id_rsa_ci_test.pub root@10.44.111.27
$ cat id_rsa_ci_test
```

GitLab » CI/CD 3 :

- SERVER_HOST: IP , 10.44.111.27
- SERVER_USER: login, root
- STAGING_PRIVATE_KEY: cat id_rsa_ci_test

3 .gitlab-ci.yml

# Step3:  .gitlab-ci.yml

.gitlab-ci.yml

```
image:  node:10.19.0-buster

stages:
  - npm_install
  - build_docker
  - deploy

variables:
  TARGET_DIR:  ~/vue-element-admin/

#   stage
before_script:
  - 'which ssh-agent || ( apt-get update -y && apt-get install openssh-client -y )'
  - mkdir -p ~/.ssh
  - eval $(ssh-agent -s)
  - '[[ -f /.dockerenv ]] && echo -e "Host *\n\tStrictHostKeyChecking no\n\n" >
~/.ssh/config'
  - ssh-add <(echo "$STAGING_PRIVATE_KEY")
  - npm set registry https://mirrors.huaweicloud.com/repository/npm/

stage_npm_install:
  stage:  npm_install
  tags:
    - docker
    - vm-wzz
  cache:
    paths:
      - node_modules/
  script:
    - npm install
  only:
    changes:
      - package.json

stage_build_docker:
```

```
  stage: build_docker
  tags:
    - docker
    - vm-wzz
  script:
    - ssh $SERVER_USER@$SERVER_HOST "mkdir -p $TARGET_DIR/docker-compose/"
    - scp -r docker-compose/* $SERVER_USER@$SERVER_HOST:$TARGET_DIR/docker-compose/
    - ssh $SERVER_USER@$SERVER_HOST "docker-compose -f $TARGET_DIR/docker-compose/docker-
compose.yml build"
  only:
    changes:
      - docker-compose/**/*

stage_deploy:
  stage: deploy
  artifacts:
    paths:
      - dist/
  tags:
    - docker
    - vm-wzz
  cache:
    paths:
      - node_modules/
    policy: pull
  script:
    - npm run build
    - ssh $SERVER_USER@$SERVER_HOST "mkdir -p $TARGET_DIR/dist/"
    - scp -r dist/* $SERVER_USER@$SERVER_HOST:$TARGET_DIR/dist/
    - ssh $SERVER_USER@$SERVER_HOST "mkdir -p $TARGET_DIR/docker-compose/"
    - scp -r docker-compose/* $SERVER_USER@$SERVER_HOST:$TARGET_DIR/docker-compose/
    - ssh $SERVER_USER@$SERVER_HOST "cd $TARGET_DIR/docker-compose/ && docker-compose stop &&
docker-compose up -d"
```

3 1 npm_install, package.json

2 build_docker, docker-compose/ Dockerfile, nginx

3 deploy, 1 node_modules/,

3 1 1 package.json .gitlab-ci.yml package.json

GitLab CI / CD “ ”

docker Version 1 GitLab 02:55 ( package.json

IP

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Revision #1
Created 16 June 2020 10:37:31 by
Updated 16 June 2020 13:10:29 by