

Gitlab in LXC

Gitlab in unprivileged LXC (Proxmox).

Installation

- Install Debian Buster container
- Install gitlab repo
- Create additional mount point for Gitlab runtime (database, artifacts, lfs, pages) (to SSD/NVM disks)
 - 100GB (thin provisioning) for /var/opt/gitlab
- Create additional mount point for Gitlab repos (to SSD/NVM disks)
 - 200GB (thin provisioning) for /home/git-data
- Configure mail agent: [Relay to external SMTP server](#)

Issues

setting key "kernel.sem": Read-only file system

```
STDERR: sysctl: setting key "kernel.sem": Read-only file system
---- End output of sysctl -e -p /opt/gitlab/embedded/etc/90-omnibus-gitlab-
kernel.sem.conf ----
```

[Failed to modify kernel parameters with sysctl](#)

Gitlab installer puts own sysctl settings:

```
# ls -l /etc/sysctl.d
total 11
lrwxrwxrwx 1 root root 58 lip  9 16:24 90-omnibus-gitlab-kernel.sem.conf ->
/opt/gitlab/embedded/etc/90-omnibus-gitlab-kernel.sem.conf
lrwxrwxrwx 1 root root 61 lip  9 06:36 90-omnibus-gitlab-kernel.shmall.conf
-> /opt/gitlab/embedded/etc/90-omnibus-gitlab-kernel.shmall.conf
lrwxrwxrwx 1 root root 61 lip  9 05:53 90-omnibus-gitlab-kernel.shmmax.conf
-> /opt/gitlab/embedded/etc/90-omnibus-gitlab-kernel.shmmax.conf
lrwxrwxrwx 1 root root 14 kwi 27 17:02 99-sysctl.conf -> ../sysctl.conf
-rw-r--r-- 1 root root 324 maj 31  2018 protect-links.conf
-rw-r--r-- 1 root root 639 maj 31  2018 README.sysctl
```

Problem is located in RO /sys filesystem, not in values itself. Host already has huge values set, enough to run Gitlab:

```
# sysctl kernel.shmmax
```

```
kernel.shmmax = 18446744073692774399
```

Solution is to configure gitlab again and again, to skip installator part. Gitlab reconfigure will detect that LXC host has correct variable:

```
dpkg --configure -a  
gitlab-ctl reconfigure
```

Some LXC configuration trick (can work with privileged containers)

```
lxc.apparmor.profile: unconfined  
lxc.mount.auto: sys:rw
```

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