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## **What is GitLab?**

GitLab is a web-based Git repository that provides free open and private repositories, issue-following capabilities, and wikis. It is a complete DevOps platform that enables professionals to perform all the tasks in a project—from project planning and source code management to monitoring and security. Furthermore, it allows teams to collaborate and build better software.

GitLab helps teams reduce product lifecycles and increase productivity, which in turn creates value for customers. The application doesn't require users to manage authorizations for each tool. If permissions are set once, then everyone in the organization has access to every component.

<https://www.simplilearn.com/tutorials/git-tutorial/what-is-gitlab>

# **How to Minimal Install Debian 10 Server**

**Debian** also known as **Debian GNU/Linux** is a Linux distribution composed of free and open source software, developed by community supported [Debian project](https://www.debian.org/), which was established by **Ian Murdock** on August 16, 1993. Debian is one of the oldest distributions based on Linux Kernel. (Courtesy: [Wikipedia](https://en.wikipedia.org/wiki/Debian))

**Ubuntu** is the most famous Linux distribution now-a-days, and is also derived from **Debian Project**.

<https://www.centlinux.com/2020/03/how-to-minimal-install-debian-10-server.html>

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# Ansible

***Ansible est un moteur d’automatisation informatique radicalement simple. Il automatise le stockage cloud, la gestion de la configuration, le déploiement d’applications, l’orchestration intra-service et de nombreux besoins informatiques.***

Conçu pour les déploiements multi-niveaux, Ansible modélise les infrastructures informatiques. Il décrit comment tous vos systèmes sont interreliés. Il utilise également un langage écrit en YAML, sous la forme d’Ansible Playbooks. Cet article offre un aperçu sur cette technologie et présente ses intérêts pour la digitalisation des entreprises.

<https://www.objetconnecte.com/ansible-presentation>

<https://docs.ansible.com/ansible/latest/user_guide/intro_getting_started.html>

<https://linuxhandbook.com/tag/ansible/>

## **What is YAML?**

YAML has gained a lot of popularity over the last few years as it became part of crucial DevOps tools, technologies and processes such as Ansible, [Kubernetes](https://kubernetes.io/), CI/CD pipelines and so on.

[YAML](https://yaml.org/) stands for *"YAML Ain't Markup Language"* originally was an acronym for 'Yet Another Markup Language'. YAML is a “data serialization” language and basically a human-readable structured data format.

It is designed to be read and write friendly. The object serialization feature of YAML presents itself as a practicable alternative to [JSON](https://www.json.org/json-en.html). YAML is a superset of JSON with the use of indentation-based scoping to denote the structure like Python.

<https://linuxhandbook.com/yaml-basics/>

## **Terraform**

Terraform Cloud is a platform that performs Terraform runs to provision infrastructure, either on demand or in response to various events. Unlike a general-purpose continuous integration (CI) system, it is deeply integrated with Terraform's workflows and data, which allows it to make Terraform significantly more convenient and powerful.

15 min overview

<https://www.youtube.com/watch?v=l5k1ai_GBDE>

Full tuto

<https://www.youtube.com/watch?v=SLB_c_ayRMo&t=16s>

## Packer

Packer overview

<https://kappataumu.com/articles/creating-an-Ubuntu-VM-with-packer.html>

Packer for virtualbox

<https://www.packer.io/guides/packer-on-cicd/build-virtualbox-image>

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INSTALL GIT

su -

apt-get install sudo -y

adduser username sudo

chmod 0440 /etc/sudoers

sudo apt install git

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CREATE PUBLIC SSH KEY

cd ~/.ssh/

ssh-keygen

ssh-copy-id username@192.168.56.10

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INSTALL ANSIBLE

sudo apt update -y

sudo apt install ansible -y

ansible --version

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INSTALL SSH

apt install openssh-server -y

apt install ufw

ufw allow ssh

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SSH AUTO CONNECT WITH ROOT

Create public ssh key like below

cat .ssh/id\_rsa.pub

Copy output

Connect to host with SSH like username@192.168.56.10

Create file 'key' and paste last output then save this file

Exit

With VirtualBox, connect with root on host machine

cat /home/username/key >> /root/.ssh/authorized\_keys

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LUNCH ANSIBLE PLAYBOOK

ansible-playbook -i ansible/hosts ansible/playbook.yml

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IF ANSIBLE PLAYBOOK FAIL AT INSTALL PREREQUIES

Check sudo apt update on remote machine that failed

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RESSOURCES

https://www.youtube.com/watch?v=DwNapBHypE8

https://www.digitalocean.com/community/tutorials/how-to-use-ansible-to-install-and-set-up-lamp-on-ubuntu-18-04-fr