



# How to Install Terraform (Infrastructure as Code) in Linux

Karthick | Last Updated: October 27, 2023 | Read Time: 2 mins | [CentOS](#), [Debian](#), [Fedora](#), [RedHat](#), [Ubuntu](#)  
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In this article, we will discuss what Terraform is and how to install Terraform on various Linux distributions using HashiCorp repositories.

## What is Terraform?

Terraform is a popular cloud orchestration tool in the world of automation, which is used to deploy your infrastructure through the IAC (Infrastructure as code) approach.

Terraform is built by Hashicorp and released under Mozilla Public License. It supports public, private as well and hybrid cloud, as of now Terraform supports 145 providers, which include popular providers like AWS, Azure Cloud, GCP, Oracle Cloud, and many others.

Terraform architecture is very simple. All you need is to download the terraform binary to your local/server machine which is going to act as your base machine.

We have to mention the provider to work within our syntax file. Terraform will download the plugin for that particular provider automatically and will authenticate with the provider API to execute the plan.

## What is Infrastructure as Code?

The process of provisioning and managing resources like Virtual Machines, Storage, Networks, Database, etc.. through machine-readable definition files, rather than interactive tools or hardware configurations.

## Features

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- Open-source.
- Declarative syntax.
- Pluggable Modules.
- Immutable infrastructure.
- Simple client-only architecture.

Let's get started...

## Installing Terraform in Linux Distributions

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The Terraform primary distribution packages come in `.zip` format, that includes single executable files that you can uncompress at any location on your Linux system.

However, for simpler integration with configuration management tools, terraform also offers package repositories for [Debian-based](#) and [RHEL-based systems](#), which enables you to install Terraform using your default package management tools called [APT](#), [Yum](#), or [DNF](#).

### Install Terraform in Debian, Ubuntu & Mint

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```
wget -O- https://apt.releases.hashicorp.com/gpg | sudo gpg --dearmor -o /usr/share/keyrings/hashicorp-archive-keyring.gpg
echo "deb [signed-by=/usr/share/keyrings/hashicorp-archive-keyring.gpg] https://apt.releases.hashicorp.com/ $(lsb_release -cs) main" | sudo tee /etc/apt/sources.list.d/hashicorp.list
sudo apt update
sudo apt install terraform
```

### Install Terraform in RHEL and CentOS

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```
sudo yum install -y yum-utils
sudo yum-config-manager --add-repo https://rpm.releases.hashicorp.com/RHEL/hashicorp.repo
sudo yum update
sudo yum -y install terraform
```

## Install Terraform in Fedora

```
sudo dnf install -y dnf-plugins-core
sudo dnf config-manager --add-repo https://rpm.releases.hashicorp.com/fedora
sudo dnf update
sudo dnf -y install terraform
```

Now the installation can be verified by running a simple terraform version command.

```
$ terraform version
```

```
[karthick@TECMINT ~]$ terraform version
Terraform v0.14.0
```

[Check Terraform Version](#)

That's it for this article. The installation is very simple and easy to set up and [some text editors](#) like [Sublime](#) and [VSCode](#) come with language support for Terraform too.

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## Karthick

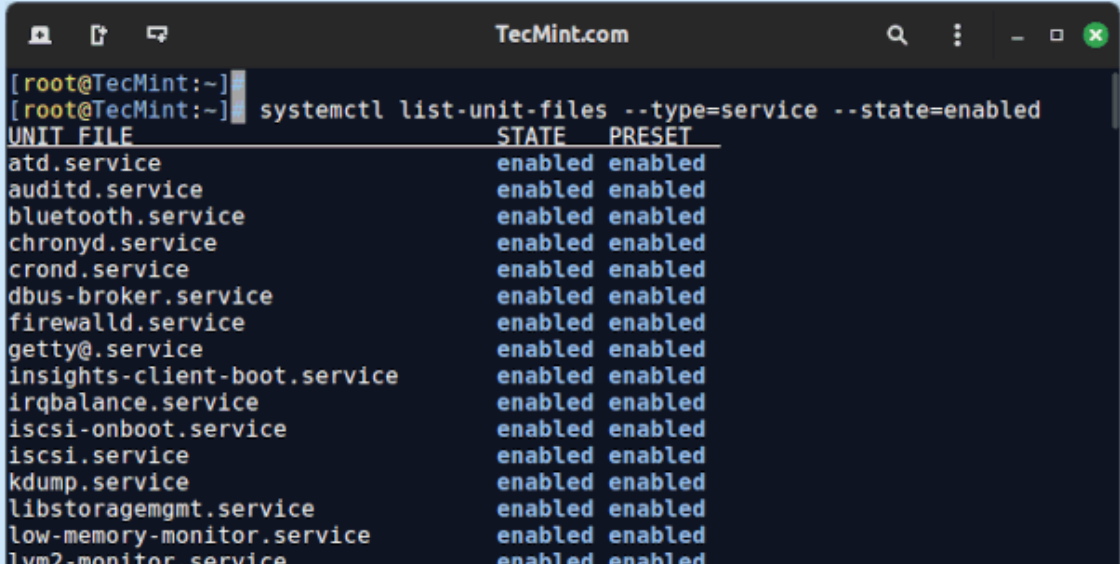
A passionate software engineer who loves to explore new technologies. He is a public speaker and loves writing about technology, especially about Linux and open source.

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UNIT	FILE	STATE	PRESET
atd.service		enabled	enabled
auditd.service		enabled	enabled
bluetooth.service		enabled	enabled
chronyd.service		enabled	enabled
crond.service		enabled	enabled
dbus-broker.service		enabled	enabled
firewalld.service		enabled	enabled
getty@.service		enabled	enabled
insights-client-boot.service		enabled	enabled
irqbalance.service		enabled	enabled
iscsi-onboot.service		enabled	enabled
iscsi.service		enabled	enabled
kdump.service		enabled	enabled
libstoragemgmt.service		enabled	enabled
low-memory-monitor.service		enabled	enabled
lvm2-monitor.service		enabled	enabled

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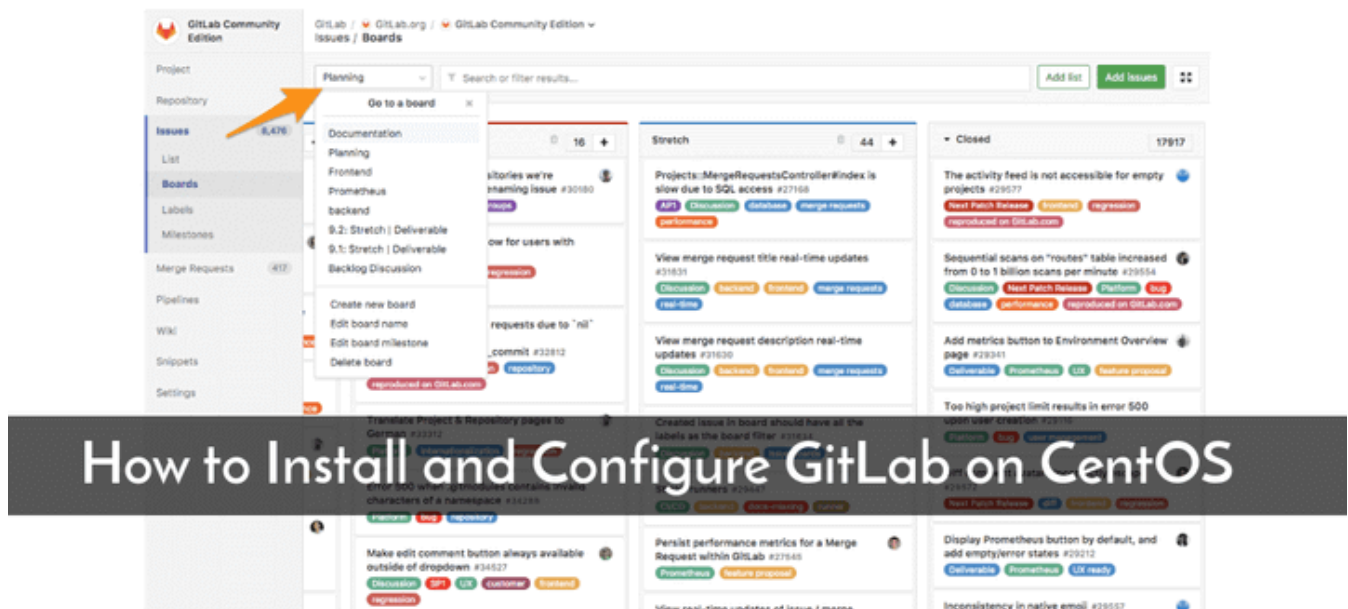
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```
root@tecmint:~#  
root@tecmint:~# chronyc sources  
MS Name/IP address          Stratum Poll Reach LastRx Last sample  
=====
```

^? time.cloudflare.com	0	6	0	-	+0ns[ +0ns]	+/-	0ns
^+ ntp.ges.net.pk	3	6	7	30	+4490us[+2529us]	+/-	198ms
^+ ns1.ads.net.id	2	6	7	28	-9806us[ -12ms]	+/-	134ms
^* ec2-51-16-77-36.il-centr>	3	6	7	28	+3964us[+2003us]	+/-	74ms

```
root@tecmint:~# date  
Thu Feb  8 01:06:32 PM IST 2024  
root@tecmint:~#
```

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**Mike Bomba**

October 27, 2023 at 12:26 pm

apt-key has been deprecated on Linux Mint 21 – another means needs to be used to import the key.

apt update has been updated to require a Release file. This command fails on Linux Mint 21 as used above.

[Reply](#)

Admin



**Ravi Saive**

October 27, 2023 at 1:13 pm



@Mike,

I've revised the installation instructions for Terraform on Debian-based distributions, including Linux Mint.

[Reply](#)



**Pablo**

March 4, 2021 at 9:33 am

Thanks for the article!

Just note when you're installing Terraform via the CLI on Debian family distros, you have to include below command to update package.

```
$ sudo apt update
```

If it's not executed you'll see something as below:

```
Reading package lists... Done
Building dependency tree
Reading state information... Done
E: Unable to locate package terraform
```

I guess the same is happening for the Red Hat family distros.

Thanks,  
Pablo

[Reply](#)

Admin

**Ravi Saive**

March 4, 2021 at 10:00 am

@Pablo,

Thanks for informing us, I have updated the article as per your suggestion...

[Reply](#)

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