

TASKS ON TERRAFORM

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❖ DATE: 17/07/2025

❖ BATCH: 11

❖ NO.OF TASKS: 1

1. Installation of terraform on Linux

We create a virtual machine to install terraform, create a Virtual machine with following details

Microsoft Azure

Upgrade

Search resources, services, and docs (G+/I)

Copilot

shaikhussain752@gmail...
DEFAULT DIRECTORY (SHAIRHUS...)

Home > Compute infrastructure | Virtual machines >

Create a virtual machine

Changing Basic options may reset selections you have made. Review all options prior to creating the virtual machine.

Help me create a low cost VM

Help me create a VM optimized for high availability

Help me choose the right VM size for my workload

Basics | Disks | Networking | Management | Monitoring | Advanced | Tags | Review + create

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. [Learn more](#)

This subscription may not be eligible to deploy VMs of certain sizes in certain regions.

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription *

Azure subscription 1

Resource group *

vm

Create new

Instance details

Virtual machine name *

VMterra

Region *

(US) West US 3

Availability options

Availability zone

Zone options

Self-selected zone

Choose up to 3 availability zones, one VM per zone

Azure-selected zone (Preview)

Let Azure assign the best zone for your needs

Availability zone *

Zone 1

You can now select multiple zones. Selecting multiple zones will create one VM per zone. [Learn more](#)

Security type

Trusted launch virtual machines

[Configure security features](#)

Image *

Ubuntu Server 22.04 LTS - x64 Gen2 (free services eligible)

[See all images](#) | [Configure VM generation](#)

VM architecture

Arm64

x64

Run with Azure Spot discount

You are in the free trial period. Costs associated with this VM can be covered by any remaining credits on your subscription. [Learn more](#)

Size *

Standard_B1s - 1 vcpu, 1 GiB memory (US\$7.59/month) (free services eligible)

[See all sizes](#)

Enable Hibernation

Hibernate does not currently support Trusted launch and Confidential virtual machines for Linux images. [Learn more](#)

Administrator account

Authentication type

SSH public key

Password

Azure now automatically generates an SSH key pair for you and allows you to store it for future use. It is a fast, simple, and secure way to connect to your virtual machine.

Username *

mujju

SSH public key source

Use existing key stored in Azure

Ed25519 and RSA SSH formats are supported for the selected VM image. Ed25519 provides a fixed security level of no more than 128 bits for 256-bit key, while RSA could offer better security with keys longer than 3072 bits.

Stored Keys

jenkins-vm_key

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports *

None

Allow selected ports

Select inbound ports *

SSH (22)

This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

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Next: Disks >

Review + create

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In Networking section

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BasicsDisksNetworkingManagementMonitoringAdvancedTagsReview + create

Define network connectivity for your virtual machine by configuring network interface card (NIC) settings. You can control ports, inbound and outbound connectivity with security group rules, or place behind an existing load balancing solution.
[Learn more](#)

Network interface

When creating a virtual machine, a network interface will be created for you.

Virtual network *

lin-vnet
[Create new](#)

Subnet *

default (10.0.0.0/24)
[Manage subnet configuration](#)

Public IP

(new) VMterra-ip
[Create new](#)

NIC network security group

☐ None
☒ Basic
☐ Advanced

Public inbound ports *

☐ None
☒ Allow selected ports

Select inbound ports *

SSH (22)

This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

Delete public IP and NIC when VM is deleted

☒

Enable accelerated networking

☐

The selected VM size does not support accelerated networking.

Load balancing

You can place this virtual machine in the backend pool of an existing Azure load balancing solution. [Learn more](#)

Load balancing options

☒ None
☐ Azure load balancer
Supports all TCP/UDP network traffic, port-forwarding, and outbound flows.
☐ Application gateway
Web traffic load balancer for HTTP/HTTPS with URL-based routing, SSL termination, session persistence, and web application firewall.

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Next : Management >

Review + create

[Give feedback](#)

VM is created

VMterra

Virtual machine

Help me copy this VM in any region

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Resource visualizer

Connect

Networking

Network settings

Load balancing

Application security groups

Network manager

Settings

Availability + scale

Security

Backup + disaster recovery

Connect

Start

Restart

Stop

Hibernate

Capture

Delete

Refresh

Open in mobile

Feedback

CLI / PS

Essentials

Resource group (move) : vm

Status : Running

Location : West US 3 (Zone 1)

Subscription (move) : Azure subscription 1

Subscription ID : 6b09f008-6934-4533-97f5-79266f544b0b

Availability zone : 1

Tags (edit) : Add tags

Operating system : Linux (ubuntu 22.04)

Size : Standard B1s (1 vcpu, 1 GiB memory)

Public IP address : 20.172.71.32

Virtual network/subnet : lin-vnet/default

DNS name : Not configured

Health state : -

Time created : 17/07/2025, 03:07 UTC

Properties

Monitoring

Capabilities (7)

Recommendations

Tutorials

Virtual machine

Computer name : VMterra

Operating system : Linux (ubuntu 22.04)

VM generation : V2

VM architecture : x64

Agent status : Ready

Networking

Public IP address : 20.172.71.32 (Network interface vmterra671_z1)

Public IP address (IPv6) : -

Private IP address : 10.0.0.4

Private IP address (IPv6) : -

Virtual network/subnet : lin-vnet/default

Installation of terraform:

Install required packages

sudo apt-get update && sudo apt-get install -y gnupg software-properties-common

```
mujju@VMterra:~$ sudo apt-get update && sudo apt-get install -y gnupg software-properties-common
Hit:1 http://azure.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://azure.archive.ubuntu.com/ubuntu jammy-updates InRelease [128 kB]
Get:3 http://azure.archive.ubuntu.com/ubuntu jammy-backports InRelease [127 kB]
Get:4 http://azure.archive.ubuntu.com/ubuntu jammy-security InRelease [129 kB]
Get:5 http://azure.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
Get:6 http://azure.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get:7 http://azure.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get:8 http://azure.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
Get:9 http://azure.archive.ubuntu.com/ubuntu jammy/multiverse Translation-en [112 kB]
Get:10 http://azure.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8372 B]
Get:11 http://azure.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [2751 kB]
Get:12 http://azure.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [437 kB]
Get:13 http://azure.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [4018 kB]
Get:14 http://azure.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [725 kB]
Get:15 http://azure.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1223 kB]
Get:16 http://azure.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [302 kB]
Get:17 http://azure.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [28.7 kB]
Get:18 http://azure.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [59.5 kB]
Get:19 http://azure.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [14.2 kB]
Get:20 http://azure.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [592 B]
Get:21 http://azure.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [68.8 kB]
Get:22 http://azure.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [11.4 kB]
Get:23 http://azure.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [392 B]
Get:24 http://azure.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 B]
Get:25 http://azure.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [30.0 kB]
Get:26 http://azure.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get:27 http://azure.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [672 B]
Get:28 http://azure.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 B]
Get:29 http://azure.archive.ubuntu.com/ubuntu jammy-security/main amd64 Packages [2474 kB]
Get:30 http://azure.archive.ubuntu.com/ubuntu jammy-security/main Translation-en [370 kB]
Get:31 http://azure.archive.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [3767 kB]
Get:32 http://azure.archive.ubuntu.com/ubuntu jammy-security/restricted Translation-en [677 kB]
Get:33 http://azure.archive.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [990 kB]
Get:34 http://azure.archive.ubuntu.com/ubuntu jammy-security/universe Translation-en [214 kB]
Get:35 http://azure.archive.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [21.7 kB]
Get:36 http://azure.archive.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [40.3 kB]
Get:37 http://azure.archive.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [8908 B]
Get:38 http://azure.archive.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [368 B]
Fetched 39.0 MB in 6s (6619 kB/s)
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
```

Securely add HashiCorp's GPG key to Linux system

wget -O- https://apt.releases.hashicorp.com/gpg | gpg --dearmor | sudo tee

/usr/share/keyrings/hashicorp-archive-keyring.gpg > /dev/null

```
mujju@VMterra:~$ wget -O- https://apt.releases.hashicorp.com/gpg | gpg --dearmor | sudo tee /usr/share/keyrings/hashicorp-archive-keyring.gpg > /dev/null
--2025-07-17 03:29:34-- https://apt.releases.hashicorp.com/gpg
Resolving apt.releases.hashicorp.com (apt.releases.hashicorp.com)... 18.238.96.76, 18.238.96.112, 18.238.96.22, ...
Connecting to apt.releases.hashicorp.com (apt.releases.hashicorp.com)|18.238.96.76|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 3980 (3.9K) [binary/octet-stream]
Saving to: 'STDOUT'

-
100%[=====] 3.89K --KB/s in 0s

2025-07-17 03:29:34 (4.95 GB/s) - written to stdout [3980/3980]
```

You are adding the HashiCorp APT repository to your system, so apt can install Terraform and keep it updated via the package manager.

- **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**

```
mujju@VMterra:~$ echo "deb [signed-by=/usr/share/keyrings/hashicorp-archive-keyring.gpg] https://apt.releases.hashicorp.com $(lsb_release -cs) main" | sudo tee /etc/apt/sources.list.d/hashicorp.list
deb [signed-by=/usr/share/keyrings/hashicorp-archive-keyring.gpg] https://apt.releases.hashicorp.com jammy main
mujju@VMterra:~$ sudo apt-get update
Hit:1 http://azure.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://azure.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://azure.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://azure.archive.ubuntu.com/ubuntu jammy-security InRelease
Get:5 https://apt.releases.hashicorp.com jammy InRelease [12.9 kB]
Get:6 https://apt.releases.hashicorp.com jammy/main amd64 Packages [191 kB]
Fetched 204 kB in 1s (253 kB/s)
Reading package lists... Done
mujju@VMterra:~$
```

Once we have added the repository and updated run the command to install **terraform**

sudo apt-get install terraform

```
mujju@VMterra:~$ sudo apt-get install terraform
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  terraform
0 upgraded, 1 newly installed, 0 to remove and 21 not upgraded.
Need to get 28.4 MB of archives.
After this operation, 93.6 MB of additional disk space will be used.
Get:1 https://apt.releases.hashicorp.com jammy/main amd64 terraform amd64 1.12.2-1 [28.4 MB]
Fetched 28.4 MB in 0s (96.3 MB/s)
Selecting previously unselected package terraform.
(Reading database ... 62805 files and directories currently installed.)
Preparing to unpack .../terraform_1.12.2-1_amd64.deb ...
Unpacking terraform (1.12.2-1) ...
Setting up terraform (1.12.2-1) ...
Scanning processes ...
Scanning linux images ...
```

Check the version using command

terraform -v

```
mujju@VMterra:~$ terraform -v
Terraform v1.12.2
on linux amd64
```