Question 1Correct

Matthew wants to set a Terraform variable using the environment variables.

What is the right format of environment variable name that needs to be defined?

VAR_TF_NAME

TF_VAR

TF_VAR_ENV_name

Your answer is correct

TF_VAR_name

Overall explanation

The environment variables must be in the format **TF_VAR_name** and this will be checked last for a value.

https://www.terraform.io/docs/commands/environment-variables.html

Few examples were variables are set using this use-case:

```
export TF_VAR_region=us-west-1
export TF_VAR_ami=ami-049d8641
export TF_VAR_alist='[1,2,3]'
```

Question 2Correct

If John runs the `terraform init` command 10 times in a specific terraform project directory, can it lead to any corruption or modification of terraform configuration files?

Yes

Your answer is correct

No

Question 3Correct

Is it recommended to use Terraform Provisioners extensively, or should it be used minimally?

Extensively

Your answer is correct

Minimally

Overall explanation

Provisioners are the Last Resort. Make sure to always impart changes as part of the AMI (Image) itself rather than running provisioners for all the new servers.

https://www.terraform.io/docs/provisioners/index.html

Question 4Correct

Small Corp has 3 environments named Dev, Stage and QA.

Since they have a small team, they want to maintain a single configuration file but with a different terraform.tfstate file for each environment.

Which Terraform feature can be used?

Modules

Backends

Functions

Your answer is correct

Workspaces

Resources

Overall explanation

Terraform workspaces allow you to isolate your infrastructure into separate environments. Each workspace has its own state file.

Question 5Correct

James has set the following environment variable:

```
TF_LOG_PATH=./terraform-debug.log
```

However, even after running multiple Terraform operations, the logs are not stored in the `terraform-debug.log` file.

What is the issue?

James has to first manually create a empty terraform.log file.

Some issue with Terraform. Upgrade to latest version.

Your answer is correct

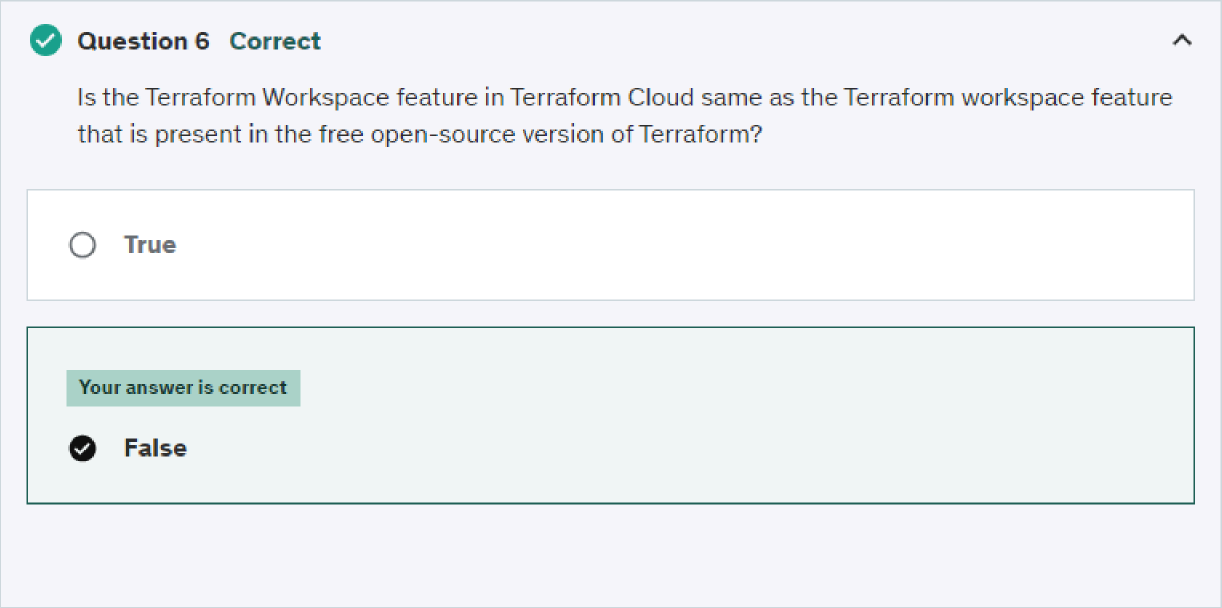
Set the TF_LOG environment variable

None of the Above

Overall explanation

Even when `TF_LOG_PATH` is set, `TF_LOG` must be set in order for any logging to be enabled.

https://www.terraform.io/cli/config/environment-variables#tf_log_path



Question 6 Correct

Is the Terraform Workspace feature in Terraform Cloud same as the Terraform workspace feature that is present in the free open-source version of Terraform?

○ True

Your answer is correct

● False

Question 7Correct

There is a need to install `nginx` on the remote machine. Matthew has decided to make use of Terraform provisioner. The command to install `nginx` is as follows:

```
yum -y install nginx
```

Which among the below options is the right approach to achieve the use-case?

```
provisioner "remote-exec" {
   inline = [
     command = "yum -y install nginx"
   ]
 }
```

Your answer is correct

```
provisioner "remote-exec" {
   inline = [
     "yum -y install nginx"
   ]
 }
```

```
provisioner "remote-exec" {
   inline = [
     run = "yum -y install nginx"
   ]
```

```
  }
 provisioner "local-exec" {
    inline = [
       "yum -y install nginx"
    ]
  }
```

Overall explanation

https://www.terraform.io/docs/provisioners/remote-exec.html

Question 8Incorrect

Which of the features are unique to Terraform Cloud Business Plan?

Terraform Functions

Correct selection

Audit Logging

Sentinel

Your selection is correct

Clustering Functionality

Version Control Integration

Your selection is correct

Private Network Connectivity

Overall explanation

https://www.hashicorp.com/products/terraform/pricing/

Question 9Correct

There is a requirement to rewrite Terraform configuration files to a canonical format and style.

Which Terraform command can be used?

terraform plan

terraform validate

terraform format

terraform graph

Your answer is correct

terraform fmt

Overall explanation

https://www.terraform.io/cli/commands/fmt

Question 10Correct

You want to contribute to the Terraform project. There are certain bugs that are reported in the Terraform binary, and you want to add a fix to it so that it is fixed in the newer Terraform version.

Which language will you need to write the fix?

Java

Any Language

Python

Your answer is correct

Go

HCL

Overall explanation

Terraform Core is a statically-compiled binary written in the Go programming language. The compiled binary is the command line tool (CLI) `terraform`, the entrypoint for anyone using Terraform. The code is open source and hosted at github.com/hashicorp/terraform.

Question 11Correct

Matthew is using the Terraform Cloud Free version. Which of the below features is not supported in free version?

Workspaces

Your answer is correct

Team Management

Private Module Registry

VCS Integration

Overall explanation

https://cloud.hashicorp.com/products/terraform/pricing

Question 12Correct

Matthew has defined a map that contains multiple AMI ID associated with different regions. Following is a sample code:

```
  variable "ami_ids" {
    type = "map"
    default = {
        "mumbai" = "image-abc"
        "germany" = "image-def"
        "states"  = "image-xyz"
     }
  }
```

The user needs to select the `image-def`. Which one of the following methods be used to select that image?

var.ami_ids[1]

var.ami_ids[2]

var.ami_ids["image-def"]

Your answer is correct

var.ami_ids["germany"]

Question 13 Correct

Which among the following is the default backend for the Terraform free version?

consul

google cloud

S3

Your answer is correct

local

Overall explanation

By default, Terraform uses a backend called `local`, which stores state as a local file on disk. You can also configure one of the built-in backends.

Question 14 Correct

Which Terraform files should be ignored by Git when committing code to a repository? (Choose Three)

input.tf

output.tf

Your selection is correct

Files named exactly terraform.tfvars or terraform.tfvars.json.

Your selection is correct

terraform.tfstate

Your selection is correct

Any files with names ending in .auto.tfvars or .auto.tfvars.json.

Overall explanation

.tfvars files, which are likely to contain sensitive data, such as passwords, private keys, and other secrets. These should not be part of version control as they are data points that are potentially sensitive and subject to change depending on the environment.

Along with this, even tfstate files should not be committed. It can contain sensitive data. Instead, it is recommended to have tfstate to a remote backend.

Question 15 Correct

There are two workspaces which are created, namely PROD and QA

You want to deploy some infrastructure in the QA setup and have switched to QA workspace. Where will the state file be stored?

.terraform

terraform.d

Your answer is correct

terraform.tfstate.d

terraform.tfstate

Overall explanation

For local state, Terraform stores the workspace states in a directory called terraform.tfstate.d. This directory should be treated similarly to local-only terraform.tfstate; some teams commit these files to version control, although using a remote backend instead is recommended when there are multiple collaborators.

Question 16 Correct

Terraform supports which of the following formats for it's configuration files (Choose 2)

Python

Your selection is correct

HCL

Java

Your selection is correct

JSON

Go

C

Overall explanation

https://www.terraform.io/docs/language/syntax/json.html

Question 17Correct

Following is the sample terraform code:

```
output "db_password" {
  value       = aws_db_instance.db.password
  description = "RDS Password"
  sensitive   = true
}
```

Will the value associated with `aws_db_instance.db.password` be present within the terraform state file?

Your answer is correct

True

False

Overall explanation

Setting an output value in the root module as sensitive prevents Terraform from showing its value in the list of outputs at the end of `terraform apply`

Sensitive output values are still recorded in the state, and so will be visible to anyone who is able to access the state data.

Question 18Correct

Matthew intends to reference a VPC module from Git repository.

There is a requirement to use a specific branch instead of the default branch. What is the way to achieve this?

Your answer is correct

```
module "vpc" {
source =
"git::https://kplabs.example.com/vpc.git?ref=v2.0.0"
}
```

```
module "vpc" {
source =
"git::https://kplabs.example.com/vpc.git?version=v2.0.0"
}
```

```
module "vpc" {
source =
"git::https://kplabsexample.com/vpc.git#reference=v2.0.0"
}
```

None of the Above

Overall explanation

By default, Terraform will clone and use the default branch (referenced by `HEAD`) in the selected repository. You can override this using the `ref` argument.

https://www.terraform.io/docs/language/modules/sources.html#generic-git-repository

Question 19Correct

There is an EC2 instance that has been created manually in AWS.

There is a need to import that EC2 instance so that it can be managed by terraform going forward. Following is the configuration file written:

```
resource "aws_instance" "myec2" {
  ami = "ami-bf5540df"
  instance_type = "t2.micro"
  vpc_security_group_ids = ["sg-6ae7d613", "sg-53370035"]
  key_name = "remotepractical"
  subnet_id = "subnet-9e3cfbc5"

  tags {
    Name = "manual"
  }
}
```

The instance-id associated with manually created EC2 is `i-234567`. How can the import process happen?

terraform import `i-234567`

terraform import `i-234567 aws_instance.myec2`

terraform import `myec2 i-234567`

Your answer is correct

terraform import `aws_instance.myec2 i-234567`

Overall explanation

https://developer.hashicorp.com/terraform/language/state/import

Question 20Correct

Matthew intends to make use of 2 separate AWS regions to deploy two EC2 instances.

He has specified the following configuration in the `providers.tf` file.

```
provider "aws" { region = "us-east-1" }
provider "aws" { region = "us-west-2" }
```

Running `terraform plan` leads to an error. How can Matthew fix the issue?

There cannot be two different AWS provider configuration in same file.

Your answer is correct

Make use of alias

Change the region from us to eu

None of the Above

Overall explanation

https://www.terraform.io/language/providers/configuration#alias-multiple-provider-configurations

Question 21Correct

Enterprise Corp has a requirement to capture the highest verbosity of Logs.

Which of the following environment variables need to be set to achieve this use case?

TF_LOG = DEBUG

TF_LOG = HIGHEST

Your answer is correct

TF_LOG = TRACE

TF_LOG = 1

Overall explanation

TF_LOG=TRACE This will enable all log levels, including the most verbose level, TRACE.

https://www.terraform.io/internals/debugging

Question 22Correct

The following Terraform configuration file contains resource definition for Database (aws_db_instance) and EC2 instance (aws_instance) in AWS.

```
resource "aws_db_instance" "kplabs-db" {
  allocated_storage    = 20
  storage_type         = "gp2"
  engine               = "mysql"
}

resource "aws_instance" "kplabs-ec2" {
  ami           = "ami-090fa75af13c156b4"
  instance_type = "m5.large"

}
```

EC2 instance will be configured with an application and application requires connectivity to Database before it can start. Hence Database instance should be created first before EC2.

What is the way to achieve this?

Manually create an RDS resource first and then create EC2.

Your answer is correct

Specify an explicit dependency using the depends_on attribute.

Terraform will automatically figure out the dependency.

This is not possible in terraform.

Question 23Incorrect

There is a requirement to rename a resource block in Terraform with the intention of retaining the existing object but tracking it under a new name

Which Terraform command can be used without having the resource to be destroyed and recreated?

Your answer is incorrect

terraform mv

Correct answer

terraform state mv

terraform plan

terraform plan mv

Overall explanation

By default, Terraform will understand moving or renaming a resource configuration as a request to delete the old object and create a new object at the new address, and so `terraform state mv` allows you to override that interpretation by pre-emptively attaching the existing object to the new address in Terraform.

https://www.terraform.io/cli/commands/state/mv

Question 24Correct

For the Remote Exec Provisioners, which among the following are the supported connection types? (Choose 2)

Your selection is correct

WinRM

ftp

SMB

RDP

UDP

Your selection is correct

ssh

Overall explanation

The remote-exec provisioner requires a connection and supports both ssh and winrm.

https://www.terraform.io/language/resources/provisioners/remote-exec

Question 25Correct

Matthew is making use of zipmap function and has following code:

```
zipmap(["a", "b"], [1, 2])
```

What will be the output?

```
{
a
b
1
2
}
{
 ab12
}
```

Your answer is correct

```
{
 "a" = 1,
 "b" = 2,
}
```

None of the Above

Overall explanation

https://www.terraform.io/docs/configuration/functions/zipmap.html

Question 26Correct

Matthew has configured AWS provider within his terraform code.

Where will be the associated plugins for that provider be stored?

In the /home directory of Matthew

In the /home/plugins directory of Matthew

Your answer is correct

.terraform/plugins folder under the same directory as that of terraform code.

None of the above.

Question 27Correct

Matthew has created 3 new workspaces named dev, stage and prod.

When he runs terraform workspace list command, there are total of 4 workspaces that are displayed

```
default
dev
stage
prod
```

Can Matthew delete the default workspace as it is not required for his use-case?

True

Your answer is correct

False

Overall explanation

Terraform starts with a **single workspace named "default"**. This workspace is special both because it is the default and also because it cannot ever be deleted.

https://www.terraform.io/language/state/workspaces#using-workspaces

Question 28Correct

What are the things that the terraform import command requires to run? (Choose 2)

Your selection is correct

Resource from ID

Provider

Path

Your selection is correct

Resource address

Overall explanation

Import will find the existing resource from ID and import it into your Terraform state at the given ADDRESS.

Example Syntax:

```
terraform import aws_instance.example i-abcd1234
```

https://www.terraform.io/cli/commands/import

Question 29Incorrect

Matthew has created a new VPC module and he wants to publish the module to the Terraform registry.

What are the requirements to publish the module to the Public Registry?

Your selection is incorrect

Module must be secure and must not have any sensitive contents.

Your selection is correct

Module repositories must use this three-part name format, `terraform-provider-name`

Module must support all the versions of Terraform.

Your selection is correct

elease tag names must be a semantic version, which can optionally be prefixed with a v

Your selection is correct

The module must be on GitHub and must be a public repo.

Overall explanation

https://www.terraform.io/registry/modules/publish#requirements

Question 30Correct

If a module declares a variable with a default value, is there a need to explicitly set a variable value?

True

Your answer is correct

False

Overall explanation

Since default is already set, if no explicit value is defined, the default value will be used.