HashiCorp

Exam Questions Terraform-Associate-003

HashiCorp Certified: Terraform Associate (003)

NEW QUESTION 1
How would you reference the volume IDs associated with the ebs_block_device blocks in this configuration?

```
resource "aws_instance" "example" {
  ami = "ami-abc123"
  instance_type = "t2.micro"

  ebs_block_device {
    device_name = "sda2"
    volume_size = 16
  }

  ebs_block_device {
    device_name = "sda3"
    volume_size = 20
  }
}
```

A. aws_instance.example.ebs_block_device[sda2,sda3).volume_id
B. aws_lnstance.example.ebs_block_device.[*].volume_id
C. aws_lnstance.example.ebs_block_device.volume_ids
D. aws_instance.example-ebs_block_device.*.volume_id

Answer: D

Explanation:
This is the correct way to reference the volume IDs associated with the ebs_block_device blocks in this configuration, using the splat expression syntax. The other options are either invalid or incomplete.

NEW QUESTION 2
Which of the following is not a key principle of infrastructure as code?

A. Self-describing infrastructure
B. Idempotence
C. Versioned infrastructure
D. Golden images

Answer: D

Explanation:
The key principle of infrastructure as code that is not listed among the options is golden images. Golden images are pre-configured, ready-to-use virtual machine images that contain a specific set of software and configuration. They are often used to create multiple identical instances of the same environment, such as for testing or production. However, golden images are not a principle of infrastructure as code, but rather a technique that can be used with or without infrastructure as code. The other options are all key principles of infrastructure as code, as explained below:
? Self-describing infrastructure: This means that the infrastructure is defined in code that describes its desired state, rather than in scripts that describe the steps to create it. This makes the infrastructure easier to understand, maintain, and reproduce.
? Idempotence: This means that applying the same infrastructure code multiple times will always result in the same state, regardless of the initial state. This makes the infrastructure consistent and predictable, and avoids errors or conflicts caused by repeated actions.
? Versioned infrastructure: This means that the infrastructure code is stored in a version control system, such as Git, that tracks the changes and history of the code. This makes the infrastructure code reusable, auditable, and collaborative, and enables practices such as branching, merging, and rollback. References = [Introduction to Infrastructure as Code with Terraform], [Infrastructure as Code in a Private or Public Cloud]

NEW QUESTION 3
A terraform apply can not infrastructure.

A. change
B. destroy
C. provision
D. import

Answer: D

Explanation:
The terraform import command is used to import existing infrastructure into Terraform??s state. This allows Terraform to manage and destroy the imported infrastructure as part of the configuration. The terraform import command does not modify the configuration, so the imported resources must be manually added to the configuration after the import. References = [Importing Infrastructure]

NEW QUESTION 4
Changing the Terraform backend from the default "local" backend to a different one after performing your first terrafom apply is:

A. Optional
B. Impossible
C. Mandatory
D. Discouraged

Answer: D

Explanation:
Changing the Terraform backend after performing the initial terraform apply is technically possible but strongly discouraged. This is because changing backends can lead to complexities in state management, requiring manual intervention such as state migration to ensure consistency. Terraform's documentation and best practices advise planning the backend configuration carefully before applying Terraform configurations to avoid such changes.References = This guidance is consistent with Terraform's official documentation, which recommends careful consideration and planning of backend configurations to avoid the need for changes.

NEW QUESTION 5
Which option cannot be used to keep secrets out of Terraform configuration files?

A. A Terraform provider
B. Environment variables
C. A -var flag
D. secure string

Answer: D

Explanation:
A secure string is not a valid option to keep secrets out of Terraform configuration files. A secure string is a feature of AWS Systems Manager Parameter Store that allows you to store sensitive data encrypted with a KMS key. However, Terraform does not support secure strings natively and requires a custom data source to retrieve them. The other options are valid ways to keep secrets out of Terraform configuration files. A Terraform provider can expose secrets as data sources that can be referenced in the configuration. Environment variables can be used to set values for input variables that contain secrets. A -var flag can be used to pass values for input variables that contain secrets from the command line or a file. References = [AWS Systems Manager Parameter Store], [Terraform AWS Provider Issue #55], [Terraform Providers], [Terraform Input Variables]

NEW QUESTION 6
How does Terraform determine dependencies between resources?

A. Terraform requires resource dependencies to be defined as modules and sourced in order
B. Terraform automatically builds a resource graph based on resources provisioners, special meta-parameters, and the stale file (if present}
C. Terraform requires resources in a configuration to be listed m the order they will be created to determine dependencies
D. Terraform requires all dependencies between resources to be specified using the depends_on parameter

Answer: B

Explanation:
This is how Terraform determines dependencies between resources, by using the references between them in the configuration files and other factors that affect the order of operations.

NEW QUESTION 7
Terraform providers are always installed from the Internet.

A. True
B. False

Answer: B

Explanation:
Terraform providers are not always installed from the Internet. There are other ways to install provider plugins, such as from a local mirror or cache, from a local filesystem directory, or from a network filesystem. These methods can be useful for offline or air-gapped environments, or for customizing the installation process. You can configure the provider installation methods using the provider_installation block in the CLI configuration file.

NEW QUESTION 8
terraform validate confirms that your infrastructure matches the Terraform state file.

A. True
B. False

Answer: B

Explanation:
terraform validate does not confirm that your infrastructure matches the Terraform state file. It only checks whether the configuration files in a directory are syntactically valid and internally consistent3. To confirm that your infrastructure matches the Terraform state file, you need to use terraform plan or terraform apply with the -refresh- only option.

NEW QUESTION 9
Which of these ate features of Terraform Cloud? Choose two correct answers.

A. Automated infrastructure deployment visualization
B. Automatic backups
C. A web-based user interface (Ul)

D. Remote state storage

Answer: CD

Explanation:
These are features of Terraform Cloud, which is a hosted service that provides a web-based UI, remote state storage, remote operations, collaboration features, and more for managing your Terraform infrastructure.

NEW QUESTION 10
Which command should you run to check if all code in a Terraform configuration that references multiple modules is properly formatted without making changes?

A. terraform fmt -write-false
B. terraform fmt -list -recursive
C. terraform fmt -check -recursive
D. terraform fmt -check

Answer: C

Explanation:
This command will check if all code in a Terraform configuration that references multiple modules is properly formatted without making changes, and will return a non-zero exit code if any files need formatting. The other commands will either make changes, list the files that need formatting, or not check the modules.

NEW QUESTION 10
If a module declares a variable with a default, that variable must also be defined within the module.

A. True
B. False

Answer: B

Explanation:
A module can declare a variable with a default value without requiring the caller to define it. This allows the module to provide a sensible default behavior that can be customized by the caller if needed. References = [Module Variables]

NEW QUESTION 15
What Terraform command always causes a state file to be updated with changes that might have been made outside of Terraform?

A. Terraform plan –refresh-only
B. Terraform show –json
C. Terraform apply –lock-false
D. Terraform plan target-state

Answer: A

Explanation:
This is the command that always causes a state file to be updated with changes that might have been made outside of Terraform, as it will only refresh the state file with the current status of the real resources, without making any changes to them or creating a plan.

NEW QUESTION 18
All standard backend types support state locking, and remote operations like plan, apply, and destroy.

A. True
B. False

Answer: B

Explanation:
Not all standard backend types support state locking and remote operations like plan, apply, and destroy. For example, the local backend does not support remote operations and state locking. State locking is a feature that ensures that no two users can make changes to the state file at the same time, which is crucial for preventing race conditions. Remote operations allow running Terraform commands on a remote server, which is supported by some backends like remote or consul, but not all.
References:
? Terraform documentation on backends: Terraform Backends
? Detailed backend support: Terraform Backend Types

NEW QUESTION 23
Only the user that generated a plan may apply it.

A. True
B. False

Answer: B

Explanation:
Any user with permission to apply a plan can apply it, not only the user that generated it. This allows for collaboration and delegation of tasks among team members.

NEW QUESTION 24
Which method for sharing Terraform configurations fulfills the following criteria:
* 1. Keeps the configurations confidential within your organization
* 2. Support Terraform??s semantic version constrains
* 3. Provides a browsable directory

A. Subfolder within a workspace
B. Generic git repository
C. Terraform Cloud private registry
D. Public Terraform module registry

Answer: C

Explanation:
This is the method for sharing Terraform configurations that fulfills the following criteria:
? Keeps the configurations confidential within your organization
? Supports Terraform??s semantic version constraints
? Provides a browsable directory
The Terraform Cloud private registry is a feature of Terraform Cloud that allows you to host and manage your own modules within your organization, and use them in your Terraform configurations with versioning and access control.

NEW QUESTION 26
The Terraform binary version and provider versions must match each other in a single configuration.

A. True
B. False

Answer: B

Explanation:
The Terraform binary version and provider versions do not have to match each other in a single configuration. Terraform allows you to specify provider version constraints in the configuration??s terraform block, which can be different from the Terraform binary version1. Terraform will use the newest version of the provider that meets the configuration??s version constraints2. You can also use the dependency lock file to ensure Terraform is using the correct provider version3.
References =
•1: Providers - Configuration Language | Terraform | HashiCorp Developer
•2: Multiple provider versions with Terraform - Stack Overflow
•3: Lock and upgrade provider versions | Terraform - HashiCorp Developer

NEW QUESTION 29
You add a new resource to an existing Terraform configuration, but do not update the version constraint in the configuration. The existing and new resources use the same provider. The working contains a .terraform.lock, hc1 file.
How will Terraform choose which version of the provider to use?

A. Terraform will use the version recorded in your lock file
B. Terraform will use the latest version of the provider for the new resource and the version recorded in the lock file to manage existing resources
C. Terraform will check your state file to determine the provider version to use
D. Terraform will use the latest version of the provider available at the time you provision your new resource

Answer: A

Explanation:
This is how Terraform chooses which version of the provider to use, when you add a new resource to an existing Terraform configuration, but do not update the version constraint in the configuration. The lock file records the exact version of each provider that was installed in your working directory, and ensures that Terraform will always use the same provider versions until you run terraform init -upgrade to update them.

NEW QUESTION 31
If a DevOps team adopts AWS CloudFormation as their standardized method for provisioning public cloud resoruces, which of the following scenarios poses a challenge for this team?

A. The team is asked to manage a new application stack built on AWS-native services
B. The organization decides to expand into Azure wishes to deploy new infrastructure
C. The team is asked to build a reusable code based that can deploy resources into any AWS region
D. The DevOps team is tasked with automating a manual, web console-based provisioning.

Answer: B

Explanation:
This is the scenario that poses a challenge for this team, if they adopt AWS CloudFormation as their standardized method for provisioning public cloud resources, as CloudFormation only supports AWS services and resources, and cannot be used to provision infrastructure on other cloud platforms such as Azure.

NEW QUESTION 32
Setting the TF_LOG environment variable to DEBUG causes debug messages to be logged into stdout.

A. True
B. False

Answer: A

Explanation:
Setting the TF_LOG environment variable to DEBUG causes debug messages to be logged into stdout, along with other log levels such as TRACE, INFO, WARN, and ERROR. This can be useful for troubleshooting or debugging purposes.

NEW QUESTION 37
You can develop a custom provider to manage its resources using Terraform.

A. True
B. False

Answer: A

Explanation:
You can develop a custom provider to manage its resources using Terraform, as Terraform is an extensible tool that allows you to write your own plugins in Go language. You can also publish your custom provider to the Terraform Registry or use it privately.

NEW QUESTION 40
What value does the Terraform Cloud private registry provide over the public Terraform Module Registry?

A. The ability to share modules publicly with any user of Terraform
B. The ability to restrict modules to members of Terraform Cloud or Enterprise organizations
C. The ability to tag modules by version or release
D. The ability to share modules with public Terraform users and members of Terraform Cloud Organizations

Answer: B

Explanation:
The Terraform Cloud private registry provides the ability to restrict modules to members of Terraform Cloud or Enterprise organizations. This allows you to share modules within your organization without exposing them to the public. The private registry also supports importing modules from your private VCS repositories. The public Terraform Module Registry, on the other hand, publishes modules from public Git repositories and makes them available to any user of Terraform. References = : Private Registry - Terraform Cloud : Terraform Registry - Provider Documentation

NEW QUESTION 44
You modified your Terraform configuration and run Terraform plan to review the changes. Simultaneously, your teammate manually modified the infrastructure component you are working on. Since you already ran terraform plan locally, the execution plan for terraform apply will be the same.

A. True
B. False

Answer: B

Explanation:
The execution plan for terraform apply will not be the same as the one you ran locally with terraform plan, if your teammate manually modified the infrastructure component you are working on. This is because Terraform will refresh the state file before applying any changes, and will detect any differences between the state and the real resources.

NEW QUESTION 47
You want to know from which paths Terraform is loading providers referenced in your Terraform configuration (* files). You need to enable additional logging messages to find this out. Which of the following would achieve this?

A. Set verbose for each provider in your Terraform configuration
B. Set the environment variable TF_LOG_TRACE
C. Set the environment variable TF_LOG_PATH
D. Set the environment variable TF_log_TRACE

Answer: B

Explanation:
This will enable additional logging messages to find out from which paths Terraform is loading providers referenced in your Terraform configuration files, as it will set the log level to TRACE, which is the most verbose and detailed level.

NEW QUESTION 49
You want to define multiple data disks as nested blocks inside the resource block for a virtual machine. What Terraform feature would help you define the blocks using the values in a variable?

A. Local values
B. Count arguments
C. Collection functions
D. Dynamic blocks

Answer: D

Explanation:
Dynamic blocks in Terraform allow you to define multiple nested blocks within a resource based on the values of a variable. This feature is particularly useful for scenarios where the number of nested blocks is not fixed and can change based on variable input.

NEW QUESTION 54
Which of the following is not a valid siring function in Terraform?

A. choaf
B. join
C. Split
D. slice

Answer: A

Explanation:
This is not a valid string function in Terraform. The other options are valid string functions that can manipulate strings in various ways2.

NEW QUESTION 57
What type of block is used to construct a collection of nested configuration blocks?

A. Dynamic
B. For_each
C. Nesting
D. repeated.

Answer: A

Explanation:
This is the type of block that is used to construct a collection of nested configuration blocks, by using a for_each argument to iterate over a collection value and generate a nested block for each element. For example, you can use a dynamic block to create multiple ingress rules for a security group resource.

NEW QUESTION 59
Which configuration consistency errors does terraform validate report?

A. Terraform module isn't the latest version
B. Differences between local and remote state
C. Declaring a resource identifier more than once
D. A mix of spaces and tabs in configuration files

Answer: C

Explanation:
Terraform validate reports configuration consistency errors, such as declaring a resource identifier more than once. This means that the same resource type and name combination is used for multiple resource blocks, which is not allowed in Terraform. For example, resource "aws_instance" "example" {...} cannot be used more than once in the same configuration. Terraform validate does not report errors related to module versions, state differences, or formatting issues, as these are not relevant for checking the configuration syntax and structure. References = [Validate Configuration], [Resource Syntax]

NEW QUESTION 60
Terraform can only manage resource dependencies if you set them explicitly with the depends_on argument.

A. True
B. False

Answer: B

Explanation:
Terraform can manage resource dependencies implicitly or explicitly. Implicit dependencies are created when a resource references another resource or data source in its arguments. Terraform can infer the dependency from the reference and create or destroy the resources in the correct order. Explicit dependencies are created when you use the depends_on argument to specify that a resource depends on another resource or module. This is useful when Terraform cannot infer the dependency from the configuration or when you need to create a dependency for some reason outside of Terraform??s
scope. References = : Create resource dependencies : Terraform Resource Dependencies Explained

NEW QUESTION 62
You add a new provider to your configuration and immediately run terraform apply in the CD using the local backend. Why does the apply fail?

A. The Terraform CD needs you to log into Terraform Cloud first
B. Terraform requires you to manually run terraform plan first
C. Terraform needs to install the necessary plugins first
D. Terraform needs you to format your code according to best practices first

Answer: C

Explanation:
The reason why the apply fails after adding a new provider to the configuration and immediately running terraform apply in the CD using the local backend is because Terraform needs to install the necessary plugins first. Terraform providers are plugins that Terraform uses to interact with various cloud services and other APIs. Each provider has a source address that determines where to download it from. When Terraform encounters a new provider in the configuration, it needs to run terraform init first to install the provider plugins in a local directory. Without the plugins, Terraform cannot
communicate with the provider and perform the desired actions. References = [Provider Requirements], [Provider Installation]

NEW QUESTION 66
In a Terraform Cloud workpace linked to a version control repository speculative plan rum start automatically commit changes to version control.

A. True
B. False

Answer: A

Explanation:
When you use a remote backend that needs authentication, HashiCorp recommends that you:

NEW QUESTION 69
How could you reference an attribute from the vsphere_datacenter data source for use with the datacenter_id argument within the vsphere_folder resource in the following configuration?

```
data "vsphere_datacenter" "dc" {}

resource "vsphere_folder" "parent" {
          path = "Production"
          type = "vm"
  datacenter_id =
}
```

A. Data.vsphere_datacenter.DC.id
B. Vsphere_datacenter.dc.id
C. Data,dc,id
D. Data.vsphere_datacenter,dc

Answer: A

Explanation:
The correct way to reference an attribute from the vsphere_datacenter data source for use with the datacenter_id argument within the vsphere_folder resource in the following configuration is data.vsphere_datacenter.dc.id. This follows the syntax for accessing data source attributes, which is data.TYPE.NAME.ATTRIBUTE. In this case, the data source type is vsphere_datacenter, the data source name is dc, and the attribute we want to access is id. The other options are incorrect because they either use the wrong syntax, the wrong punctuation, or the wrong case. References = [Data Source: vsphere_datacenter], [Data Source: vsphere_folder], [Expressions: Data Source References]

NEW QUESTION 71
Which of the following methods, used to provision resources into a public cloud, demonstrates the concept of infrastructure as code?

A. curl commands manually run from a terminal
B. A sequence of REST requests you pass to a public cloud API endpoint Most Voted
C. A script that contains a series of public cloud CLI commands
D. A series of commands you enter into a public cloud console

Answer: C

Explanation:
The concept of infrastructure as code (IaC) is to define and manage infrastructure using code, rather than manual processes or GUI tools. A script that contains a series of public cloud CLI commands is an example of IaC, because it uses code to provision resources into a public cloud. The other options are not examples of IaC, because they involve manual or interactive actions, such as running curl commands,
sending REST requests, or entering commands into a console. References = [Introduction to Infrastructure as Code with Terraform] and [Infrastructure as Code]

NEW QUESTION 74
You have deployed a new webapp with a public IP address on a cloud provider. However, you did not create any outputs for your code. What is the best method to quickly find the IP address of the resource you deployed?

A. In a new folder, use the terraform_remote_state data source to load in the state file, then write an output for each resource that you find the state file
B. Run terraform state list to find the name of the resource, then terraform state show to find the attributes including public IP address
C. Run terraform output ip_address to view the result
D. Run terraform destroy then terraform apply and look for the IP address in stdout

Answer: B

Explanation:
This is a quick way to inspect the state file and find the information you need without modifying anything5. The other options are either incorrect or inefficient.

NEW QUESTION 79
Module variable assignments are inherited from the parent module and you do not need to explicitly set them.

A. True
B. False

Answer: B

Explanation:
Module variable assignments are not inherited from the parent module and you need to explicitly set them using the source argument. This allows you to customize the behavior of each module instance.

NEW QUESTION 80
Which of the following are advantages of using infrastructure as code (IaC) instead of provisioning with a graphical user interface (GUI)? Choose two correct answers.

A. Prevents manual modifications to your resources
B. Lets you version, reuse, and share infrastructure configuration
C. Secures your credentials
D. Provisions the same resources at a lower cost
E. Reduces risk of operator error

Answer: BE

Explanation:
Infrastructure as code (IaC) is a way of managing and provisioning cloud infrastructure using programming techniques instead of manual processes1. IaC has many advantages over using a graphical user interface (GUI) for provisioning infrastructure, such as:
•Versioning: IaC allows you to store your infrastructure configuration in a version control system, such as Git, and track changes over time. This enables you to roll back to previous versions, compare differences, and collaborate with other developers2.
•Reusability: IaC allows you to create reusable modules and templates that can be applied to different environments, such as development, testing, and production. This reduces duplication, improves consistency, and speeds up deployment3.
•Sharing: IaC allows you to share your infrastructure configuration with other developers, teams, or organizations, and leverage existing code from open source repositories or registries. This fosters best practices, innovation, and standardization4.
•Risk reduction: IaC reduces the risk of human error, configuration drift, and security breaches that can occur when provisioning infrastructure manually or using a GUI. IaC also enables you to perform automated testing, validation, and compliance checks on your
infrastructure before deploying it5. References =
•1: What is Infrastructure as Code? Explained for Beginners - freeCodeCamp.org
•2: The benefits of Infrastructure as Code - Microsoft Community Hub
•3: Infrastructure as Code : Best Practices, Benefits & Examples - Spacelift
•4: 5 Benefits of Infrastructure as Code (IaC) for Modern Businesses in the Cloud
•5: The 7 Biggest Benefits of Infrastructure as Code - DuploCloud

NEW QUESTION 84
How does the Terraform cloud integration differ from other state backends such as S3, Consul,etc?

A. It can execute Terraform runs on dedicated infrastructure in Terraform Cloud
B. It doesn't show the output of a terraform apply locally
C. It is only arable lo paying customers
D. All of the above

Answer: A

Explanation:
This is how the Terraform Cloud integration differs from other state backends
such as S3, Consul, etc., as it allows you to perform remote operations on Terraform Cloud??s servers instead of your local machine. The other options are either incorrect or irrelevant.

NEW QUESTION 89
The public Terraform Module Registry is free to use.

A. True
B. False

Answer: A

Explanation:
The public Terraform Module Registry is free to use, as it is a public service that hosts thousands of self-contained packages called modules that are used to provision infrastructure. You can browse, use, and publish modules to the registry without any cost.

NEW QUESTION 90
What does state looking accomplish?

A. Prevent accidental Prevent accident deletion of the state file
B. Blocks Terraform commands from modifying, the state file
C. Copies the state file from memory to disk
D. Encrypts any credentials stored within the state file

Answer: B

Explanation:
This is what state locking accomplishes, by preventing other users from modifying the state file while a Terraform operation is in progress. This prevents conflicts

and data loss.

NEW QUESTION 92
What kind of configuration block will create an infrastructure object with settings specified within the block?

A. provider
B. state
C. data
D. resource

Answer: D

Explanation:
This is the kind of configuration block that will create an infrastructure object with settings specified within the block. The other options are not used for creating infrastructure objects, but for configuring providers, accessing state data, or querying data sources.

NEW QUESTION 97
When do changes invoked by terraform apply take effect?

A. After Terraform has updated the state file
B. Once the resource provider has fulfilled the request
C. Immediately
D. None of the above are correct

Answer: B

Explanation:
Changes invoked by terraform apply take effect once the resource provider has fulfilled the request, not after Terraform has updated the state file or immediately. The state file is only a reflection of the real resources, not a source of truth.

NEW QUESTION 100
What is the workflow for deploying new infrastructure with Terraform?

A. Write Terraform configuration, run terraform init to initialize the working directory or workspace, and run terraform apply
B. Write Terraform configuration, run terraform show to view proposed changes, and terraform apply to create new infrastructure
C. Write Terraform configuration, run terraform apply to create infrastructure, use terraform validate to confirm Terraform deployed resources correctly
D. Write Terraform configuration, run terraform plan to initialize the working directory or workspace, and terraform apply to create the infrastructure

Answer: A

Explanation:
This is the workflow for deploying new infrastructure with Terraform, as it will create a plan and apply it to the target environment. The other options are either incorrect or incomplete.

NEW QUESTION 104
You have a Terraform configuration that defines a single virtual machine with no references to it, You have run terraform apply to create the resource, and then removed the resource definition from your Terraform configuration file.
What will happen you run terraform apply in the working directory again?

A. Terraform will remove the virtual machine from the state file, but the resource will still exist
B. Nothing
C. Terraform will error
D. Terraform will destroy the virtual machine

Answer: D

Explanation:
This is what will happen if you run terraform apply in the working directory again, after removing the resource definition from your Terraform configuration file. Terraform will detect that there is a resource in the state file that is not present in the configuration file, and will assume that you want to delete it.

NEW QUESTION 107
The _____ determines how Terraform creates, updates, or delete resources.

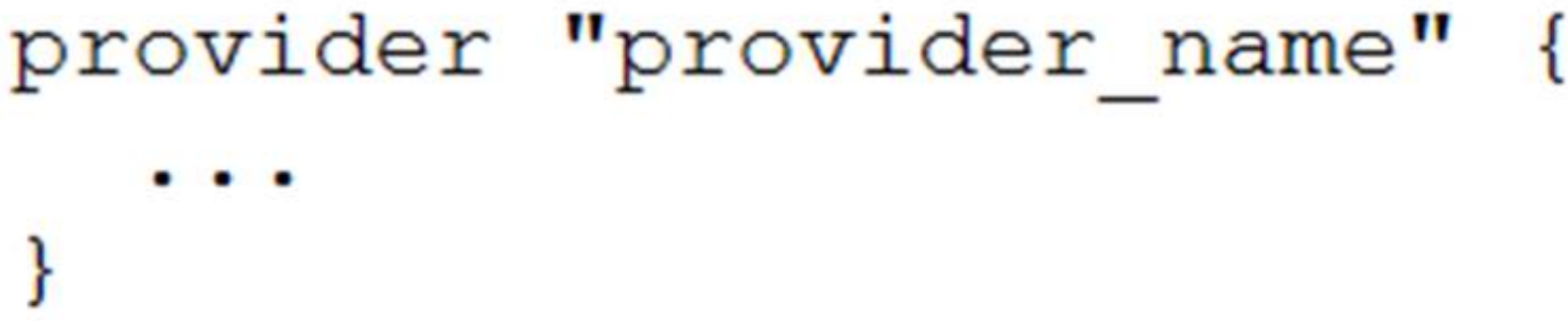
A. Terraform configuration
B. Terraform provisioner
C. Terraform provider
D. Terraform core

Answer: C

Explanation:
This is what determines how Terraform creates, updates, or deletes resources, as it is responsible for understanding API interactions with some service and exposing resources and data sources based on that API.

NEW QUESTION 111

A provider configuration block is required in every Terraform configuration.
Example:



A. True
B. False

Answer: B

Explanation:
A provider configuration block is not required in every Terraform configuration. A provider configuration block can be omitted if its contents would otherwise be empty. Terraform assumes an empty default configuration for any provider that is not explicitly configured. However, some providers may require some configuration arguments (such as endpoint URLs or cloud regions) before they can be used. A provider??s documentation should list which configuration arguments it expects. For providers distributed on the Terraform Registry, versioned documentation is available on each provider??s page, via the ??Documentation?? link in the provider??s header1. References = [Provider Configuration]1

NEW QUESTION 114
Once you configure a new Terraform backend with a terraform code block, which command(s) should you use to migrate the state file?

A. terraform destroy, then terraform apply
B. terraform init
C. terraform push
D. terraform apply

Answer: A

Explanation:
This command will initialize the new backend and prompt you to migrate the existing state file to the new location4. The other commands are not relevant for this task.

NEW QUESTION 118
Your security team scanned some Terraform workspaces and found secrets stored in plaintext in state files. How can you protect that data?

A. Edit your state file to scrub out the sensitive data
B. Always store your secrets in a secrets.tfvars file
C. Delete the state file every time you run Terraform
D. Store the state in an encrypted backend

Answer: D

Explanation:
This is a secure way to protect sensitive data in the state file, as it will be encrypted at rest and in transit2. The other options are not recommended, as they could lead to data loss, errors, or security breaches.

NEW QUESTION 123
You can configure Terraform to log to a file using the TF_LOG environment variable.

A. True
B. False

Answer: A

Explanation:
You can configure Terraform to log to a file using the TF_LOG environment variable. This variable can be set to one of the log levels: TRACE, DEBUG, INFO, WARN or ERROR. You can also use the TF_LOG_PATH environment variable to specify a custom log file location. References = : Debugging Terraform

NEW QUESTION 127
Which of these is true about Terraform's plugin-based architecture?

A. Terraform can only source providers from the internet
B. Every provider in a configuration has its own state file for its resources
C. You can create a provider for your API if none exists
D. All providers are part of the Terraform core binary

Answer: C

Explanation:
Terraform is built on a plugin-based architecture, enabling developers to extend Terraform by writing new plugins or compiling modified versions of existing plugins1. Terraform plugins are executable binaries written in Go that expose an implementation for a specific service, such as a cloud resource, SaaS platform, or

API2. If there is no existing provider for your API, you can create one using the Terraform Plugin SDK3 or the Terraform Plugin Framework4. References =
•1: Plugin Development - How Terraform Works With Plugins | Terraform | HashiCorp Developer
•2: Lab: Terraform Plug-in Based Architecture - GitHub
•3: Terraform Plugin SDK - Terraform by HashiCorp
•4: HashiCorp Terraform Plugin Framework Now Generally Available

NEW QUESTION 130
How can you trigger a run in a Terraform Cloud workspace that is connected to a Version Control System (VCS) repository?

A. Only Terraform Cloud organization owners can set workspace variables on VCS connected workspaces
B. Commit a change to the VCS working directory and branch that the Terraform Cloud workspace is connected to
C. Only Terraform Cloud organization owners can approve plans in VCS connected workspaces
D. Only members of a VCS organization can open a pull request against repositories that are connected to Terraform Cloud workspaces

Answer: B

Explanation:
This will trigger a run in the Terraform Cloud workspace, which will perform a plan and apply operation on the infrastructure defined by the Terraform configuration files in the VCS repository.

NEW QUESTION 133
In a Terraform Cloud workspace linked to a version control repository, speculative plan runs start automatically when you merge or commit changes to version control.

A. True
B. False

Answer: B

Explanation:
In Terraform Cloud, speculative plan runs are not automatically started when changes are merged or committed to the version control repository linked to a workspace. Instead, speculative plans are typically triggered as part of proposed changes in merge requests or pull requests to give an indication of what would happen if the changes were applied, without making any real changes to the infrastructure. Actual plan and apply operations in Terraform Cloud workspaces are usually triggered by specific events or configurations defined within the Terraform Cloud workspace settings.References = This behavior is part of how Terraform Cloud integrates with version control systems and is documented in Terraform Cloud's usage guidelines and best practices, especially in the context of VCS-driven workflows.

NEW QUESTION 137
You ate making changes to existing Terraform code to add some new infrastructure. When is the best time to run terraform validate?

A. After you run terraform apply so you can validate your infrastructure
B. Before you run terraform apply so you can validate your provider credentials
C. Before you run terraform plan so you can validate your code syntax
D. After you run terraform plan so you can validate that your state file is consistent with your infrastructure

Answer: C

Explanation:
This is the best time to run terraform validate, as it will check your code for syntax errors, typos, and missing arguments before you attempt to create a plan. The other options are either incorrect or unnecessary.

NEW QUESTION 140
Variables declared within a module are accessible outside of the module.

A. True
B. False

Answer: B

Explanation:
Variables declared within a module are only accessible within that module, unless they are explicitly exposed as output values1.

NEW QUESTION 144
A developer accidentally launched a VM (virtual machine) outside of the Terraform workflow and ended up with two servers with the same name. They don't know which VM Terraform manages but do have a list of all active VM IDs.
Which of the following methods could you use to discover which instance Terraform manages?

A. Run terraform state list to find the names of all VMs, then run terraform state show for each of them to find which VM ID Terraform manages
B. Update the code to include outputs for the ID of all VMs, then run terraform plan to view the outputs
C. Run terraform taint/code on all the VMs to recreate them
D. Use terraform refresh/code to find out which IDs are already part of state

Answer: A

Explanation:
The terraform state list command lists all resources that are managed by Terraform in the current state file1. The terraform state show command shows the attributes of a single resource in the state file2. By using these two commands, you can compare the VM IDs in your list with the ones in the state file and identify

which one is managed by Terraform.

NEW QUESTION 146
How does Terraform manage most dependencies between resources?

A. Terraform will automatically manage most resource dependencies
B. Using the depends_on parameter
C. By defining dependencies as modules and including them in a particular order
D. The order that resources appear in Terraform configuration indicates dependencies

Answer: A

Explanation:
This is how Terraform manages most dependencies between resources, by using the references between them in the configuration files. For example, if resource A depends on resource B, Terraform will create resource B first and then pass its attributes to resource A.

NEW QUESTION 148
Where can Terraform not load a provider from?

A. Plugins directory
B. Provider plugin chance
C. Official HashCrop Distribution on releases.hashcrop.com
D. Source code

Answer: D

Explanation:
This is where Terraform cannot load a provider from, as it requires a compiled binary file that implements the provider protocol. You can load a provider from a plugins directory, a provider plugin cache, or the official HashiCorp distribution on releases.hashicorp.com.

NEW QUESTION 152
Where does the Terraform local backend store its state?

A. In the terraform file
B. In the /tmp directory
C. In the terraform,tfstate file
D. In the user??s terraform,state file

Answer: C

Explanation:
This is where the Terraform local backend stores its state, by default, unless you specify a different file name or location in your configuration. The local backend is the simplest backend type that stores the state file on your local disk.

NEW QUESTION 155
Which type of block fetches or computes information for use elsewhere in a Terraform configuration?

A. data
B. local
C. resource
D. provider

Answer: A

Explanation:
In Terraform, a data block is used to fetch or compute information from external sources for use elsewhere in the Terraform configuration. Unlike resource blocks that manage infrastructure, data blocks gather information without directly managing any resources. This can include querying for data from cloud providers, external APIs, or other Terraform states.References = This definition and usage of data blocks are covered in Terraform's official documentation, highlighting their role in fetching external information to inform Terraform configurations.

NEW QUESTION 156
When should you run terraform init?

A. Every time you run terraform apply
B. Before you start coding a new Terraform project
C. After you run terraform plan for the time in a new terraform project and before you run terraform apply
D. After you start coding a new terraform project and before you run terraform plan for thefirst time.

Answer: D

Explanation:
You should run terraform init after you start coding a new Terraform project and before you run terraform plan for the first time. This command will initialize the working directory by downloading the required providers and modules, creating the initial state file, and performing other necessary tasks. References = : Initialize a Terraform Project

NEW QUESTION 161

How can terraform plan aid in the development process?

A. Initializes your working directory containing your Terraform configuration files
B. Validates your expectations against the execution plan without permanently modifying state
C. Formats your Terraform configuration files
D. Reconciles Terraform's state against deployed resources and permanently modifies state using the current status of deployed resources

Answer: B

Explanation:
The terraform plan command is used to create an execution plan. It allows you to see what actions Terraform will take to reach the desired state defined in your configuration files. It evaluates the current state and configuration, showing a detailed outline of the resources that will be created, updated, or destroyed. This is a critical step in the development process as it helps you verify that the changes you are about to apply will perform as expected, without actually modifying any state or infrastructure.
References:
? Terraform documentation on terraform plan: Terraform Plan

NEW QUESTION 162
You have a list of numbers that represents the number of free CPU cores on each virtual cluster:

```
numcpus = [ 18, 3, 7, 11, 2 ]
```

What Terraform function could you use to select the largest number from the list?

A. top(numcpus)
B. max(numcpus)
C. ceil (numcpus)
D. hight[numcpus]

Answer: B

Explanation:
In Terraform, the max function can be used to select the largest number from a list of numbers. The max function takes multiple arguments and returns the highest one. For the list numcpus = [18, 3, 7, 11, 2], using max(numcpus...) will return 18, which is the largest number in the list.
References:
? Terraform documentation on max function: Terraform Functions - max

NEW QUESTION 165
Which of the following arguments are required when declaring a Terraform output?

A. value
B. description
C. default
D. sensitive

Answer: A

Explanation:
When declaring a Terraform output, the value argument is required. Outputs are a way to extract information from Terraform-managed infrastructure, and the value argument specifies what data will be outputted. While other arguments like description and sensitive can provide additional context or security around the output, value is the only mandatory argument needed to define an output.References = The requirement of the value argument for outputs is specified in Terraform's official documentation, which provides guidelines on defining and using outputs in Terraform configurations.

NEW QUESTION 170
How would you reference the "name???? value of the second instance of this resource?

```
resource "aws_instance" "web" {
  count = 2
  name = "terraform-${count.index}"
}
```

A. aws_instance.web(2),name
B. element(aws_instance.web, 2)
C. aws_instance-web(1)
D. aws_instance_web(1),name
E. Aws_instance,web,* , name

Answer: D

Explanation:
In Terraform, when you use the count meta-argument, you can reference individual instances using an index. The indexing starts at 0, so to reference the "name" value of the second instance, you would use aws_instance.web[1].name. This syntax allows you to access the properties of specific instances in a list generated

by the count argument.
References:
? Terraform documentation on count and accessing resource instances: Terraform Count

NEW QUESTION 173
Which of these commands makes your code more human readable?

A. Terraform validate
B. Terraform output
C. Terraform show
D. Terraform fmt

Answer: D

Explanation:
The command that makes your code more human readable is terraform fmt. This command is used to rewrite Terraform configuration files to a canonical format and style, following the Terraform language style conventions and other minor adjustments for
readability. The command is optional, opinionated, and has no customization options, but it is recommended to ensure consistency of style across different Terraform codebases. Consistency can help your team understand the code more quickly and easily, making the use of terraform fmt very important. You can run this command on your configuration files before committing them to source control or as part of your CI/CD pipeline. References =
: Command: fmt : Using Terraform fmt Command to Format Your Terraform Code

NEW QUESTION 174
Which of the following is not a valid Terraform variable type?

A. list
B. array
C. nap
D. string

Answer: B

Explanation:
This is not a valid Terraform variable type. The other options are valid variable types that can store different kinds of values2.

NEW QUESTION 177
What does Terraform use the .terraform.lock.hc1 file for?

A. There is no such file
B. Tracking specific provider dependencies
C. Preventing Terraform runs from occurring
D. Storing references to workspaces which are locked

Answer: B

Explanation:
The .terraform.lock.hcl file is a new feature in Terraform 0.14 that records the exact versions of each provider used in your configuration. This helps ensure consistent
and reproducible behavior across different machines and runs.

NEW QUESTION 180
You have never used Terraform before and would like to test it out using a shared team account for a cloud provider. The shared team account already contains 15 virtual machines (VM). You develop a Terraform configuration containing one VM. perform terraform apply, and see that your VM was created successfully. What should you do to delete the newly-created VM with Terraform?

A. The Terraform state file contains all 16 VMs in the team accoun
B. Execute terraform destroy and select the newly-created VM.
C. Delete the Terraform state file and execute terraform apply.
D. The Terraform state file only contains the one new V
E. Execute terraform destroy.
F. Delete the VM using the cloud provider console and terraform apply to apply the changes to the Terraform state file.

Answer: C

Explanation:
This is the best way to delete the newly-created VM with Terraform, as it will only affect the resource that was created by your configuration and state file. The other options are either incorrect or inefficient.

NEW QUESTION 181
You must use different Terraform commands depending on the cloud provider you use.

A. True
B. False

Answer: B

Explanation:

You do not need to use different Terraform commands depending on the cloud provider you use. Terraform commands are consistent across different providers, as they operate on the Terraform configuration files and state files, not on the provider APIs directly.

NEW QUESTION 186
You decide to move a Terraform state file to Amazon S3 from another location. You write the code below into a file called backend.tf.

```
terraform {
  backend "s3" {
    bucket = "my-tf-bucket"
    region = "us-east-1"
  }
}
```

Which command will migrate your current state file to the new S3 remote backend?

A. terraform state
B. terraform init
C. terraform push
D. terraform refresh

Answer: B

Explanation:
This command will initialize the new backend and prompt you to migrate the existing state file to the new location3. The other commands are not relevant for this task.

NEW QUESTION 187
What is terraform refresh-only intended to detect?

A. Terraform configuration code changes
B. Corrupt state files
C. State file drift
D. Empty state files

Answer: C

Explanation:
The terraform refresh-only command is intended to detect state file drift. This command synchronizes the state file with the actual infrastructure, updating the state to reflect any changes that have occurred outside of Terraform.

NEW QUESTION 191
Any user can publish modules to the public Terraform Module Registry.

A. True
B. False

Answer: A

Explanation:
The Terraform Registry allows any user to publish and share modules. Published modules support versioning, automatically generate documentation, allow browsing version histories, show examples and READMEs, and more. Public modules are managed via Git and GitHub, and publishing a module takes only a few minutes. Once a module is published, releasing a new version of a module is as simple as pushing a properly formed Git tag1.
References = The information can be verified from the Terraform Registry documentation on Publishing Modules provided by HashiCorp Developer1.

NEW QUESTION 196
Which are examples of infrastructure as code? Choose two correct answers.

A. Cloned virtual machine images
B. Versioned configuration files
C. Change management database records
D. Doctor files

Answer: B

Explanation:
These are examples of infrastructure as code (IaC), which is a practice of managing and provisioning infrastructure through machine-readable definition files, rather than physical hardware configuration or interactive configuration tools.

NEW QUESTION 199
Which of the following commands would you use to access all of the attributes and details of a resource managed by Terraform?

A. terraform state list ??provider_type.name??
B. terraform state show ??provider_type.name??

C. terraform get ??provider_type.name??
D. terraform state list

Answer: B

Explanation:
The terraform state show command allows you to access all of the attributes and details of a resource managed by Terraform. You can use the resource address (e.g. provider_type.name) as an argument to show the information about a specific
resource. The terraform state list command only shows the list of resources in the state, not their attributes. The terraform get command downloads and installs modules needed for the configuration. It does not show any information about resources. References = [Command: state show] and [Command: state list]

NEW QUESTION 200
Which provider authentication method prevents credentials from being stored in the state file?

A. Using environment variables
B. Specifying the login credentials in the provider block
C. Setting credentials as Terraform variables
D. None of the above

Answer: D

Explanation:
None of the above methods prevent credentials from being stored in the state file. Terraform stores the provider configuration in the state file, which may include sensitive information such as credentials. This is a potential security risk and should be avoided if possible. To prevent credentials from being stored in the state file, you can use one of the following methods:
? Use environment variables to pass credentials to the provider. This way, the credentials are not part of the provider configuration and are not stored in the state file. However, this method may not work for some providers that require credentials to be set in the provider block.
? Use dynamic credentials to authenticate with your cloud provider. This way,
Terraform Cloud or Enterprise will request temporary credentials from your cloud provider for each run and use them to provision your resources. The credentials are not stored in the state file and are revoked after the run is completed. This method is supported for AWS, Google Cloud Platform, Azure, and
Vault. References = : [Sensitive Values in State] : Authenticate providers with dynamic credentials

NEW QUESTION 203
How do you specify a module??s version when publishing it to the public terraform Module Registry?

A. Configuration it in the module's Terraform code
B. Mention it on the module's configuration page on the Terraform Module Registry
C. The Terraform Module Registry does not support versioning modules
D. Tag a release in the associated repo

Answer: D

Explanation:
This is how you specify a module??s version when publishing it to the public Terraform Module Registry, as it uses the tags from your version control system (such as GitHub or GitLab) to identify module versions. You need to use semantic versioning for your tags, such as v1.0.0.

NEW QUESTION 208
Which command must you first run before performing further Terraform operations in a working directory?

A. terraform import
B. terraform workspace
C. terraform plan
D. terraform init

Answer: D

Explanation:
terraform init is the first command that should be run after writing a new Terraform configuration or cloning an existing one from version control. It initializes a working directory containing Terraform configuration files and downloads any required providers and modules. The other commands are used for different purposes, such as importing existing resources, switching between workspaces, generating execution plans, etc.

NEW QUESTION 213
How would you output returned values from a child module in the Terraform CLI output?

A. Declare the output in the root configuration
B. Declare the output in the child module
C. Declare the output in both the root and child module
D. None of the above

Answer: C

Explanation:
To output returned values from a child module in the Terraform CLI output, you need to declare the output in both the child module and the root module. The child module output will return the value to the root module, and the root module output will display the value in the CLI. References = [Terraform Outputs]

NEW QUESTION 217
.....

Thank You for Trying Our Product

We offer two products:

1st - We have Practice Tests Software with Actual Exam Questions

2nd - Questons and Answers in PDF Format

Terraform-Associate-003 Practice Exam Features:

* Terraform-Associate-003 Questions and Answers Updated Frequently

* Terraform-Associate-003 Practice Questions Verified by Expert Senior Certified Staff

* Terraform-Associate-003 Most Realistic Questions that Guarantee you a Pass on Your FirstTry

* Terraform-Associate-003 Practice Test Questions in Multiple Choice Formats and Updatesfor 1 Year