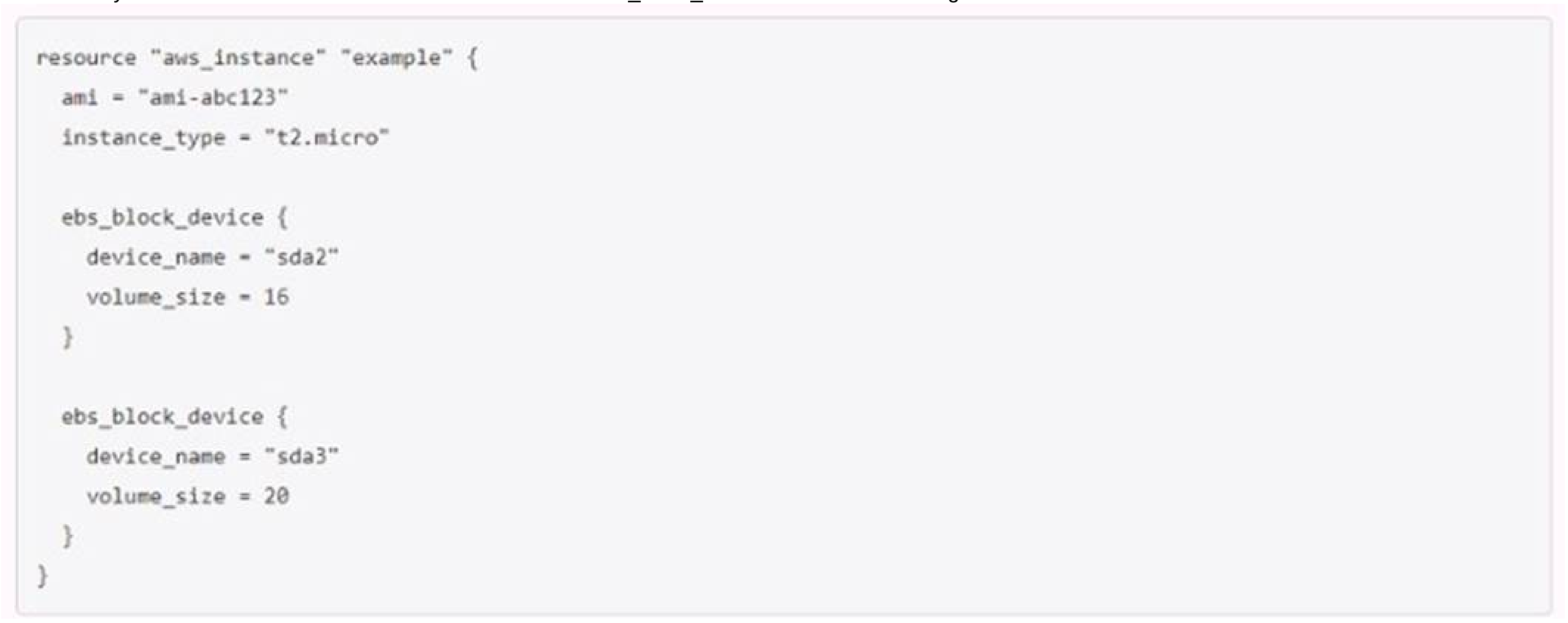
HashiCorp

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
HashiCorp Configuration Language (HCL) supports user-denned functions.

A. True
B. False

Answer: B

Explanation:
HashiCorp Configuration Language (HCL) does not support user-defined functions. You can only use the built-in functions that are provided by the language. The built-in functions allow you to perform various operations and transformations on values within expressions. The general syntax for function calls is a function name followed by comma-separated arguments in parentheses, such as max(5, 12, 9). You can find the documentation for all of the available built-in functions in the Terraform Registry or the
Packer Documentation, depending on which tool you are using. References = : Functions - Configuration Language | Terraform : Functions - Configuration Language | Packer

NEW QUESTION 3
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 4
You much initialize your working directory before running terraform validate.

A. True
B. False

Answer: A

Explanation:
You must initialize your working directory before running terraform validate, as it will ensure that all the required plugins and modules are installed and configured

properly. If you skip this step, you may encounter errors or inconsistencies when validating
your configuration files.

NEW QUESTION 5
While attempting to deploy resources into your cloud provider using Terraform, you begin to see some odd behavior and experience slow responses. In order to troubleshoot you decide to turn on Terraform debugging. Which environment variables must be configured to make Terraform's logging more verbose?

A. TF_LOG_PAIH
B. TF_LOG
C. TF_VAR_log_path
D. TF_VAR_log_level

Answer: B

Explanation:
To make Terraform's logging more verbose for troubleshooting purposes, you must configure the TF_LOG environment variable. This variable controls the level of logging and can be set to TRACE, DEBUG, INFO, WARN, or ERROR, with TRACE providing the most verbose output.References = Detailed debugging instructions and the use of environment variables like TF_LOG for increasing verbosity are part of Terraform's standard debugging practices

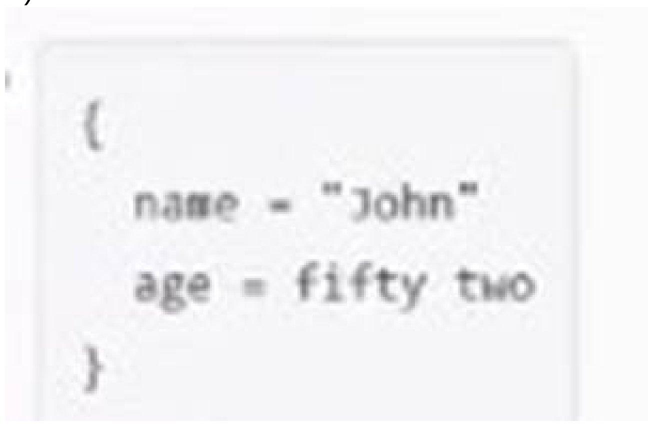
NEW QUESTION 6
A developer on your team is going lo leaf down an existing deployment managed by Terraform and deploy a new one. However, there is a server resource named aws instant.ubuntu[l] they would like to keep. What command should they use to tell Terraform to stop managing that specific resource?

A. Terraform plan rm:aws_instance.ubuntu[1]
B. Terraform state rm:aws_instance.ubuntu[1]
C. Terraform apply rm:aws_instance.ubuntu[1]
D. Terraform destory rm:aws_instance.ubuntu[1]

Answer: B

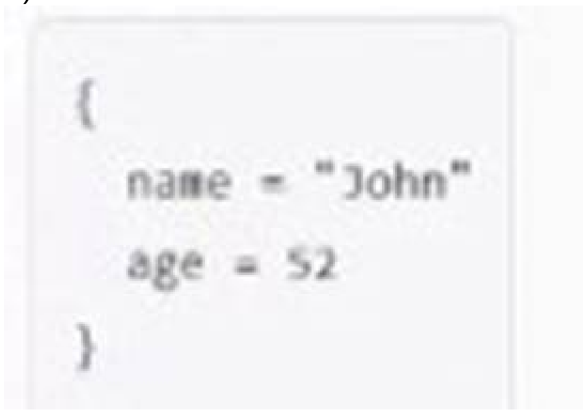
Explanation:
To tell Terraform to stop managing a specific resource without destroying it, you can use the terraform state rm command. This command will remove the resource from the Terraform state, which means that Terraform will no longer track or update the corresponding remote object. However, the object will still exist in the remote system and you can later use terraform import to start managing it again in a different configuration or workspace. The syntax for this command is terraform state rm <address>,
where <address> is the resource address that identifies the resource instance to remove.
For example, terraform state rm aws_instance.ubuntu[1] will remove the second instance of the aws_instance resource named ubuntu from the state. References = : Command: state rm : Moving Resources

NEW QUESTION 7
In Terraform HCL, an object type of object({name=string, age-number}) would match this value.
A)



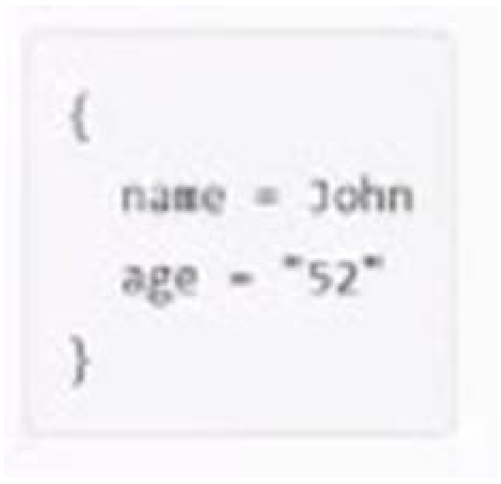
```
{
  name = "John"
  age = fifty two
}
```

B)



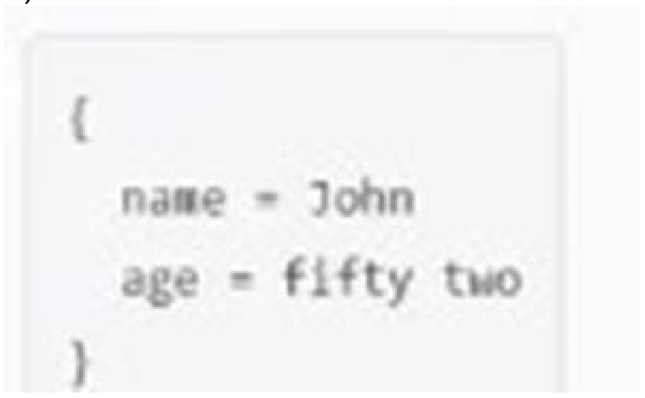
```
{
  name = "John"
  age = 52
}
```

C)



```
{
  name = John
  age = "52"
}
```

D)



```
{
  name = John
  age = fifty two
}
```

A. Option A
B. Option B
C. Option C
D. Option D

Answer: B

NEW QUESTION 8
You cannot install third party plugins using terraform init.

A. True
B. False

Answer: B

Explanation:
You can install third party plugins using terraform init, as long as you specify the plugin directory in your configuration or as a command-line argument. You can also use the terraform providers mirror command to create a local mirror of providers from any source.

NEW QUESTION 9
Your DevOps team is currently using the local backend for your Terraform configuration. You would like to move to a remote backend to store the state file in a central location. Which of the following backends would not work?

A. Artifactory
B. Amazon S3
C. Terraform Cloud
D. Git

Answer: D

Explanation:
This is not a valid backend for Terraform, as it does not support locking or versioning of state files4. The other options are valid backends that can store state files in a central location.

NEW QUESTION 10
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 10
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 12
You should run terraform fnt to rewrite all Terraform configurations within the current working directory to conform to Terraform-style conventions.

A. True
B. False

Answer: A

Explanation:
You should run terraform fmt to rewrite all Terraform configurations within the current working directory to conform to Terraform-style conventions. This command applies a subset of the Terraform language style conventions, along with other minor adjustments for readability. It is recommended to use this command to ensure consistency of style across different Terraform codebases. The command is optional, opinionated, and has no customization options, but it can help you and your team understand the code more quickly and easily. References = : Command: fmt : Using Terraform fmt Command to Format Your Terraform Code

NEW QUESTION 17
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 20
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 21
A module can always refer to all variables declared in its parent module.

A. True
B. False

Answer: B

Explanation:
A module cannot always refer to all variables declared in its parent module, as it needs to explicitly declare input variables and assign values to them from the parent module??s arguments. A module cannot access the parent module??s variables directly, unless they are passed as input arguments.

NEW QUESTION 23
Running terraform fmt without any flags in a directory with Terraform configuration files check the formatting of those files without changing their contents.

A. True
B. False

Answer: B

Explanation:
Running terraform fmt without any flags in a directory with Terraform configuration files will not check the formatting of those files without changing their contents,

but will actually rewrite them to a canonical format and style. If you want to check the formatting without making changes, you need to use the -check flag.

NEW QUESTION 27
Before you can use a remote backend, you must first execute terra-form init.

A. True
B. False

Answer: A

Explanation:
Before using a remote backend in Terraform, it is mandatory to run terraform init. This command initializes a Terraform working directory, which includes configuring the backend. If a remote backend is specified, terraform init will set up the working directory to use it, including copying any existing state to the remote backend if necessary.References = This principle is a fundamental part of working with Terraform and its backends, as outlined in general Terraform documentation and best practices. The specific HashiCorp Terraform Associate (003) study materials in the provided files did not include direct references to this information.

NEW QUESTION 31
What are some benefits of using Sentinel with Terraform Cloud/Terra form Cloud? Choose three correct answers.

A. You can enforce a list of approved AWS AMIs
B. Policy-as-code can enforce security best practices
C. You can check out and check in cloud access keys
D. You can restrict specific resource configurations, such as disallowing the use of CIDR=0.0.0.0/0.
E. Sentinel Policies can be written in HashiCorp Configuration Language (HCL)

Answer: ABD

Explanation:
These are some of the benefits of using Sentinel with Terraform Cloud/Terraform Enterprise, as they allow you to implement logic-based policies that can access and evaluate the Terraform plan, state, and configuration. The other options are not true, as Sentinel does not manage cloud access keys, and Sentinel policies are written in Sentinel language, not HCL.

NEW QUESTION 35
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 36
What information does the public Terraform Module Registry automatically expose about published modules?

A. Required input variables
B. Optional inputs variables and default values
C. Outputs
D. All of the above
E. None of the above

Answer: D

Explanation:
The public Terraform Module Registry automatically exposes all the information about published modules, including required input variables, optional input variables and default values, and outputs. This helps users to understand how to use and configure the modules.

NEW QUESTION 41
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 43
How is terraform import run?

A. As a part of terraform init
B. As a part of terraform plan
C. As a part of terraform refresh
D. By an explicit call
E. All of the above

Answer: D

Explanation:
The terraform import command is not part of any other Terraform workflow. It must be explicitly invoked by the user with the appropriate arguments, such as the resource address and the ID of the existing infrastructure to import. References = [Importing Infrastructure]

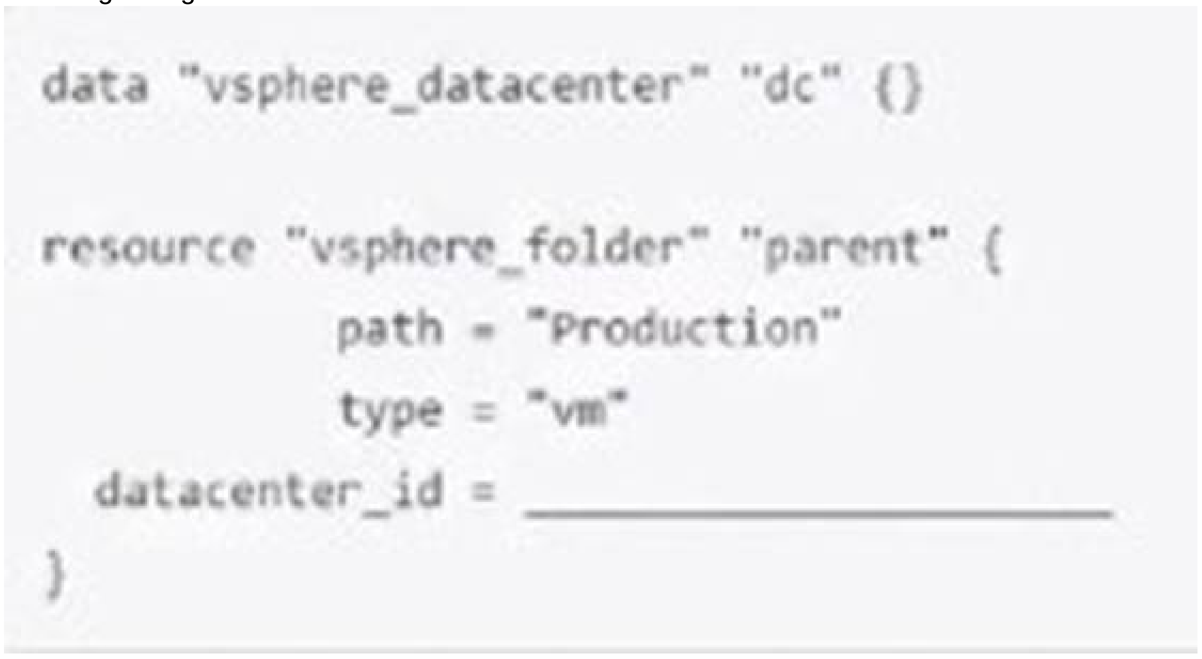
NEW QUESTION 45
In a Terraform Cloud workpace linked to a version control repository speculative plan rum start automatically commit changes to version control.

A. True
B. False

Answer: A

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

NEW QUESTION 48
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 52
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 56
Which of the following are advantages of using infrastructure as code (laC) 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 60
When should you write Terraform configuration files for existing infrastructure that you want to start managing with Terraform?

A. You can import infrastructure without corresponding Terraform code
B. Terraform will generate the corresponding configuration files for you
C. Before you run terraform Import
D. After you run terraform import

Answer: C

Explanation:
You need to write Terraform configuration files for the existing infrastructure that you want to import into Terraform, otherwise Terraform will not know how to manage it. The configuration files should match the type and name of the resources that you want to import.

NEW QUESTION 64
Outside of the required_providers block, Terraform configurations always refer to providers by their local names.

A. True
B. False

Answer: B

Explanation:
Outside of the required_providers block, Terraform configurations can refer to providers by either their local names or their source addresses. The local name is a short name that can be used throughout the configuration, while the source address is a global identifier for the provider in the format registry.terraform.io/namespace/type. For example, you can use either aws or registry.terraform.io/hashicorp/aws to refer to the AWS provider.

NEW QUESTION 68
Module version is required to reference a module on the Terraform Module Registry.

A. True
B. False

Answer: B

Explanation:
Module version is optional to reference a module on the Terraform Module Registry. If you omit the version constraint, Terraform will automatically use the latest available version of the module

NEW QUESTION 69
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 74
You're building a CI/CD (continuous integration/continuous delivery) pipeline and need to inject sensitive variables into your Terraform run. How can you do this safely?

A. Copy the sensitive variables into your Terraform code
B. Store the sensitive variables in a secure_varS.tf file
C. Store the sensitive variables as plain text in a source code repository
D. Pass variables to Terraform with a -var flag

Answer: D

Explanation:
This is a secure way to inject sensitive variables into your Terraform run, as they will not be stored in any file or source code repository. You can also use environment variables or variable files with encryption to pass sensitive variables to Terraform.

NEW QUESTION 76
Which are forbidden actions when the terraform state file is locked? Choose three correct answers.

A. Terraform state list
B. Terraform destroy
C. Terraform validate
D. Terraform validate
E. Terraform for
F. Terraform apply

Answer: BCF

Explanation:
The terraform state file is locked when a Terraform operation that could write state is in progress. This prevents concurrent state operations that could corrupt the state.
The forbidden actions when the state file is locked are those that could write state, such as terraform apply, terraform destroy, terraform refresh, terraform taint, terraform
untaint, terraform import, and terraform state *. The terraform validate command is also forbidden, because it requires an initialized working directory with the state file. The allowed actions when the state file is locked are those that only read state, such as terraform plan, terraform show, terraform output, and terraform console. References = [State Locking] and [Command: validate]

NEW QUESTION 80
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 81
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 84
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 86
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.

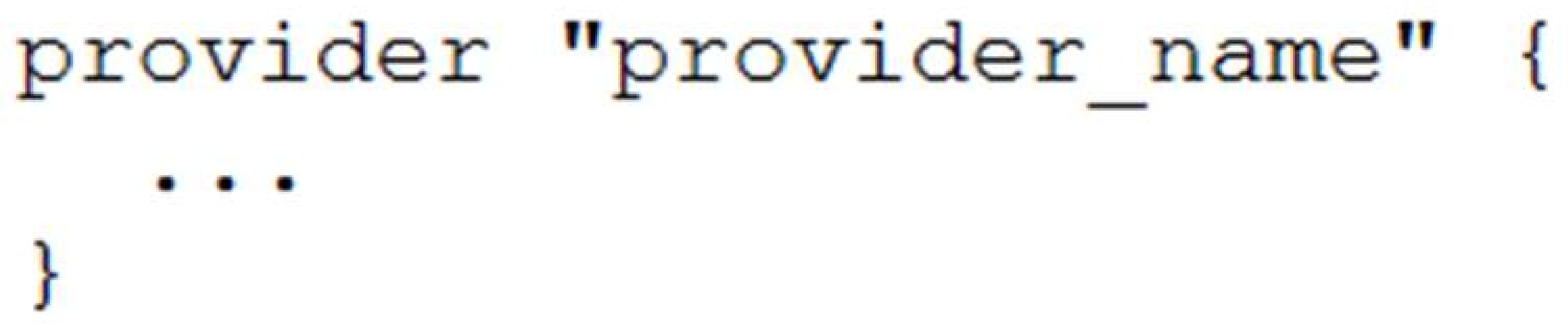
NEW QUESTION 91
Which Terraform command checks that your configuration syntax is correct?

A. terraform validate
B. terraform init
C. terraform show
D. terraform fmt

Answer: A

Explanation:
The terraform validate command is used to check that your Terraform configuration files are syntactically valid and internally consistent. It is a useful command for ensuring your Terraform code is error-free before applying any changes to your infrastructure.

NEW QUESTION 92
A provider configuration block is required in every Terraform configuration.
Example:



```
provider "provider_name" {
    ...
}
```

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 95
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 100
Define the purpose of state in Terraform.

A. State maps real world resources to your configuration and keeps track of metadata
B. State lets you enforce resource configurations that relate to compliance policies
C. State stores variables and lets you quickly reuse existing code
D. State codifies the dependencies of related resources

Answer: A

Explanation:
The purpose of state in Terraform is to keep track of the real-world resources managed by Terraform, mapping them to the configuration. The state file contains metadata about these resources, such as resource IDs and other important attributes, which Terraform uses to plan and manage infrastructure changes. The state enables Terraform to know what resources are managed by which configurations and helps in maintaining the desired state of the infrastructure.References = This role of state in Terraform is outlined in Terraform's official documentation, emphasizing its function in mapping configuration to real-world resources and storing vital metadata .

NEW QUESTION 105
You have multiple team members collaborating on infrastructure as code (IaC) using Terraform, and want to apply formatting standards for readability.
How can you format Terraform HCL (HashiCorp Configuration Language) code according to standard Terraform style convention?

A. Run the terraform fmt command during the code linting phase of your CI/CD process Most Voted
B. Designate one person in each team to review and format everyone's code
C. Manually apply two spaces indentation and align equal sign "=" characters in every Terraform file (*.tf)
D. Write a shell script to transform Terraform files using tools such as AWK, Python, and sed

Answer: A

Explanation:
The terraform fmt command is used to rewrite Terraform configuration files to a canonical format and style. This command applies a subset of the Terraform language style conventions, along with other minor adjustments for readability. Running this command on your configuration files before committing them to source control can help ensure consistency of style between different Terraform codebases, and can also make diffs easier to read. You can also use the -check and -diff options to check if the files are formatted and display the formatting changes respectively2. Running the terraform fmt command during the code linting phase of your CI/CD process can help automate this
process and enforce the formatting standards for your team. References = [Command: fmt]2

NEW QUESTION 110
It is best practice to store secret data in the same version control repository as your Terraform configuration.

A. True
B. False

Answer: B

Explanation:
It is not a best practice to store secret data in the same version control repository as your Terraform configuration, as it could expose your sensitive information to unauthorized parties or compromise your security. You should use environment variables, vaults, or other mechanisms to store and provide secret data to Terraform.

NEW QUESTION 113
Which Terraform collection type should you use to store key/value pairs?

A. Set
B. Map
C. Tuple
D. list

Answer: B

Explanation:
The Terraform collection type that should be used to store key/value pairs is map. A map is a collection of values that are accessed by arbitrary labels, called keys.
The keys and values can be of any type, but the keys must be unique within a map. For example, var = { key1 = "value1", key2 = "value2" } is a map with two key/value pairs. Maps are useful for grouping related values together, such as configuration options or
metadata. References = [Collection Types], [Map Type Constraints]

NEW QUESTION 115
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 118
Which command lets you experiment with terraform expressions?

A. Terraform console
B. Terraform validate
C. Terraform env
D. Terraform test

Answer: A

Explanation:
This is the command that lets you experiment with Terraform expressions, by providing an interactive console that allows you to evaluate expressions and see their results. You can use this command to test your expressions before using them in your configuration files.

NEW QUESTION 121
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 126
What is a key benefit of the Terraform state file?

A. A state file can schedule recurring infrastructure tasks
B. A state file is a source of truth for resources provisioned with Terraform
C. A state file is a source of truth for resources provisioned with a public cloud console
D. A state file is the desired state expressed by the Terraform code files

Answer: B

Explanation:
This is a key benefit of the Terraform state file, as it stores and tracks the metadata and attributes of the resources that are managed by Terraform, and allows Terraform to compare the current state with the desired state expressed by your configuration files.

NEW QUESTION 129
Which of the following command would be use to access all of the attributes and details of a resource managed by Terraform?

A. Terraform state show ?? provider_type_name
B. Terraform state list
C. Terraform get provider_type_name
D. Terraform state list provider_type_name

Answer: A

Explanation:
This is the command that you would use to access all of the attributes and details of a resource managed by Terraform, by providing the resource address as an argument. For example, terraform state show 'aws_instance.example' will show you all the information about the AWS instance named example.

NEW QUESTION 132
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 135
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 138
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 143
Terraform variable names are saved in the state file.

A. True
B. False

Answer: B

Explanation:
Terraform variable names are not saved in the state file, only their values are. The state file only stores the attributes of the resources and data sources that are managed by Terraform, not the variables that are used to configure them.

NEW QUESTION 145
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 150
Which backend does the Terraform CU use by default?

A. Depends on the cloud provider configured
B. HTTP
C. Remote
D. Terraform Cloud
E. Local

Answer: E

Explanation:
This is the backend that the Terraform CLI uses by default, unless you specify a different backend in your configuration. The local backend stores the state file in a local file named terraform.tfstate, which can be used to track and manage the state of your infrastructure.

NEW QUESTION 151
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 154
Where in your Terraform configuration do you specify a state backend?

A. The resource block
B. The data source block
C. The terraform block
D. The provider block

Answer: C

Explanation:
In Terraform, the backend configuration, which includes details about where and how state is stored, is specified within the terraform block of your configuration. This block is the correct place to define the backend type and its configuration parameters, such as the location of the state file for a local backend or the bucket details for a remote backend like S3.References = This practice is outlined in Terraform's core documentation, which provides examples and guidelines on how to configure various aspects of Terraform's behavior, including state backends .

NEW QUESTION 155
Terraform configuration (including any module references) can contain only one Terraform provider type.

A. True
B. False

Answer: B

Explanation:
Terraform configuration (including any module references) can contain more than one Terraform provider type. Terraform providers are plugins that Terraform uses to interact with various cloud services and other APIs. A Terraform configuration can use multiple providers to manage resources across different platforms and services. For example, a configuration can use the AWS provider to create a virtual machine, the Cloudflare provider to manage DNS records, and the GitHub provider to create a
repository. Terraform supports hundreds of providers for different use cases and scenarios. References = [Providers], [Provider Requirements], [Provider Configuration]

NEW QUESTION 158
Multiple team members are collaborating on infrastructure using Terraform and want to format the* Terraform code following standard Terraform-style convention.
How should they ensure the code satisfies conventions?

A. Terraform automatically formats configuration on terraform apply
B. Run terraform validate prior to executing terraform plan or terraform apply
C. Use terraform fmt
D. Replace all tabs with spaces

Answer: C

Explanation:
The terraform fmt command is used to format Terraform configuration files
to a canonical format and style. This ensures that all team members are using a consistent style, making the code easier to read and maintain. It automatically applies Terraform's standard formatting conventions to your configuration files, helping maintain consistency across the team's codebase.
References:
? Terraform documentation on terraform fmt: Terraform Fmt

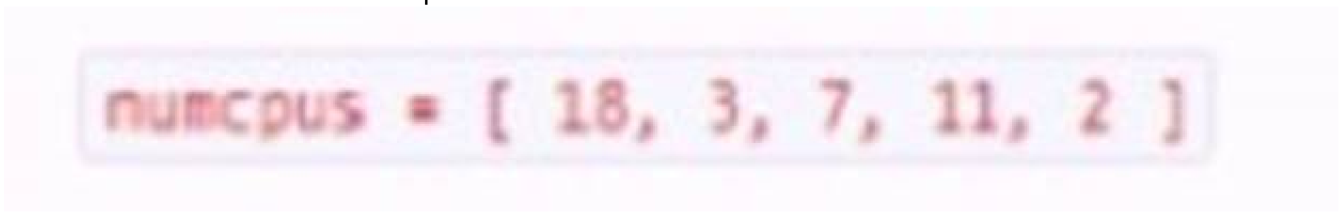
NEW QUESTION 159
How can terraform plan aid in the development process?

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 161
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 164
Infrastructure as Code (laC) can be stored in a version control system along with application code.

A. True
B. False

Answer: A

Explanation:
Infrastructure as Code (IaC) can indeed be stored in a version control system along with application code. This practice is a fundamental principle of modern infrastructure management, allowing teams to apply software development practices like versioning, peer review, and CI/CD to infrastructure management. Storing IaC configurations in version control facilitates collaboration, history tracking, and change management.References = While this concept is a foundational aspect of IaC and is widely accepted in the industry, direct references from the HashiCorp Terraform Associate (003) study materials were not found in the provided files. However, this practice is encouraged in Terraform's best practices and various HashiCorp learning resources.

NEW QUESTION 166
You're writing a Terraform configuration that needs to read input from a local file called id_rsa.pub . Which built-in Terraform function can you use to import the file's contents as a string?

A. file("id_rsa.pub")
B. templaTefil("id_rsa.pub")
C. filebase64("id_rsa.pub")
D. fileset<"id_rsa.pub")

Answer: A

Explanation:
To import the contents of a local file as a string in Terraform, you can use the built-in file function. By specifying file("id_rsa.pub"), Terraform reads the contents of the id_rsa.pub file and uses it as a string within your Terraform configuration. This function is particularly useful for scenarios where you need to include file data directly into your configuration, such as including an SSH public key for provisioning cloud instances.References = This information is a standard part of Terraform's functionality with built-in functions, as outlined in Terraform's official documentation and commonly used in various Terraform configurations.

NEW QUESTION 169
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 173
Your risk management organization requires that new AWS S3 buckets must be private and encrypted at rest. How can Terraform Cloud automatically and proactively enforce this security control?

A. Auditing cloud storage buckets with a vulnerability scanning tool
B. By adding variables to each Terraform Cloud workspace to ensure these settings are always enabled
C. With an S3 module with proper settings for buckets
D. With a Sentinel policy, which runs before every apply

Answer: D

Explanation:
The best way to automatically and proactively enforce the security control that new AWS S3 buckets must be private and encrypted at rest is with a Sentinel policy, which runs before every apply. Sentinel is a policy as code framework that allows you to define and enforce logic-based policies for your infrastructure. Terraform Cloud supports Sentinel policies for all paid tiers, and can run them before any terraform plan or terraform apply operation. You can write a Sentinel policy that checks the configuration of the S3 buckets and ensures that they have the proper settings for privacy and encryption, and then assign the policy to your Terraform Cloud organization or workspace. This way, Terraform Cloud will prevent any changes that violate the policy from being applied. References = [Sentinel Policy Framework], [Manage Policies in Terraform Cloud], [Write and Test Sentinel Policies for Terraform]

NEW QUESTION 176
If you update the version constraint in your Terraform configuration, Terraform will update your lock file the next time you run terraform Init.

A. True
B. False

Answer: A

Explanation:
If you update the version constraint in your Terraform configuration, Terraform will update your lock file the next time you run terraform init3. This will ensure that you use the same provider versions across different machines and runs.

NEW QUESTION 178
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 180
Which of the following ate advantages of using infrastructure as code (laC) instead of provisioning with a graphical user interface (GUI)? Choose two correct answers.

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

Answer: AD

Explanation:
? It lets you version, reuse, and share infrastructure configuration as code files, which can be stored in a source control system and integrated with your CI/CD pipeline.
? It reduces risk of operator error by automating repetitive tasks and ensuring consistency across environments. IaC does not necessarily provision resources at a lower cost, secure your credentials, or prevent manual modifications to your resources - these depend on other factors such as your cloud provider, your security practices, and your access policies.

NEW QUESTION 183
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 185
What does the default "local" Terraform backend store?

A. tfplan files
B. State file
C. Provider plugins
D. Terraform binary

Answer: B

Explanation:
The default ??local?? Terraform backend stores the state file in a local file named terraform.tfstate, which can be used to track and manage the state of your infrastructure3.

NEW QUESTION 188
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 193
Which of these are features of Terraform Cloud? Choose two correct answers.

A. A web-based user interface (UI)
B. Automated infrastructure deployment visualization
C. Automatic backups
D. Remote state storage

Answer: AD

Explanation:
Terraform Cloud includes several features designed to enhance collaboration and infrastructure management. Two of these features are:
? A web-based user interface (UI): This allows users to interact with Terraform Cloud
through a browser, providing a centralized interface for managing Terraform configurations, state files, and workspaces.
? Remote state storage: This feature enables users to store their Terraform state
files remotely in Terraform Cloud, ensuring that state is safely backed up and can be accessed by team members as needed.

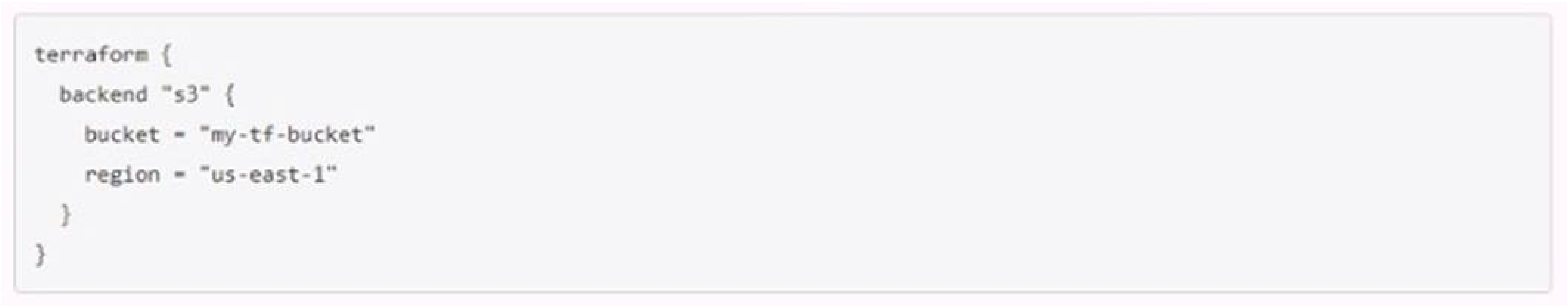
NEW QUESTION 194
When using a remote backend or terraform Cloud integration, where does Terraform save resource sate?

A. In an environment variable
B. On the disk
C. In the remote backend or Terraform Cloud
D. In memory

Answer: C

Explanation:
This is where Terraform saves resource state when using a remote backend or Terraform Cloud integration, as it allows you to store and manage your state file in a remote location, such as a cloud storage service or Terraform Cloud??s servers. This enables collaboration, security, and scalability for your Terraform infrastructure.

NEW QUESTION 196
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 197
Which command add existing resources into Terraform state?

A. Terraform init

B. Terraform plan
C. Terraform refresh
D. Terraform import
E. All of these

Answer: D

Explanation:
This is the command that can add existing resources into Terraform state, by matching them with the corresponding configuration blocks in your files.

NEW QUESTION 198
backends support state locking.

A. All
B. No
C. Some
D. Only local

Answer: C

Explanation:
Some backends support state locking, which prevents other users from modifying the state file while a Terraform operation is in progress. This prevents conflicts and data loss. Not all backends support this feature, and you can check the documentation for each backend type to see if it does.

NEW QUESTION 203
A Terraform output that sets the "sensitive" argument to true will not store that value in the state file.

A. True
B. False

Answer: A

Explanation:
A Terraform output that sets the "sensitive" argument to true will store that value in the state file. The purpose of setting sensitive = true is to prevent the value from being displayed in the CLI output during terraform plan and terraform apply, and to mask it in the Terraform UI. However, it does not affect the storage of the value in the state file. Sensitive outputs are still written to the state file to ensure that Terraform can manage resources correctly during subsequent operations.
References:
? Terraform documentation on sensitive outputs: Terraform Output Values

NEW QUESTION 204
You can access state stored with the local backend by using terraform_remote_state data source.

A. True
B. False

Answer: B

Explanation:
You cannot access state stored with the local backend by using the terraform_remote_state data source. The terraform_remote_state data source is used to retrieve the root module output values from some other Terraform configuration using the latest state snapshot from the remote backend. It requires a backend that supports remote state storage, such as S3, Consul, AzureRM, or GCS. The local backend stores the state file locally on the filesystem, which terraform_remote_state cannot access. References:
? Terraform documentation on terraform_remote_state data source: Terraform
Remote State Data Source
? Example usage of remote state: Example Usage (remote Backend)

NEW QUESTION 207
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 208
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 211
What is the Terraform style convention for indenting a nesting level compared to the one above it?

A. With a tab
B. With two spaces
C. With four spaces
D. With three spaces

Answer: B

Explanation:
This is the Terraform style convention for indenting a nesting level compared to the one above it. The other options are not consistent with the Terraform style guide.

NEW QUESTION 212
FILL IN THE BLANK
What is the name of the default file where Terraform stores the state?
Type your answer in the field provided. The text field is not case-sensitive and all variations of the correct answer are accepted.

A. Mastered
B. Not Mastered

Answer: A

Explanation:
The name of the default file where Terraform stores the state is terraform.tfstate. This file contains a JSON representation of the current state of the infrastructure managed by Terraform. Terraform uses this file to track the metadata and attributes of the resources, and to plan and apply changes. By default, Terraform stores the state file locally in the same directory as the configuration files, but it can also be configured to store the state remotely in a backend. References = [Terraform State], [State File Format]

NEW QUESTION 217
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 219
A Terraform provider is NOT responsible for:

A. Exposing resources and data sources based on an APUI
B. Managing actions to take based on resources differences
C. Understanding API interactions with some service
D. Provisioning infrastructure in multiple

Answer: D

Explanation:
This is not a responsibility of a Terraform provider, as it does not make sense grammatically or logically. A Terraform provider is responsible for exposing resources and data sources based on an API, managing actions to take based on resource differences, and understanding API interactions with some service.

NEW QUESTION 221
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