

Terraform-Associate-003 Dumps

HashiCorp Certified: Terraform Associate (003)

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NEW QUESTION 1

Changing the Terraform backend from the default "local" backend to a different one after performing your first terraform 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 2

What does this code do?

```
terraform {
  required_providers {
    aws = "~> 3.0"
  }
}
```

- A. Requires any version of the AWS provider ≥ 3.0 and < 4.0
- B. Requires any version of the AWS provider ≥ 3.0
- C. Requires any version of the AWS provider ≥ 3.0 major releases like 4.1
- D. like 4.1
- E. Requires any version of the AWS provider > 3.0

Answer: A

Explanation:

This is what this code does, by using the pessimistic constraint operator ($\sim>$), which specifies an acceptable range of versions for a provider or module.

NEW QUESTION 3

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_PAINT
- 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 4

A developer on your team is going to leave down an existing deployment managed by Terraform and deploy a new one. However, there is a server resource named aws_instance.ubuntu[1] 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 destroy 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 5

Which of these are features of Terraform Cloud? Choose two correct answers.

- A. Automated infrastructure deployment visualization
- B. Automatic backups
- C. A web-based user interface (UI)
- 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 6

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 7

What feature stops multiple users from operating on the Terraform state at the same time?

- A. State locking
- B. Version control
- C. Provider constraints
- D. Remote backends

Answer: A

Explanation:

State locking prevents other users from modifying the state file while a Terraform operation is in progress. This prevents conflicts and data loss.

NEW QUESTION 8

If a DevOps team adopts AWS CloudFormation as their standardized method for provisioning public cloud resources, 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 and wishes to deploy new infrastructure
- C. The team is asked to build a reusable code base 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 9

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 10

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 10

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 14

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 19

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 24

If you manually destroy infrastructure, what is the best practice reflecting this change in Terraform?

- A. Run terraform refresh
- B. It will happen automatically
- C. Manually update the state file
- D. Run terraform import

Answer: B

Explanation:

If you manually destroy infrastructure, Terraform will automatically detect the change and update the state file during the next plan or apply. Terraform compares the current state of the infrastructure with the desired state in the configuration and generates a plan to reconcile the differences. If a resource is missing from the infrastructure but still exists in the state file, Terraform will attempt to recreate it. If a resource is present in the infrastructure but not in the state file, Terraform will ignore it unless you use the terraform import command to bring it under Terraform's management. References = [Terraform State]

NEW QUESTION 25

Which of these are secure options for storing secrets for connecting to a Terraform remote backend? Choose two correct answers.

- A. A variable file
- B. Defined in Environment variables
- C. Inside the backend block within the Terraform configuration
- D. Defined in a connection configuration outside of Terraform

Answer: BD

Explanation:

Environment variables and connection configurations outside of Terraform are secure options for storing secrets for connecting to a Terraform remote backend. Environment variables can be used to set values for input variables that contain secrets, such as backend access keys or tokens. Terraform will read environment variables that start with `TF_VAR_` and match the name of an input variable. For example, if you have an input variable called `backend_token`, you can set its value with the environment variable `TF_VAR_backend_token1`. Connection configurations outside of Terraform are files or scripts that provide credentials or other information for Terraform to connect to a remote backend. For example, you can use a credentials file for the S3 backend², or a shell script for the HTTP backend³. These files or scripts are not part of the Terraform configuration and can be stored securely in a separate location. The other options are not secure for storing secrets. A variable file is a file that contains values for input variables. Variable files are usually stored in the same directory as the Terraform configuration or in a version control system. This exposes the secrets to anyone who can access the files or the repository. You should not store secrets in variable files¹. Inside the backend block within the Terraform configuration is where you specify the type and settings of the remote backend. The backend block is part of the Terraform configuration and is usually stored in a version control system. This exposes the secrets to anyone who can access the configuration or the repository. You should not store secrets in the backend block⁴. References = [Terraform Input Variables]¹, [Backend Type: s3]², [Backend Type: http]³, [Backend Configuration]⁴

NEW QUESTION 26

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 29

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 34

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 37

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 41

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 42

You are 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 44

Which task does `terraform init` not perform?

- A. Validates all required variables are present
- B. Sources any modules and copies the configuration locally
- C. Connects to the backend
- D. Sources all providers used in the configuration and downloads them

Answer: A

Explanation:

The `terraform init` command is used to initialize a working directory containing Terraform configuration files. This command performs several different initialization steps to prepare the current working directory for use with Terraform, which includes initializing the backend, installing provider plugins, and copying any modules referenced in the configuration. However, it does not validate whether all required variables are present; that is a task performed by `terraform plan` or `terraform apply`.

References = This information can be verified from the official Terraform documentation on the `terraform init` command provided by HashiCorp Developer1.

NEW QUESTION 49

Which backend does the Terraform CLI 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 51

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 54

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 59

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. high[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 62

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 65

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 values.

NEW QUESTION 70

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 infrastructure.

NEW QUESTION 71

One remote backend configuration always maps to a single remote workspace.

- A. True
- B. False

Answer: A

Explanation:

The remote backend can work with either a single remote Terraform Cloud workspace, or with multiple similarly-named remote workspaces (like `networking-dev` and `networking-prod`). The `workspaces` block of the backend configuration determines which mode it uses. To use a single remote Terraform Cloud workspace, set `workspaces.name` to the remote workspace's full name (like `networking-prod`). To use multiple remote workspaces, set `workspaces.prefix` to a prefix used in all of the desired remote workspace names. For example, set `prefix = "networking-"` to use Terraform cloud workspaces with names like `networking-dev` and `networking-prod`. This is helpful when mapping multiple Terraform CLI workspaces used in a single Terraform configuration to multiple Terraform Cloud workspaces. However, one remote backend configuration always maps to a single remote workspace, either by name or by prefix. You cannot use both name and prefix in the same backend configuration, or omit both. Doing so will result in a configuration error. References = [Backend Type: remote]

NEW QUESTION 74

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 76

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 tag. References = The information can be verified from the Terraform Registry documentation on Publishing Modules provided by HashiCorp Developer.

NEW QUESTION 81

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 86

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 91

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 96

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 100

Which of these statements about Terraform Cloud workspaces is false?

- A. They have role-based access controls
- B. You must use the CLI to switch between workspaces
- C. Plans and applies can be triggered via version control system integrations
- D. They can securely store cloud credentials

Answer: B

Explanation:

The statement that you must use the CLI to switch between workspaces is false. Terraform Cloud workspaces are different from Terraform CLI workspaces. Terraform Cloud workspaces are required and represent all of the collections of infrastructure in an organization. They are also a major component of role-based access in Terraform Cloud. You can grant individual users and user groups permissions for one or more workspaces that dictate whether they can manage variables, perform runs, etc. You can create, view, and switch between Terraform Cloud workspaces using the Terraform Cloud UI, the Workspaces API, or the Terraform Enterprise Provider⁵. Terraform CLI workspaces are optional and allow you to create multiple distinct instances of a single configuration within one working directory. They are useful for creating disposable environments for testing or experimenting without affecting your main or production environment. You can create, view, and switch between Terraform CLI workspaces using the terraform workspace command⁶. The other statements about Terraform Cloud workspaces are true. They have role-based access controls that allow you to assign permissions to users and teams based on their roles and responsibilities. You can create and manage roles using the Teams API or the Terraform Enterprise Provider⁷. Plans and applies can be triggered via version control system integrations that allow you to link your Terraform Cloud workspaces to your VCS repositories. You can configure VCS settings, webhooks, and branch tracking to automate your Terraform Cloud workflow⁸. They can securely store cloud credentials as sensitive variables that are encrypted at rest and only decrypted when needed. You can manage variables using the Terraform Cloud UI, the Variables API, or the Terraform Enterprise Provider⁹. References = [Workspaces]⁵, [Terraform CLI Workspaces]⁶, [Teams and Organizations]⁷, [VCS Integration]⁸, [Variables]⁹

NEW QUESTION 105

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