

REST Resource: instances | Compute Engine | Google Cloud Documentation

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kind

string

[Output Only] Type of the resource. Always `compute#instance` for instances.

id

string ([uint64](#) format)

[Output Only] The unique identifier for the resource. This identifier is defined by the server.

creationTimestamp

string

[Output Only] Creation timestamp in [RFC3339](#) text format.

name

string

The name of the resource, provided by the client when initially creating the resource. The resource name must be 1-63 characters long, and comply with [RFC1035](#). Specifically, the name must be 1-63 characters long and match the regular expression `[a-z]([-a-z0-9]*[a-z0-9])?` which means the first character must be a lowercase letter, and all following characters must be a dash, lowercase letter, or digit, except the last character, which cannot be a dash.

description

string

An optional description of this resource. Provide this property when you create the resource.

tags

object

Tags to apply to this instance. Tags are used to identify valid sources or targets for network firewalls and are specified by the client during instance creation. The tags can be later modified by the `setTags` method. Each tag within the list must comply with [RFC1035](#). Multiple tags can be specified via the `'tags.items'` field.

tags.items[]

string

An array of tags. Each tag must be 1-63 characters long, and comply with [RFC1035](#).

tags.fingerprint

string ([bytes](#) format)

Specifies a fingerprint for this request, which is essentially a hash of the tags' contents and used for optimistic locking. The fingerprint is initially generated by Compute Engine and changes after every request to modify or update tags. You must always provide an up-to-date fingerprint hash in order to update or change tags.

To see the latest fingerprint, make `get()` request to the instance.

A base64-encoded string.

machineType

string

Full or partial URL of the machine type resource to use for this instance, in the format:

`zones/zone/machineTypes/machine-type` . This is provided by the client when the instance is created. For example, the following is a valid partial url to a [predefined machine type](#):

`zones/us-central1-f/machineTypes/n1-standard-1`

To create a [custom machine type](#), provide a URL to a machine type in the following format, where *CPUS* is 1 or an even number up to 32 (2, 4, 6, ... 24, etc), and *MEMORY* is the total memory for this instance. Memory must be a multiple of 256 MB and must be supplied in MB (e.g. 5 GB of memory is 5120 MB):

`zones/zone/machineTypes/custom-CPUS-MEMORY`

For example: `zones/us-central1-f/machineTypes/custom-4-5120` For a full list of restrictions, read the [Specifications](#) for custom machine types.

status

enum

[Output Only] The status of the instance. One of the following values: `PROVISIONING` , `STAGING` , `RUNNING` , `STOPPING` , `SUSPENDING` , `SUSPENDED` , `REPAIRING` , and `TERMINATED` . For more information about the status of the instance, see [Instance life cycle](#).

statusMessage

string

[Output Only] An optional, human-readable explanation of the status.

zone

string

[Output Only] URL of the zone where the instance resides. You must specify this field as part of the HTTP request URL. It is not settable as a field in the request body.

canIpForward

boolean

Allows this instance to send and receive packets with non-matching destination or source IPs. This is required if you plan to use this instance to forward routes. For more information, see [Enabling IP Forwarding](#).

networkInterfaces[]

object

An array of network configurations for this instance. These specify how interfaces are configured to interact with other network services, such as connecting to the internet. Multiple interfaces are supported per instance.

networkInterfaces[].kind

string

[Output Only] Type of the resource. Always `compute#networkInterface` for network interfaces.

networkInterfaces[].network

string

URL of the VPC network resource for this instance. When creating an instance, if neither the network nor the subnetwork is specified, the default network `global/networks/default` is used. If the selected project doesn't have the default network, you must specify a network or subnet. If the network is not specified but the subnetwork is specified, the network is inferred.

If you specify this property, you can specify the network as a full or partial URL. For example, the following are all valid URLs:

- <https://www.googleapis.com/compute/v1/projects/project/global/networks/network>
- `projects/project/global/networks/network`
- `global/networks/default`

networkInterfaces[].subnetwork

string

The URL of the Subnetwork resource for this instance. If the network resource is in [legacy](#) mode, do not specify this field. If the network is in auto subnet mode, specifying the subnetwork is optional. If the network is in custom

subnet mode, specifying the subnetwork is required. If you specify this field, you can specify the subnetwork as a full or partial URL. For example, the following are all valid URLs:

- <https://www.googleapis.com/compute/v1/projects/project/regions/region/subnetworks/subnetwork>
- `regions/region/subnetworks/subnetwork`

`networkInterfaces[].networkIP`

string

An IPv4 internal IP address to assign to the instance for this network interface. If not specified by the user, an unused internal IP is assigned by the system.

`networkInterfaces[].ipv6Address`

string

An IPv6 internal network address for this network interface. To use a static internal IP address, it must be unused and in the same region as the instance's zone. If not specified, Google Cloud will automatically assign an internal IPv6 address from the instance's subnetwork.

`networkInterfaces[].internalIpv6PrefixLength`

integer

The prefix length of the primary internal IPv6 range.

`networkInterfaces[].name`

string

[Output Only] The name of the network interface, which is generated by the server. For a VM, the network interface uses the `nicN` naming format. Where `N` is a value between `0` and `7`. The default interface value is `nic0`.

`networkInterfaces[].accessConfigs[]`

object

An array of configurations for this interface. Currently, only one access config, `ONE_TO_ONE_NAT`, is supported. If there are no `accessConfigs` specified, then this instance will have no external internet access.

`networkInterfaces[].accessConfigs[].kind`

string

[Output Only] Type of the resource. Always `compute#accessConfig` for access configs.

`networkInterfaces[].accessConfigs[].type`

enum

The type of configuration. In `accessConfigs` (IPv4), the default and only option is `ONE_TO_ONE_NAT` . In `ipv6AccessConfigs` , the default and only option is `DIRECT_IPV6` .

`networkInterfaces[].accessConfigs[].name`

string

The name of this access configuration. In `accessConfigs` (IPv4), the default and recommended name is `External NAT` , but you can use any arbitrary string, such as `My external IP` or `Network Access` . In `ipv6AccessConfigs` , the recommend name is `External IPv6` .

`networkInterfaces[].accessConfigs[].natIP`

string

Applies to `accessConfigs` (IPv4) only. An [external IP address](#) associated with this instance. Specify an unused static external IP address available to the project or leave this field undefined to use an IP from a shared ephemeral IP address pool. If you specify a static external IP address, it must live in the same region as the zone of the instance.

`networkInterfaces[].accessConfigs[].externalIPv6`

string

Applies to `ipv6AccessConfigs` only. The first IPv6 address of the external IPv6 range associated with this instance, prefix length is stored in `externalIPv6PrefixLength` in `ipv6AccessConfig` . To use a static external IP address, it must be unused and in the same region as the instance's zone. If not specified, Google Cloud will automatically assign an external IPv6 address from the instance's subnetwork.

`networkInterfaces[].accessConfigs[].externalIPv6PrefixLength`

integer

Applies to `ipv6AccessConfigs` only. The prefix length of the external IPv6 range.

`networkInterfaces[].accessConfigs[].setPublicPtr`

boolean

Specifies whether a public DNS 'PTR' record should be created to map the external IP address of the instance to a DNS domain name.

This field is not used in `ipv6AccessConfig` . A default PTR record will be created if the VM has external IPv6 range associated.

`networkInterfaces[].accessConfigs[].publicPtrDomainName`

string

The DNS domain name for the public PTR record.

You can set this field only if the `setPublicPtr` field is enabled in `accessConfig` . If this field is unspecified in `ipv6AccessConfig` , a default PTR record will be created for first IP in associated external IPv6 range.

`networkInterfaces[].accessConfigs[].networkTier`

enum

This signifies the networking tier used for configuring this access configuration and can only take the following values: `PREMIUM` , `STANDARD` .

If an `AccessConfig` is specified without a valid external IP address, an ephemeral IP will be created with this `networkTier`.

If an `AccessConfig` with a valid external IP address is specified, it must match that of the `networkTier` associated with the `Address` resource owning that IP.

`networkInterfaces[].accessConfigs[].securityPolicy`

string

The resource URL for the security policy associated with this access config.

`networkInterfaces[].ipv6AccessConfigs[]`

object

An array of IPv6 access configurations for this interface. Currently, only one IPv6 access config, `DIRECT_IPV6` , is supported. If there is no `ipv6AccessConfig` specified, then this instance will have no external IPv6 Internet access.

`networkInterfaces[].ipv6AccessConfigs[].kind`

string

[Output Only] Type of the resource. Always `compute#accessConfig` for access configs.

`networkInterfaces[].ipv6AccessConfigs[].type`

enum

The type of configuration. In `accessConfigs` (IPv4), the default and only option is `ONE_TO_ONE_NAT` . In `ipv6AccessConfigs` , the default and only option is `DIRECT_IPV6` .

`networkInterfaces[].ipv6AccessConfigs[].name`

string

The name of this access configuration. In `accessConfigs` (IPv4), the default and recommended name is `External NAT`, but you can use any arbitrary string, such as `My external IP` or `Network Access`. In `ipv6AccessConfigs`, the recommend name is `External IPv6`.

```
networkInterfaces[].ipv6AccessConfigs[].natIP
```

string

Applies to `accessConfigs` (IPv4) only. An [external IP address](#) associated with this instance. Specify an unused static external IP address available to the project or leave this field undefined to use an IP from a shared ephemeral IP address pool. If you specify a static external IP address, it must live in the same region as the zone of the instance.

```
networkInterfaces[].ipv6AccessConfigs[].externalIpv6
```

string

Applies to `ipv6AccessConfigs` only. The first IPv6 address of the external IPv6 range associated with this instance, prefix length is stored in `externalIpv6PrefixLength` in `ipv6AccessConfig`. To use a static external IP address, it must be unused and in the same region as the instance's zone. If not specified, Google Cloud will automatically assign an external IPv6 address from the instance's subnetwork.

```
networkInterfaces[].ipv6AccessConfigs[].externalIpv6PrefixLength
```

integer

Applies to `ipv6AccessConfigs` only. The prefix length of the external IPv6 range.

```
networkInterfaces[].ipv6AccessConfigs[].setPublicPtr
```

boolean

Specifies whether a public DNS 'PTR' record should be created to map the external IP address of the instance to a DNS domain name.

This field is not used in `ipv6AccessConfig`. A default PTR record will be created if the VM has external IPv6 range associated.

```
networkInterfaces[].ipv6AccessConfigs[].publicPtrDomainName
```

string

The DNS domain name for the public PTR record.

You can set this field only if the `setPublicPtr` field is enabled in `accessConfig`. If this field is unspecified in `ipv6AccessConfig`, a default PTR record will be created for first IP in associated external IPv6 range.

```
networkInterfaces[].ipv6AccessConfigs[].networkTier
```

enum

This signifies the networking tier used for configuring this access configuration and can only take the following values: PREMIUM , STANDARD .

If an AccessConfig is specified without a valid external IP address, an ephemeral IP will be created with this networkTier.

If an AccessConfig with a valid external IP address is specified, it must match that of the networkTier associated with the Address resource owning that IP.

networkInterfaces[].ipv6AccessConfigs[].securityPolicy

string

The resource URL for the security policy associated with this access config.

networkInterfaces[].aliasIpRanges[]

object

An array of alias IP ranges for this network interface. You can only specify this field for network interfaces in VPC networks.

networkInterfaces[].aliasIpRanges[].ipCidrRange

string

The IP alias ranges to allocate for this interface. This IP CIDR range must belong to the specified subnetwork and cannot contain IP addresses reserved by system or used by other network interfaces. This range may be a single IP address (such as 10.2.3.4), a netmask (such as /24) or a CIDR-formatted string (such as 10.1.2.0/24).

networkInterfaces[].aliasIpRanges[].subnetworkRangeName

string

The name of a subnetwork secondary IP range from which to allocate an IP alias range. If not specified, the primary range of the subnetwork is used.

networkInterfaces[].fingerprint

string (bytes format)

Fingerprint hash of contents stored in this network interface. This field will be ignored when inserting an Instance or adding a NetworkInterface . An up-to-date fingerprint must be provided in order to update the NetworkInterface . The request will fail with error 400 Bad Request if the fingerprint is not provided, or 412 Precondition Failed if the fingerprint is out of date.

A base64-encoded string.

`networkInterfaces[].stackType`

enum

The stack type for this network interface. To assign only IPv4 addresses, use `IPV4_ONLY`. To assign both IPv4 and IPv6 addresses, use `IPV4_IPV6`. If not specified, `IPV4_ONLY` is used.

This field can be both set at instance creation and update network interface operations.

`networkInterfaces[].ipv6AccessType`

enum

[Output Only] One of `EXTERNAL`, `INTERNAL` to indicate whether the IP can be accessed from the Internet. This field is always inherited from its subnetwork.

Valid only if `stackType` is `IPV4_IPV6`.

`networkInterfaces[].queueCount`

integer

The networking queue count that's specified by users for the network interface. Both Rx and Tx queues will be set to this number. It'll be empty if not specified by the users.

`networkInterfaces[].nicType`

enum

The type of vNIC to be used on this interface. This may be `gVNIC` or `VirtioNet`.

`networkInterfaces[].networkAttachment`

string

The URL of the network attachment that this interface should connect to in the following format: `projects/{projectNumber}/regions/{region_name}/networkAttachments/{network_attachment_name}`.

`networkInterfaces[].parentNicName`

string

Name of the parent network interface of a dynamic network interface.

`networkInterfaces[].vlan`

integer

VLAN tag of a dynamic network interface, must be an integer in the range from 2 to 255 inclusively.

`networkInterfaces[].igmpQuery`

enum

Indicate whether igmp query is enabled on the network interface or not. If enabled, also indicates the version of IGMP supported.

networkInterfaces[].serviceClassId

string

Optional. Producer Service's Service class Id for the region of this network interface. Can only be used with networkAttachment. It is not possible to use on its own however, networkAttachment can be used without serviceClassId.

networkInterfaces[].enableVpcScopedDns

boolean

Optional. If true, DNS resolution will be enabled over this interface. Only valid with networkAttachment.

disks[]

object

Array of disks associated with this instance. Persistent disks must be created before you can assign them.

disks[].kind

string

[Output Only] Type of the resource. Always compute#attachedDisk for attached disks.

disks[].type

enum

Specifies the type of the disk, either SCRATCH or PERSISTENT . If not specified, the default is PERSISTENT .

disks[].mode

enum

The mode in which to attach this disk, either READ_WRITE or READ_ONLY . If not specified, the default is to attach the disk in READ_WRITE mode.

disks[].savedState

enum

Output only. For LocalSSD disks on VM Instances in STOPPED or SUSPENDED state, this field is set to PRESERVED if the LocalSSD data has been saved to a persistent location by customer request. (see the

discardLocalSsd option on instances.stop/instances.suspend). Read-only in the api.

`disks[].source`

string

Specifies a valid partial or full URL to an existing Persistent Disk resource. When creating a new instance boot disk, one of `initializeParams.sourceImage` or `initializeParams.sourceSnapshot` or `disks.source` is required.

If desired, you can also attach existing non-root persistent disks using this property. This field is only applicable for persistent disks.

Note that for InstanceTemplate, specify the disk name for zonal disk, and the URL for regional disk.

`disks[].deviceName`

string

Specifies a unique device name of your choice that is reflected into the `/dev/disk/by-id/google-*` tree of a Linux operating system running within the instance. This name can be used to reference the device for mounting, resizing, and so on, from within the instance.

If not specified, the server chooses a default device name to apply to this disk, in the form `persistent-disk-x`, where x is a number assigned by Google Compute Engine. This field is only applicable for persistent disks.

`disks[].index`

integer

[Output Only] A zero-based index to this disk, where 0 is reserved for the boot disk. If you have many disks attached to an instance, each disk would have a unique index number.

`disks[].boot`

boolean

Indicates that this is a boot disk. The virtual machine will use the first partition of the disk for its root filesystem.

`disks[].initializeParams`

object

[Input Only] Specifies the parameters for a new disk that will be created alongside the new instance. Use initialization parameters to create boot disks or local SSDs attached to the new instance.

This property is mutually exclusive with the `source` property; you can only define one or the other, but not both.

`disks[].initializeParams.diskName`

string

Specifies the disk name. If not specified, the default is to use the name of the instance. If a disk with the same name already exists in the given region, the existing disk is attached to the new instance and the new disk is not created.

`disks[].initializeParams.sourceImage`

string

The source image to create this disk. When creating a new instance boot disk, one of `initializeParams.sourceImage` or `initializeParams.sourceSnapshot` or `disks.source` is required.

To create a disk with one of the [public operating system images](#), specify the image by its family name. For example, specify `family/debian-9` to use the latest Debian 9 image:

`projects/debian-cloud/global/images/family/debian-9`

Alternatively, use a specific version of a public operating system image:

`projects/debian-cloud/global/images/debian-9-stretch-vYYYYMMDD`

To create a disk with a custom image that you created, specify the image name in the following format:

`global/images/my-custom-image`

You can also specify a custom image by its image family, which returns the latest version of the image in that family. Replace the image name with `family/family-name` :

`global/images/family/my-image-family`

If the source image is deleted later, this field will not be set.

`disks[].initializeParams.diskSizeGb`

string ([int64](#) format)

Specifies the size of the disk in base-2 GB. The size must be at least 10 GB. If you specify a `sourceImage` , which is required for boot disks, the default size is the size of the `sourceImage` . If you do not specify a `sourceImage` , the default disk size is 500 GB.

`disks[].initializeParams.diskType`

string

Specifies the disk type to use to create the instance. If not specified, the default is `pd-standard` , specified using the full URL. For example:

<https://www.googleapis.com/compute/v1/projects/project/zones/zone/diskTypes/pd-standard>

For a full list of acceptable values, see [Persistent disk types](#). If you specify this field when creating a VM, you can provide either the full or partial URL. For example, the following values are valid:

- <https://www.googleapis.com/compute/v1/projects/project/zones/zone/diskTypes/diskType>
- `projects/project/zones/zone/diskTypes/diskType`
- `zones/zone/diskTypes/diskType`

If you specify this field when creating or updating an instance template or all-instances configuration, specify the type of the disk, not the URL. For example: `pd-standard`.

```
disks[].initializeParams.sourceImageEncryptionKey
```

```
object
```

The [customer-supplied encryption key](#) of the source image. Required if the source image is protected by a customer-supplied encryption key.

InstanceTemplate and InstancePropertiesPatch do not store [customer-supplied encryption keys](#), so you cannot create disks for instances in a [managed instance group](#) if the source images are encrypted with your own keys.

```
disks[].initializeParams.sourceImageEncryptionKey.rawKey
```

```
string
```

Specifies a 256-bit [customer-supplied encryption key](#), encoded in [RFC 4648 base64](#) to either encrypt or decrypt this resource. You can provide either the `rawKey` or the `rsaEncryptedKey`. For example:

```
"rawKey": "SGVsbG8gZnJvbSBHb29nbGUgQ2xvdWQgUGxhdGZvcml0="
```

```
disks[].initializeParams.sourceImageEncryptionKey.rsaEncryptedKey
```

```
string
```

Specifies an RFC 4648 base64 encoded, RSA-wrapped 2048-bit [customer-supplied encryption key](#) to either encrypt or decrypt this resource. You can provide either the `rawKey` or the `rsaEncryptedKey`. For example:

```
"rsaEncryptedKey": "ieCx/NcW06PcT7Ep1X6LUTc/hLvUDYyzSZPPVCVPTVEohpeHASqC8uw5Tzy09U+Fka9JFH z0mBibXUI"
```

The key must meet the following requirements before you can provide it to Compute Engine:

1. The key is wrapped using a RSA public key certificate provided by Google.
2. After being wrapped, the key must be encoded in [RFC 4648 base64](#) encoding.

Gets the RSA public key certificate provided by Google at:

```
https://cloud-certs.storage.googleapis.com/google-cloud-csek-ingress.pem
```

```
disks[].initializeParams.sourceImageEncryptionKey.kmsKeyName
```

```
string
```

The name of the encryption key that is stored in Google Cloud KMS. For example:

```
"kmsKeyName": "projects/ kms_project_id/locations/ region/keyRings/ key_region/cryptoKeys/key
```

The fully-qualified key name may be returned for resource GET requests. For example:

```
"kmsKeyName": "projects/ kms_project_id/locations/ region/keyRings/ key_region/cryptoKeys/key /crypt
```

```
disks[].initializeParams.sourceImageEncryptionKey.sha256
```

```
string
```

[Output only] The [RFC 4648 base64](#) encoded SHA-256 hash of the [customer-supplied encryption key](#) that protects this resource.

```
disks[].initializeParams.sourceImageEncryptionKey.kmsKeyServiceAccount
```

```
string
```

The service account being used for the encryption request for the given KMS key. If absent, the Compute Engine default service account is used. For example:

```
"kmsKeyServiceAccount": "name@ projectId.iam.gserviceaccount.com/"
```

```
disks[].initializeParams.labels
```

```
map (key: string, value: string)
```

Labels to apply to this disk. These can be later modified by the `disks.setLabels` method. This field is only applicable for persistent disks.

```
disks[].initializeParams.sourceSnapshot
```

```
string
```

The source snapshot to create this disk. When creating a new instance boot disk, one of

```
initializeParams.sourceSnapshot
```

 or

```
initializeParams.sourceImage
```

 or

```
disks.source
```

 is required.

To create a disk with a snapshot that you created, specify the snapshot name in the following format:

```
global/snapshots/my-backup
```

If the source snapshot is deleted later, this field will not be set.

Note: You cannot create VMs in bulk using a snapshot as the source. Use an image instead when you create VMs using the [bulk insert method](#).

```
disks[].initializeParams.sourceSnapshotEncryptionKey
```

```
object
```

The [customer-supplied encryption key](#) of the source snapshot.

```
disks[].initializeParams.sourceSnapshotEncryptionKey.rawKey
```

```
string
```

Specifies a 256-bit [customer-supplied encryption key](#), encoded in [RFC 4648 base64](#) to either encrypt or decrypt this resource. You can provide either the `rawKey` or the `rsaEncryptedKey`. For example:

```
"rawKey": "SGVsbG8gZnJvbSBHb29nbGUgQ2xvdWQgUGxhdGZvcml0="
```

```
disks[].initializeParams.sourceSnapshotEncryptionKey.rsaEncryptedKey
```

```
string
```

Specifies an RFC 4648 base64 encoded, RSA-wrapped 2048-bit [customer-supplied encryption key](#) to either encrypt or decrypt this resource. You can provide either the `rawKey` or the `rsaEncryptedKey`. For example:

```
"rsaEncryptedKey": "ieCx/NcW06PcT7Ep1X6LUTc/hLvUDYyzSZPPVCVPTVEohpeHASqC8uw5Tzy09U+Fka9JFH z0mBibXUI"
```

The key must meet the following requirements before you can provide it to Compute Engine:

1. The key is wrapped using a RSA public key certificate provided by Google.
2. After being wrapped, the key must be encoded in [RFC 4648 base64](#) encoding.

Gets the RSA public key certificate provided by Google at:

```
https://cloud-certs.storage.googleapis.com/google-cloud-csek-ingress.pem
```

```
disks[].initializeParams.sourceSnapshotEncryptionKey.kmsKeyName
```

```
string
```

The name of the encryption key that is stored in Google Cloud KMS. For example:

```
"kmsKeyName": "projects/ kms_project_id/locations/ region/keyRings/ key_region/cryptoKeys/key"
```

The fully-qualified key name may be returned for resource GET requests. For example:

```
"kmsKeyName": "projects/ kms_project_id/locations/ region/keyRings/ key_region/cryptoKeys/key /crypt
```

```
disks[].initializeParams.sourceSnapshotEncryptionKey.sha256
```

```
string
```

[Output only] The [RFC 4648 base64](#) encoded SHA-256 hash of the [customer-supplied encryption key](#) that protects this resource.

```
disks[].initializeParams.sourceSnapshotEncryptionKey.kmsKeyServiceAccount
```

```
string
```

The service account being used for the encryption request for the given KMS key. If absent, the Compute Engine default service account is used. For example:

```
"kmsKeyServiceAccount": "name@ projectId.iam.gserviceaccount.com/"
```

```
disks[].initializeParams.description
```

```
string
```

An optional description. Provide this property when creating the disk.

```
disks[].initializeParams.replicaZones[]
```

```
string
```

Required for each regional disk associated with the instance. Specify the URLs of the zones where the disk should be replicated to. You must provide exactly two replica zones, and one zone must be the same as the instance zone.

```
disks[].initializeParams.resourcePolicies[]
```

```
string
```

Resource policies applied to this disk for automatic snapshot creations. Specified using the full or partial URL. For instance template, specify only the resource policy name.

```
disks[].initializeParams.onUpdateAction
```

```
enum
```

Specifies which action to take on instance update with this disk. Default is to use the existing disk.

```
disks[].initializeParams.provisionedIops
```

```
string (int64 format)
```

Indicates how many IOPS to provision for the disk. This sets the number of I/O operations per second that the disk can handle. Values must be between 10,000 and 120,000. For more details, see the [Extreme persistent disk documentation](#).

```
disks[].initializeParams.licenses[]
```

```
string
```

A list of publicly visible licenses. Reserved for Google's use.

```
disks[].initializeParams.architecture
```

```
enum
```

The architecture of the attached disk. Valid values are arm64 or x86_64.

```
disks[].initializeParams.resourceManagerTags
```

```
map (key: string, value: string)
```

Input only. Resource manager tags to be bound to the disk. Tag keys and values have the same definition as [resource manager tags](#). Keys and values can be either in numeric format, such as `tagKeys/{tag_key_id}` and `tagValues/456` or in namespaced format such as `{org_id|projectId}/{tag_key_short_name}` and `{tag_value_short_name}`. The field is ignored (both PUT & PATCH) when empty.

```
disks[].initializeParams.provisionedThroughput
```

```
string (int64 format)
```

Indicates how much throughput to provision for the disk. This sets the number of throughput mb per second that the disk can handle. Values must greater than or equal to 1.

```
disks[].initializeParams.enableConfidentialCompute
```

```
boolean
```

Whether this disk is using confidential compute mode.

```
disks[].initializeParams.storagePool
```

```
string
```

The storage pool in which the new disk is created. You can provide this as a partial or full URL to the resource. For example, the following are valid values:

- <https://www.googleapis.com/compute/v1/projects/project/zones/zone/storagePools/storagePool>
- `projects/project/zones/zone/storagePools/storagePool`
- `zones/zone/storagePools/storagePool`

```
disks[].autoDelete
```

`boolean`

Specifies whether the disk will be auto-deleted when the instance is deleted (but not when the disk is detached from the instance).

`disks[].licenses[]``string`

[Output Only] Any valid publicly visible licenses.

`disks[].interface``enum`

Specifies the disk interface to use for attaching this disk, which is either `SCSI` or `NVME`. For most machine types, the default is `SCSI`. Local SSDs can use either NVME or SCSI. In certain configurations, persistent disks can use NVMe. For more information, see [About persistent disks](#).

`disks[].guestOsFeatures[]``object`

A list of features to enable on the guest operating system. Applicable only for bootable images. Read [Enabling guest operating system features](#) to see a list of available options.

`disks[].guestOsFeatures[].type``enum`

The ID of a supported feature. To add multiple values, use commas to separate values. Set to one or more of the following values:

- `VIRTIO_SCSI_MULTIQUEUE`
- `WINDOWS`
- `MULTI_IP_SUBNET`
- `UEFI_COMPATIBLE`
- `GVNIC`
- `SEV_CAPABLE`
- `SUSPEND_RESUME_COMPATIBLE`
- `SEV_LIVE_MIGRATABLE_V2`
- `SEV_SNP_CAPABLE`
- `TDX_CAPABLE`
- `IDPF`
- `SNP_SVSM_CAPABLE`
- `CCA_CAPABLE`

For more information, see [Enabling guest operating system features](#). `disks[].diskEncryptionKey`

object

Encrypts or decrypts a disk using a [customer-supplied encryption key](#).

If you are creating a new disk, this field encrypts the new disk using an encryption key that you provide. If you are attaching an existing disk that is already encrypted, this field decrypts the disk using the customer-supplied encryption key.

If you encrypt a disk using a customer-supplied key, you must provide the same key again when you attempt to use this resource at a later time. For example, you must provide the key when you create a snapshot or an image from the disk or when you attach the disk to a virtual machine instance.

If you do not provide an encryption key, then the disk will be encrypted using an automatically generated key and you do not need to provide a key to use the disk later.

Note:

Instance templates do not store [customer-supplied encryption keys](#), so you cannot use your own keys to encrypt disks in a [managed instance group](#).

You cannot create VMs that have disks with customer-supplied keys using the [bulk insert method](#).

`disks[].diskEncryptionKey.rawKey`

string

Specifies a 256-bit [customer-supplied encryption key](#), encoded in [RFC 4648 base64](#) to either encrypt or decrypt this resource. You can provide either the `rawKey` or the `rsaEncryptedKey` . For example:

```
"rawKey": "SGVsbG8gZnJvbSBHb29nbGUgQ2xvdWQgUGxhdGZvcml0="
```

`disks[].diskEncryptionKey.rsaEncryptedKey`

string

Specifies an RFC 4648 base64 encoded, RSA-wrapped 2048-bit [customer-supplied encryption key](#) to either encrypt or decrypt this resource. You can provide either the `rawKey` or the `rsaEncryptedKey` . For example:

```
"rsaEncryptedKey": "ieCx/NcW06PcT7Ep1X6LUTc/hLvUDYyzSZPPVCVPTVEohpeHASqC8uw5Tzy09U+Fka9JFH z0mBibXUI"
```

The key must meet the following requirements before you can provide it to Compute Engine:

1. The key is wrapped using a RSA public key certificate provided by Google.
2. After being wrapped, the key must be encoded in [RFC 4648 base64](#) encoding.

Gets the RSA public key certificate provided by Google at:

```
https://cloud-certs.storage.googleapis.com/google-cloud-csek-ingress.pem
```

```
disks[].diskEncryptionKey.kmsKeyName
```

```
string
```

The name of the encryption key that is stored in Google Cloud KMS. For example:

```
"kmsKeyName": "projects/ kms_project_id/locations/ region/keyRings/ key_region/cryptoKeys/key
```

The fully-qualified key name may be returned for resource GET requests. For example:

```
"kmsKeyName": "projects/ kms_project_id/locations/ region/keyRings/ key_region/cryptoKeys/key /crypt
```

```
disks[].diskEncryptionKey.sha256
```

```
string
```

[Output only] The [RFC 4648 base64](#) encoded SHA-256 hash of the [customer-supplied encryption key](#) that protects this resource.

```
disks[].diskEncryptionKey.kmsKeyServiceAccount
```

```
string
```

The service account being used for the encryption request for the given KMS key. If absent, the Compute Engine default service account is used. For example:

```
"kmsKeyServiceAccount": "name@ projectId.iam.gserviceaccount.com/
```

```
disks[].diskSizeGb
```

```
string (int64 format)
```

The size of the disk in GB.

```
disks[].shieldedInstanceInitialState
```

```
object
```

[Output Only] shielded vm initial state stored on disk

```
disks[].shieldedInstanceInitialState.pk
```

```
object
```

The Platform Key (PK).

```
disks[].shieldedInstanceInitialState.pk.content
```

```
string (bytes format)
```

The raw content in the secure keys file.

A base64-encoded string.

```
disks[].shieldedInstanceInitialState.pk.fileType
```

```
enum
```

The file type of source file.

```
disks[].shieldedInstanceInitialState.keks[]
```

```
object
```

The Key Exchange Key (KEK).

```
disks[].shieldedInstanceInitialState.keks[].content
```

```
string (bytes format)
```

The raw content in the secure keys file.

A base64-encoded string.

```
disks[].shieldedInstanceInitialState.keks[].fileType
```

```
enum
```

The file type of source file.

```
disks[].shieldedInstanceInitialState.dbs[]
```

```
object
```

The Key Database (db).

```
disks[].shieldedInstanceInitialState.dbs[].content
```

```
string (bytes format)
```

The raw content in the secure keys file.

A base64-encoded string.

```
disks[].shieldedInstanceInitialState.dbs[].fileType
```

enum

The file type of source file.

```
disks[].shieldedInstanceInitialState.dbxs[]
```

object

The forbidden key database (dbx).

```
disks[].shieldedInstanceInitialState.dbxs[].content
```

string ([bytes](#) format)

The raw content in the secure keys file.

A base64-encoded string.

```
disks[].shieldedInstanceInitialState.dbxs[].fileType
```

enum

The file type of source file.

```
disks[].forceAttach
```

boolean

[Input Only] Whether to force attach the regional disk even if it's currently attached to another instance. If you try to force attach a zonal disk to an instance, you will receive an error.

```
disks[].architecture
```

enum

[Output Only] The architecture of the attached disk. Valid values are ARM64 or X86_64.

metadata

object

The [metadata key/value pairs](#) assigned to this instance. This includes metadata keys that were explicitly defined for the instance.

```
metadata.kind
```

string

[Output Only] Type of the resource. Always `compute#metadata` for metadata.

```
metadata.fingerprint
```

string ([bytes](#) format)

Specifies a fingerprint for this request, which is essentially a hash of the metadata's contents and used for optimistic locking. The fingerprint is initially generated by Compute Engine and changes after every request to modify or update metadata. You must always provide an up-to-date fingerprint hash in order to update or change metadata, otherwise the request will fail with error `412 conditionNotMet`.

To see the latest fingerprint, make a `get()` request to retrieve the resource.

A base64-encoded string.

`metadata.items[]`

object

Array of key/value pairs. The total size of all keys and values must be less than 512 KB.

`metadata.items[].key`

string

Key for the metadata entry. Keys must conform to the following regexp: `[a-zA-Z0-9-_.]+`, and be less than 128 bytes in length. This is reflected as part of a URL in the metadata server. Additionally, to avoid ambiguity, keys must not conflict with any other metadata keys for the project.

`metadata.items[].value`

string

Value for the metadata entry. These are free-form strings, and only have meaning as interpreted by the image running in the instance. The only restriction placed on values is that their size must be less than or equal to 262144 bytes (256 KiB).

`serviceAccounts[]`

object

A list of service accounts, with their specified scopes, authorized for this instance. Only one service account per VM instance is supported.

Service accounts generate access tokens that can be accessed through the metadata server and used to authenticate applications on the instance. See [Service Accounts](#) for more information.

`serviceAccounts[].email`

string

Email address of the service account.

`serviceAccounts[].scopes[]`

string

The list of scopes to be made available for this service account.

selfLink

string

[Output Only] Server-defined URL for this resource.

scheduling

object

Sets the scheduling options for this instance.

scheduling.maxRunDuration

object

Specifies the max run duration for the given instance. If specified, the instance termination action will be performed at the end of the run duration.

scheduling.maxRunDuration.seconds

string ([int64](#) format)

Span of time at a resolution of a second. Must be from 0 to 315,576,000,000 inclusive. Note: these bounds are computed from: 60 sec/min * 60 min/hr * 24 hr/day * 365.25 days/year * 10000 years

scheduling.maxRunDuration.nanos

integer

Span of time that's a fraction of a second at nanosecond resolution. Durations less than one second are represented with a 0 `seconds` field and a positive `nanos` field. Must be from 0 to 999,999,999 inclusive.

scheduling.terminationTime

string

Specifies the timestamp, when the instance will be terminated, in [RFC3339](#) text format. If specified, the instance termination action will be performed at the termination time.

scheduling.onInstanceStopAction

object

scheduling.onInstanceStopAction.discardLocalSsd

boolean

If true, the contents of any attached Local SSD disks will be discarded else, the Local SSD data will be preserved when the instance is stopped at the end of the run duration/termination time.

`scheduling.onHostMaintenance`

enum

Defines the maintenance behavior for this instance. For standard instances, the default behavior is `MIGRATE` . For [preemptible instances](#), the default and only possible behavior is `TERMINATE` . For more information, see [Set VM host maintenance policy](#).

`scheduling.automaticRestart`

boolean

Specifies whether the instance should be automatically restarted if it is terminated by Compute Engine (not terminated by a user). You can only set the automatic restart option for standard instances. [Preemptible instances](#) cannot be automatically restarted.

By default, this is set to `true` so an instance is automatically restarted if it is terminated by Compute Engine.

`scheduling.preemptible`

boolean

Defines whether the instance is preemptible. This can only be set during instance creation or while the instance is [stopped](#) and therefore, in a `TERMINATED` state. See [Instance Life Cycle](#) for more information on the possible instance states.

`scheduling.nodeAffinities[]`

object

A set of node affinity and anti-affinity configurations. Refer to [Configuring node affinity](#) for more information. Overrides reservationAffinity.

`scheduling.nodeAffinities[].key`

string

Corresponds to the label key of Node resource.

`scheduling.nodeAffinities[].operator`

enum

Defines the operation of node selection. Valid operators are `IN` for affinity and `NOT_IN` for anti-affinity.

`scheduling.nodeAffinities[].values[]`

string

Corresponds to the label values of Node resource.

scheduling.minNodeCpus

integer

The minimum number of virtual CPUs this instance will consume when running on a sole-tenant node.

scheduling.locationHint

string

An opaque location hint used to place the instance close to other resources. This field is for use by internal tools that use the public API.

scheduling.availabilityDomain

integer

Specifies the availability domain to place the instance in. The value must be a number between 1 and the number of availability domains specified in the spread placement policy attached to the instance.

scheduling.provisioningModel

enum

Specifies the provisioning model of the instance.

scheduling.instanceTerminationAction

enum

Specifies the termination action for the instance.

scheduling.hostErrorTimeoutSeconds

integer

Specify the time in seconds for host error detection, the value must be within the range of [90, 330] with the increment of 30, if unset, the default behavior of host error recovery will be used.

scheduling.localSsdRecoveryTimeout

object

Specifies the maximum amount of time a Local Ssd Vm should wait while recovery of the Local Ssd state is attempted. Its value should be in between 0 and 168 hours with hour granularity and the default value being 1 hour.

`scheduling.localSsdRecoveryTimeout.seconds`

string ([int64](#) format)

Span of time at a resolution of a second. Must be from 0 to 315,576,000,000 inclusive. Note: these bounds are computed from: 60 sec/min * 60 min/hr * 24 hr/day * 365.25 days/year * 10000 years

`scheduling.localSsdRecoveryTimeout.nanos`

integer

Span of time that's a fraction of a second at nanosecond resolution. Durations less than one second are represented with a 0 `seconds` field and a positive `nanos` field. Must be from 0 to 999,999,999 inclusive.

`scheduling.skipGuestOsShutdown`

boolean

Default is false and there will be 120 seconds between [GCE ACPI G2 Soft Off](#) and [ACPI G3 Mechanical Off](#) for Standard VMs and 30 seconds for Spot VMs.

`cpuPlatform`

string

[Output Only] The CPU platform used by this instance.

`labels`

map (key: string, value: string)

Labels to apply to this instance. These can be later modified by the `setLabels` method.

`params`

object

Input only. [Input Only] Additional params passed with the request, but not persisted as part of resource payload.

Available from 2026-03-01..

`params.resourceManagerTags`

map (key: string, value: string)

Input only. Resource manager tags to be bound to the instance. Tag keys and values have the same definition as [resource manager tags](#). Keys and values can be either in numeric format, such as `tagKeys/{tag_key_id}` and `tagValues/456` or in namespaced format such as `{org_id|projectId}/{tag_key_short_name}` and `{tag_value_short_name}`. The field is ignored (both PUT & PATCH) when empty.

`params.requestValidForDuration`

object

Relative deadline for waiting for capacity. Relevant only for Instances.Insert API.

`params.requestValidForDuration.seconds`

string ([int64](#) format)

Span of time at a resolution of a second. Must be from 0 to 315,576,000,000 inclusive. Note: these bounds are computed from: 60 sec/min * 60 min/hr * 24 hr/day * 365.25 days/year * 10000 years

`params.requestValidForDuration.nanos`

integer

Span of time that's a fraction of a second at nanosecond resolution. Durations less than one second are represented with a 0 `seconds` field and a positive `nanos` field. Must be from 0 to 999,999,999 inclusive.

`labelFingerprint`

string ([bytes](#) format)

A fingerprint for this request, which is essentially a hash of the label's contents and used for optimistic locking. The fingerprint is initially generated by Compute Engine and changes after every request to modify or update labels. You must always provide an up-to-date fingerprint hash in order to update or change labels.

To see the latest fingerprint, make `get()` request to the instance.

A base64-encoded string.

`instanceEncryptionKey`

object

Encrypts suspended data for an instance with a [customer-managed encryption key](#).

If you are creating a new instance, this field will encrypt the local SSD and in-memory contents of the instance during the suspend operation.

If you do not provide an encryption key when creating the instance, then the local SSD and in-memory contents will be encrypted using an automatically generated key during the suspend operation.

Available from 2026-03-01..

`instanceEncryptionKey.rawKey`

string

Specifies a 256-bit [customer-supplied encryption key](#), encoded in [RFC 4648 base64](#) to either encrypt or decrypt this resource. You can provide either the `rawKey` or the `rsaEncryptedKey`. For example:

```
"rawKey": "SGVsbG8gZnJvbSBHb29nbGUgQ2xvdWQgUGxhdGZvcj0="
```

```
instanceEncryptionKey.rsaEncryptedKey
```

```
string
```

Specifies an RFC 4648 base64 encoded, RSA-wrapped 2048-bit [customer-supplied encryption key](#) to either encrypt or decrypt this resource. You can provide either the `rawKey` or the `rsaEncryptedKey`. For example:

```
"rsaEncryptedKey": "ieCx/NcW06PcT7Ep1X6LUTc/hLvUDYyzSZPPVCVPTVEohpeHASqC8uw5Tzy09U+Fka9JFH z0mBibXUI"
```

The key must meet the following requirements before you can provide it to Compute Engine:

1. The key is wrapped using a RSA public key certificate provided by Google.
2. After being wrapped, the key must be encoded in [RFC 4648 base64](#) encoding.

Gets the RSA public key certificate provided by Google at:

```
https://cloud-certs.storage.googleapis.com/google-cloud-csek-ingress.pem
```

```
instanceEncryptionKey.kmsKeyName
```

```
string
```

The name of the encryption key that is stored in Google Cloud KMS. For example:

```
"kmsKeyName": "projects/ kms_project_id/locations/ region/keyRings/ key_region/cryptoKeys/key"
```

The fully-qualified key name may be returned for resource GET requests. For example:

```
"kmsKeyName": "projects/ kms_project_id/locations/ region/keyRings/ key_region/cryptoKeys/key /crypto"
```

```
instanceEncryptionKey.sha256
```

```
string
```

[Output only] The [RFC 4648 base64](#) encoded SHA-256 hash of the [customer-supplied encryption key](#) that protects this resource.

```
instanceEncryptionKey.kmsKeyServiceAccount
```

```
string
```

The service account being used for the encryption request for the given KMS key. If absent, the Compute Engine default service account is used. For example:

```
"kmsKeyServiceAccount": "name@ projectId.iam.gserviceaccount.com/"
```

minCpuPlatform

string

Specifies a [minimum CPU platform](#) for the VM instance. Applicable values are the friendly names of CPU platforms, such as `minCpuPlatform: "Intel Haswell"` or `minCpuPlatform: "Intel Sandy Bridge"`.

guestAccelerators[]

object

A list of the type and count of accelerator cards attached to the instance.

guestAccelerators[].acceleratorType

string

Full or partial URL of the accelerator type resource to attach to this instance. For example: `projects/my-project/zones/us-central1-c/acceleratorTypes/nvidia-tesla-p100`. If you are creating an instance template, specify only the accelerator name. See [GPUs on Compute Engine](#) for a full list of accelerator types.

guestAccelerators[].acceleratorCount

integer

The number of the guest accelerator cards exposed to this instance.

startRestricted

boolean

[Output Only] Whether a VM has been restricted for start because Compute Engine has detected suspicious activity.

deletionProtection

boolean

Whether the resource should be protected against deletion.

resourcePolicies[]

string

Resource policies applied to this instance.

sourceMachineImage

string

Source machine image

reservationAffinity

object

Specifies the reservations that this instance can consume from.

reservationAffinity.consumeReservationType

enum

Specifies the type of reservation from which this instance can consume resources: `ANY_RESERVATION` (default), `SPECIFIC_RESERVATION` , or `NO_RESERVATION` . See [Consuming reserved instances](#) for examples.

reservationAffinity.key

string

Corresponds to the label key of a reservation resource. To target a `SPECIFIC_RESERVATION` by name, specify `googleapis.com/reservation-name` as the key and specify the name of your reservation as its value.

reservationAffinity.values[]

string

Corresponds to the label values of a reservation resource. This can be either a name to a reservation in the same project or "projects/different-project/reservations/some-reservation-name" to target a shared reservation in the same zone but in a different project.

hostname

string

Specifies the hostname of the instance. The specified hostname must be RFC1035 compliant. If hostname is not specified, the default hostname is `[INSTANCE_NAME].c.[PROJECT_ID].internal` when using the global DNS, and `[INSTANCE_NAME].[ZONE].c.[PROJECT_ID].internal` when using zonal DNS.

displayDevice

object

Enables display device for the instance.

displayDevice.enableDisplay

boolean

Defines whether the instance has Display enabled.

shieldedInstanceConfig

object

shieldedInstanceConfig.enableSecureBoot

boolean

Defines whether the instance has Secure Boot enabled. [Disabled by default.](#)

shieldedInstanceConfig.enableVtpm

boolean

Defines whether the instance has the vTPM enabled. [Enabled by default.](#)

shieldedInstanceConfig.enableIntegrityMonitoring

boolean

Defines whether the instance has integrity monitoring enabled. [Enabled by default.](#)

shieldedInstanceIntegrityPolicy

object

shieldedInstanceIntegrityPolicy.updateAutoLearnPolicy

boolean

Updates the integrity policy baseline using the measurements from the VM instance's most recent boot.

sourceMachineImageEncryptionKey

object

Source machine image encryption key when creating an instance from a machine image.

sourceMachineImageEncryptionKey.rawKey

string

Specifies a 256-bit [customer-supplied encryption key](#), encoded in [RFC 4648 base64](#) to either encrypt or decrypt this resource. You can provide either the `rawKey` or the `rsaEncryptedKey` . For example:

```
"rawKey": "SGVsbG8gZnJvbSBHb29nbGUgQ2xvdWQgUGxhdGZvcml0="
```

```
sourceMachineImageEncryptionKey.rsaEncryptedKey
```

```
string
```

Specifies an RFC 4648 base64 encoded, RSA-wrapped 2048-bit [customer-supplied encryption key](#) to either encrypt or decrypt this resource. You can provide either the `rawKey` or the `rsaEncryptedKey`. For example:

```
"rsaEncryptedKey": "ieCx/NcW06PcT7Ep1X6LUTc/hLvUDYyzSZPPVCVPTVEohpeHASqC8uw5Tzy09U+Fka9JFH z0mBibXUI"
```

The key must meet the following requirements before you can provide it to Compute Engine:

1. The key is wrapped using a RSA public key certificate provided by Google.
2. After being wrapped, the key must be encoded in [RFC 4648 base64](#) encoding.

Gets the RSA public key certificate provided by Google at:

```
https://cloud-certs.storage.googleapis.com/google-cloud-csek-ingress.pem
```

```
sourceMachineImageEncryptionKey.kmsKeyName
```

```
string
```

The name of the encryption key that is stored in Google Cloud KMS. For example:

```
"kmsKeyName": "projects/ kms_project_id/locations/ region/keyRings/ key_region/cryptoKeys/key
```

The fully-qualified key name may be returned for resource GET requests. For example:

```
"kmsKeyName": "projects/ kms_project_id/locations/ region/keyRings/ key_region/cryptoKeys/key /crypto"
```

```
sourceMachineImageEncryptionKey.sha256
```

```
string
```

[Output only] The [RFC 4648 base64](#) encoded SHA-256 hash of the [customer-supplied encryption key](#) that protects this resource.

```
sourceMachineImageEncryptionKey.kmsKeyServiceAccount
```

```
string
```

The service account being used for the encryption request for the given KMS key. If absent, the Compute Engine default service account is used. For example:

```
"kmsKeyServiceAccount": "name@ projectId.iam.gserviceaccount.com/"
```

confidentialInstanceConfig

object

confidentialInstanceConfig.enableConfidentialCompute

boolean

Defines whether the instance should have confidential compute enabled.

confidentialInstanceConfig.confidentialInstanceType

enum

Defines the type of technology used by the confidential instance.

fingerprint

string ([bytes](#) format)

Specifies a fingerprint for this resource, which is essentially a hash of the instance's contents and used for optimistic locking. The fingerprint is initially generated by Compute Engine and changes after every request to modify or update the instance. You must always provide an up-to-date fingerprint hash in order to update the instance.

To see the latest fingerprint, make `get()` request to the instance.

A base64-encoded string.

Available from 2026-03-01..

privateIpv6GoogleAccess

enum

The private IPv6 google access type for the VM. If not specified, use `INHERIT_FROM_SUBNETWORK` as default.

advancedMachineFeatures

object

Controls for advanced machine-related behavior features.

advancedMachineFeatures.enableNestedVirtualization

boolean

Whether to enable nested virtualization or not (default is false).

`advancedMachineFeatures.threadsPerCore`

integer

The number of threads per physical core. To disable simultaneous multithreading (SMT) set this to 1. If unset, the maximum number of threads supported per core by the underlying processor is assumed.

`advancedMachineFeatures.visibleCoreCount`

integer

The number of physical cores to expose to an instance. Multiply by the number of threads per core to compute the total number of virtual CPUs to expose to the instance. If unset, the number of cores is inferred from the instance's nominal CPU count and the underlying platform's SMT width.

`advancedMachineFeatures.enableUefiNetworking`

boolean

Whether to enable UEFI networking for instance creation.

`advancedMachineFeatures.performanceMonitoringUnit`

enum

Type of Performance Monitoring Unit requested on instance.

`advancedMachineFeatures.turboMode`

string

Turbo frequency mode to use for the instance. Supported modes include: * ALL_CORE_MAX

Using empty string or not setting this field will use the platform-specific default turbo mode.

`lastStartTimestamp`

string

[Output Only] Last start timestamp in [RFC3339](#) text format.

`lastStopTimestamp`

string

[Output Only] Last stop timestamp in [RFC3339](#) text format.

`lastSuspendedTimestamp`

string

[Output Only] Last suspended timestamp in [RFC3339](#) text format.

satisfiesPzs

boolean

[Output Only] Reserved for future use.

Available from 2026-03-01..

satisfiesPzi

boolean

[Output Only] Reserved for future use.

Available from 2026-03-01..

resourceStatus

object

[Output Only] Specifies values set for instance attributes as compared to the values requested by user in the corresponding input only field.

Available from 2026-03-01..

resourceStatus.effectiveInstanceMetadata

object

[Output Only] Effective metadata is a field that consolidates project, zonal instance settings, and instance-level predefined metadata keys to provide the overridden value for those metadata keys at the instance level.

resourceStatus.effectiveInstanceMetadata.vmDnsSettingMetadataValue

string

Effective VM DNS setting at Instance level.

resourceStatus.effectiveInstanceMetadata.enableOsloginMetadataValue

boolean

Effective enable-oslogin value at Instance level.

resourceStatus.effectiveInstanceMetadata.enableOsconfigMetadataValue

boolean

Effective enable-osconfig value at Instance level.

`resourceStatus.effectiveInstanceMetadata.enableOsInventoryMetadataValue`

boolean

Effective enable-os-inventory value at Instance level.

`resourceStatus.effectiveInstanceMetadata.enableGuestAttributesMetadataValue`

boolean

Effective enable-guest-attributes value at Instance level.

`resourceStatus.effectiveInstanceMetadata.blockProjectSshKeysMetadataValue`

boolean

Effective block-project-ssh-keys value at Instance level.

`resourceStatus.effectiveInstanceMetadata.serialPortEnableMetadataValue`

boolean

Effective serial-port-enable value at Instance level.

`resourceStatus.effectiveInstanceMetadata.serialPortLoggingEnableMetadataValue`

boolean

Effective serial-port-logging-enable value at Instance level.

`resourceStatus.effectiveInstanceMetadata.gceContainerDeclarationMetadataValue`

boolean

Effective gce-container-declaration value at Instance level.

`resourceStatus.scheduling`

object

`resourceStatus.scheduling.availabilityDomain`

integer

Specifies the availability domain to place the instance in. The value must be a number between 1 and the number of availability domains specified in the spread placement policy attached to the instance.

`resourceStatus.upcomingMaintenance`

object

`resourceStatus.upcomingMaintenance.type`

enum

Defines the type of maintenance.

`resourceStatus.upcomingMaintenance.canReschedule`

boolean

Indicates if the maintenance can be customer triggered.

`resourceStatus.upcomingMaintenance.windowStartTime`

string

The current start time of the maintenance window. This timestamp value is in RFC3339 text format.

`resourceStatus.upcomingMaintenance.windowEndTime`

string

The time by which the maintenance disruption will be completed. This timestamp value is in RFC3339 text format.

`resourceStatus.upcomingMaintenance.latestWindowStartTime`

string

The latest time for the planned maintenance window to start. This timestamp value is in RFC3339 text format.

`resourceStatus.upcomingMaintenance.maintenanceStatus`

enum

`resourceStatus.upcomingMaintenance.maintenanceOnShutdown`

boolean

Indicates whether the UpcomingMaintenance will be triggered on VM shutdown.

`resourceStatus.upcomingMaintenance.maintenanceReasons[]`

enum

The reasons for the maintenance. Only valid for vms.

`resourceStatus.physicalHost`

string

[Output Only] The precise location of your instance within the zone's data center, including the block, sub-block, and host. The field is formatted as follows: blockId/subBlockId/hostId.

`resourceStatus.physicalHostTopology`

object

[Output Only] A series of fields containing the global name of the Compute Engine cluster, as well as the ID of the block, sub-block, and host on which the running instance is located.

`resourceStatus.physicalHostTopology.cluster`

string

[Output Only] The global name of the Compute Engine cluster where the running instance is located.

`resourceStatus.physicalHostTopology.block`

string

[Output Only] The ID of the block in which the running instance is located. Instances within the same block experience low network latency.

`resourceStatus.physicalHostTopology.subblock`

string

[Output Only] The ID of the sub-block in which the running instance is located. Instances in the same sub-block experience lower network latency than instances in the same block.

`resourceStatus.physicalHostTopology.host`

string

[Output Only] The ID of the host on which the running instance is located. Instances on the same host experience the lowest possible network latency.

`resourceStatus.reservationConsumptionInfo`

object

[Output Only] Reservation information that the instance is consuming from.

`resourceStatus.reservationConsumptionInfo.consumedReservation`

string

[Output Only] The full resource name of the reservation that this instance is consuming from.

`networkPerformanceConfig`

object

`networkPerformanceConfig.totalEgressBandwidthTier`

enum

keyRevocationActionType

enum

KeyRevocationActionType of the instance. Supported options are "STOP" and "NONE". The default value is "NONE" if it is not specified.

Available from 2026-03-01..

partnerMetadata[]

map (key: string, value: object)

Partner Metadata assigned to the instance. A map from a subdomain (namespace) to entries map.

Available from 2026-03-01..

partnerMetadata[].entries

map (key: string, value: value ([Value](#) format))

Map of a partner metadata that belong to the same subdomain. It accepts any value including google.protobuf.Struct.

workloadIdentityConfig

object

workloadIdentityConfig.identity

string

workloadIdentityConfig.identityCertificateEnabled

boolean

Source: <https://cloud.google.com/compute/docs/reference/rest/v1/instances>